NorthLake Specific Plan Project

Draft Supplemental Environmental Impact Report

Northlake Specific Plan Project
County Project No. R2015-00408-(5)
Vesting Tentative Tract Map No. TR073336
Conditional Use Permit No. 201500019
Environmental Review No. 201500030
State Clearinghouse No. 2015031080

Lead Agency: County of Los Angeles
Department of Regional Planning
Hall of Records, 13th Floor, Room 1362
320 West Temple Street
Los Angeles, California 90012

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TABLE OF CONTENTS

Section **Page**

TABLE OF CONTENTS

Section **Page**

TABLE OF CONTENTS

Section **Page**

TABLE OF CONTENTS

Section **Page**

TABLE OF CONTENTS

Section **Page**

TABLE OF CONTENTS

Section **Page**

TABLES

Table **Page**

TABLES

Table **Page**

TABLES

Table **Page**

TABLES

EXHIBITS

EXHIBITS

Exhibit **Follows Page**

APPENDICES

Appendix

LIST OF ACRONYMS AND ABBREVIATIONS

Acronym	Acronym and Abbreviation Description
A	
A	Agriculture
AADT	Average Annual Daily Traffic
AB	Assembly Bill
ACOE	Army Corps of Engineers
ADA	Americans with Disability Act
ADT	Average Daily Traffic
AF	Artificial Fill
afy	acre-feet per year
ALUC	County of Los Angeles Airport Land Use Commission
APS	Accessible Pedestrian Signals
APS	Alternative Planning Scenario
AQMP	Air Quality Management Plan
ASBS	Area of Special Biological Significance
B	
BACT	Best Available Control Technology
BAT	best available technology economically achievable
BAT/BCT	Best Available Technology Economically Achievable/Best Conventional Pollutant Control Technology
BAU	Business as Usual
BCE	Before Common Era
BCF	billion cubic feet
BCT	best conventional pollutant control technology
BMP	Bicycle Master Plan
BMPs	Best Management Practices
BTU	British Thermal Unit
BVWSD	Buena Vista Water Storage District
C	
C	Commercial
°C	Degrees Celsius
C&D	Construction and Demolition
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
$CaCO_3$	calcium carbonate
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CalGreen Code	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CC&Rs	Covenants, Conditions, and Restrictions
CCR	California Code of Regulations
CDF	California Department of Forestry and Fire Protection
CDFW	California Department of Fish and Wildlife

Acronym	Acronym and Abbreviation Description
CE	Common Era
CEC	Constituents of Emerging Concerns
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CDFG	California Department of Fish and Game
cfs	cubic feet per second
CH_4	methane
CIWMB	California Integrated Waste Management Board
CLWA	Castaic Lake Water Agency
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
Col	Colluvium and Topsoil
Corps	U.S. Army Corps of Engineers
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CSE	Countywide Siting Element
CSMP	Construction Site Monitoring Program
CTR	California Toxics Rule
CUP	Conditional Use Permit
CWA	Clean Water Act
cy	cubic yards
D	
dBA	decibel, A-weighted
DMS	Development Monitoring System
DPH	Department of Public Health
DPV	Debris Production Volume
DTSC	Department of Toxic Substance Control
du	dwelling unit
DWR	Department of Water Resources
E	
EHL	Endangered Habitats League
EIR	Environmental Impact Report
EMFAC	Emission FACtor model
EO	Executive Order
Ep	Erosion potential
ER	Environmental Reevaluation
ESFP	Earl Schmidt Filtration Plant
ESIPS	Earl Schmidt Intake Pump Station
EV	Electric Vehicle

Acronym	Acronym and Abbreviation Description
F	
FCAA	Federal Clean Air Act
Fe	iron
FESA	Federal Endangered Species Act
FDU	Factored Development Unit
Ft	Feet
FIB	Federal Indicator Bacteria
FTIP	Federal Transportation Improvement Program
G	
GHG	Greenhouse Gas Emissions
GISP	Industrial Activities Storm Water General Permit
GM	Geometric Mean
GWMP	Groundwater Management Plan
GWP	Global Warming Potential
H	
HABS	Historic American Building Survey
HAER	Historic American Engineering Record
HALS	Historic American Landscapes Survey
HC	Hydrocarbon
HCM	Highway Capacity Manual
HFC	Hydrofluorocarbon
HHWE	Household Hazardous Waste Element
HM	Hillside Management
HMAs	Hillside Management Areas
HOA	Homeowners Association
HOT	High Occupancy Toll
HOV	High Occupancy Vehicle
hp	horsepower
HRA	Health Risk Assessment
HVAC	Heating, Ventilating and Air Conditioning
I	
I	Interstate
IBC	International Building Code
ICAPCD	Imperial County Air Pollution Control District
ICU	Intersection Capacity Utilization
IEC	Interagency Engineering Committee
IPM	Integrated Pest Management
IRUWMP	Integrated Regional Urban Water Management Plan
ITE	Institute of Transportation Engineers
IWDP	Industrial Waste Discharge Permit
IWMP	Integrated Waste Management Plan
K	
kV	Kilovolt
kWh	Kilowatt-hour

Acronym	Acronym and Abbreviation Description
L	
	Liter
LACDRP	Los Angeles County Department of Regional Planning
LACEP	Los Angeles County Energy Program
LACFD	Los Angeles County Fire Department
LACSD	Sanitation Districts of Los Angeles County
LACWWD	Los Angeles County Waterworks District
LADPW	Los Angeles County Department of Public Works
LADWP	Los Angeles County Department of Water and Power
LAFCO	Local Agency Formation Commission
LARWQCB	Los Angeles Regional Water Quality Control Board
lb	pound
LCFS	Low Carbon Fuel Standard
Ldn	Day-Night Average Sound Level
LEED	Leadership in Energy and Environmental Design
Leq	Sound Energy Equivalent Noise Level
LID	Low Impact Development
LOS	Level of Service
LSAA	Lake or Streambed Alteration Agreement
LST	Localized Significance Threshold
M	
M	Industrial
M-1	Light Manufacturing
MBAS	Methylene Blue Activated Substances
MBTA	Migratory Bird Treaty Act
MCL	Maximum Containment Level
MCLG	Maximum Containment Level Goal
Metro	Los Angeles County Metropolitan Transportation Authority
MG	Million Gallons
mg/L	milligrams per liter
mgd	million gallons per day
MLD	Most Likely Descendent
MM	Mitigation Measure
MMRP	Mitigation Monitoring and Reporting Program
$MMTCO_2e$	Million Metric Tons of CO_2 Equivalent
MOU	Memorandum of Understanding
Mph	miles per hour
MPO	Metropolitan Planning Organization
MS4	Municipal Separate Storm Sewer System
msl	mean sea level
MTA	Metropolitan Transportation Authority
$MTCO_2e$	Metric Tons of CO_2 Equivalent
mW	Megawatt
N	
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NAL	Numeric Action Level
NAP	Not a Part
NAT	No Action Taker

Acronym	Acronym and Abbreviation Description
NAWQC	National Ambient Water Quality Criteria
NCWD	Newhall County Water District
NDFE	Non-Disposal Facility Element
NHTSA	National Highway Traffic Safety Administration
NI	Non-Urban
N_2O	nitrous oxide
NO	nitric oxide
NO_2	nitrogen dioxide
NOC	Notice of Completion
NOI	Notice of Intent
NOP	Notice of Preparation
NOx	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NTM	Northlake Traffic Model
NTU	Nephelometric Turbidity Unit
NURP	National Urban Runoff Program
O	
O_3	ozone
O	Open Space
O&M	Operations and Maintenance
OPR	Office of Planning and Research
OSM	Office of Surface Mining Reclamation and Enforcement
OVOV	One Valley One Vision
P	
PAH	Polynuclear Aromatic Hydrocarbon
PDF	Project Design Feature
PeMS	Performance Measurement System
PFC	perfluorocarbon
PHG	Public Health Goal
PM	Particulate Matter
PM2.5	PM particles smaller than or equal to 2.5 microns in diameter
PM10	PM particles smaller than or equal to 10 microns in diameter
POTW	Publicly Owned Treatment Works
ppm	parts per million
PPV	Peak Particle Velocity
Q	
Qal	Alluvium
Qalo	Older Alluvium
QSD	Qualified Storm Water Pollution Prevention Plan Developer
QSP	Qualified Storm Water Pollution Prevention Plan Practioner*
Qt	terrace deposit
R	
R	Rural
RCP	Regional Comprehensive Plan
RHNA	Regional Housing Needs Assessment
ROG	Reactive Organic Gas
RPS	Renewables Portfolio Standard

Acronym	Acronym and Abbreviation Description
RR	Regulatory Requirement
RRBWSD	Rosedale-Rio Bravo Water Storage District
RRP	Recycling and Reuse Plan
RTP	Regional Transportation Plan
RVIPS	Rio Vista Intake Pump Station
RVWTP	Rio Vista Water Treatment Plant
RWQCB	Regional Water Quality Control Board
S	
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCCWRP	Southern California Coastal Water Research Project
SCE	Southern California Edison
SCOPE	Santa Clarita Organization for Planning and the Environment
SCRAA	Southern California Regional Rail Authority
SCS	Sustainable Communities Strategy
SCT	Santa Clarita Transit
SCVAP	Santa Clarita Valley Area Plan
SCVCTM	Santa Clarita Valley Consolidated Traffic Model
SCVJSS	Santa Clarita Valley Joint Sewerage System
SCVSD	Santa Clarita Valley Sanitation District
SCWD	Santa Clarita Water Division
SEA	Significant Ecological Area
SEIR	Supplemental Environmental Impact Report
SERA	Sensitive Environmental Resource Area
SF_6	sulfur hexafluoride
sf	square feet
SFD	Santa Felicia Dam
SIP	State Implementation Plan
SJVAPCD	San Joaquin Valley Air Pollution Control District
So-CAB	South Coast Air Basin
SoCalGas	Southern California Gas Company
SO_2	sulfur dioxide
SOI	Sphere of Influence
SP	Specific Plan
SR	State Route
SRA	Source Receptor Area
SRA	State Recreation Area
SRRE	Source Reduction and Recycling Element
SUSMP	Standard Urban Storm Water Mitigation Plan
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SWRP	Saugus Water Reclamation Project
T	
TAC	Toxic Air Contaminant
Tataviam	Fernandeño Tataviam Band of Mission Indians
TDM	Transportation Demand Management
TDS	total dissolved solids

Acronym	Acronym and Abbreviation Description
TIA	Traffic Impact Analysis
TKN	Total Kjeldahl Nitrogen
TMDL	Total Maximum Daily Loads
TN:TP	Total Nitrogen:Total Phosphorus
TOC	Total Organic Carbon
TSS	Total Suspended Solids
TTM	Tentative Tract Map
U	
U	Urban Residential
UBC	Uniform Building Code
USACE	U.S. Army Corps of Engineers
USBM	U.S. Bureau of Mines
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGBC	United States Green Building Council
USGS	United States Geological Survey
UV	Ultraviolet
UWCD	United Water Conservation District
UWMP	Urban Water Management Plan
UWMP Act	Urban Water Management Planning Act
V	
V/C	volume-to-capacity ratio
VCP	Vitrified Clay Pipe
VdB	Logarithmic decibel scale
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VOC	volatile organic compounds
VTTM	Vesting Tentative Tract Map
VWC	Valencia Water Company
VWRP	Valencia Water Reclamation Plant
W	
W	Watershed
WDID	Water Discharge Identification
WDR	Water Discharge Requirement
WQTR	Water Quality Technical Report
WRP	Water Reclamation Plant
WSA	Water Supply Assessment
WUI	Wildland-Urban Interface

Symbols

µg	microgram
µg/L	micrograms per liter

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SECTION 1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

The California Environmental Quality Act (CEQA) (*California Public Resources Code,* Sections 21000 et seq.) requires that lead agencies consider the potential environmental consequences of projects over which they have discretionary approval authority prior to taking approval action on such projects. An Environmental Impact Report (EIR) is a public document designed to provide the lead, responsible and interested agencies; special districts; local and State governmental agency decision makers; and the public with an analysis of potential environmental consequences to support informed decision making.

1.2 PROJECT LOCATION AND SETTING

The project site comprises approximately 1,330 acres of undeveloped land east of Interstate (I) 5, west of Castaic Lake, and north of the community of Castaic, California in unincorporated Los Angeles County. Regional access to the Specific Plan area is provided by I-5, and site access is provided via the Parker Road and Lake Hughes Road exits from I-5. Local access to the Project site is provided by Ridge Route Road, which traverses northerly along the western edge of the Project site. The proposed Project includes development of Phase 1 of the NorthLake Specific Plan to be implemented via Vesting Tentative Tract Map No. 73336 (VTTM 73336), which includes approximately 720 acres of the southern portion of the Specific Plan area and the remaining property for Phase 2 to be developed at a future time.

The Specific Plan site is surrounded by undeveloped land to the north and east, and urban development on the south and west.

The NorthLake Specific Plan Project site has been used as cattle ranchland since the early 1800s and was occupied by settlement “homesteaders” at various times throughout the 1800s and early 1900s. Approximately 600 acres of the site were acquired by legal homesteading in the name of William Cook in 1916 and became known as the Cook Ranch. Several hundred acres in the northern and western portions of the site were acquired in contemplation of the construction of Castaic Lake in the late 1960s. The Project site continues to be used for limited cattle grazing.

The Project site is generally underlain by Castaic Formation bedrock, which primarily consists of marine sandstone and siltstone. On-site soils are primarily porous, loose, silty-sand and clayey-silty-sand ranging in thickness from 2 to 52 feet. Alluvium occurs along the canyon floors of the site. No active faults or fault traces have been identified on the site. Precipitation in the vicinity of the Project site averages between approximately 14 and 16 inches per year and generally occurs from November through April.

Grasshopper Canyon traverses the central portion of the Project site in a northwest to southeast direction. The topography of Specific Plan area consists of a steeply sloping ridgeline that runs northwest to southeast along the western boundary of the site adjacent to I-5. The eastern portion of the Project site is characterized by gently rolling topography. To the east of Grasshopper Canyon, slopes gradually rise to a ridge on the site's eastern boundary. An intermittent stream, which is a United States Geologic Survey (USGS) designated “blueline” watercourse, runs through Grasshopper Canyon. Intermittent drainages convey seasonal runoff to Castaic Lagoon, which is located south of Castaic Lake. The main tributary in this area begins well to the north of the Specific Plan area at a point generally parallel with the northern reach of Castaic Lake, and continues in a southeast direction through Grasshopper Canyon, eventually reaching the northwestern edge of Castaic Lagoon. Elevations on the site range from approximately 2,300 feet

above mean sea level (msl) along the ridge lines to approximately 1,250 feet above msl in Grasshopper Canyon in the southern portion of the site.

A mix of sage scrub and grassland vegetation types dominate the Project site. Cattle grazing generally occurs east of Grasshopper Canyon and, as a result, this part of the Project site is dominated by non-native grassland. Additionally, much of the southern portion of the Project site burned in 2013. Violin Canyon in the south end of the Project site holds nuisance water from irrigation run-off most of the year, but only contains flowing water for brief periods during storm events.

1.3 PROJECT DESCRIPTION

The proposed Project is detailed in Section 4.0, Project Description, of this Draft SEIR. The Project site comprises approximately 1,330 acres of undeveloped land in unincorporated Los Angeles County. The proposed Project involves implementation of the previously approved Specific Plan; specifically, the proposed Project would involve development of up to 3,150 residential units, 9.2 acres of commercial uses, 13.9 acres of industrial uses, 791.6 acres of parks and open space, a 23-acre school site in the Phase 2 area, and a 1.4-acre pad for a future fire station.

As part of the project, External Map Improvements, including connection to existing utilities and relocation of existing utility lines, drainage facilities, and other infrastructure would occur outside of area specified as the proposed Project site.

To implement the project, the project Applicant has requested approval of: (1) VTTM No. TR073336 to subdivide 737 acres into a total of 407 lots; and (2) Conditional Use Permit No. 201500019 to authorize: (a) Northlake Specific Plan site plan review: (b) grading exceeding 100,000 cubic yards; and (c) construction of water tanks and water supply infrastructure.

Collectively, the Project is defined as the entire 1,330-acre Specific Plan site including the 737-acre VTTM No. TR073336 area and associated External Map Improvements (Phase 1), and the remaining property for Phase 2 to be developed at a future time.

The proposed Project has been designed to remediate potential geologic and flood hazards, and the residential and non-residential uses are separated from each other in order to protect the residential nature of each neighborhood. The proposed development provides for the establishment of an interconnecting internal roadway system. The Project will involve the establishment of the necessary trunk lines and connections to provide water, sewer, gas, electric, cable, and telephone service to the proposed development. Consistent with prior approval, project implementation would involve site grading that would fill in a portion of Grasshopper Creek Canyon to enable development in this area.

Project grading would require the relocation of some existing on-site easements, pipelines, and utilities to accommodate the proposed cut depths and site plan configuration. Extension of all utilities and some services to the project site will also be necessary to accommodate project implementation. To facilitate the provision of utilities and services, annexation to the Santa Clarita Valley Sanitation District, the Consolidated Sewer Maintenance District, and Newhall County Water District will be required. Other incidental approvals have been issued (i.e., 404 Permit, 1602 Streambed Alteration Agreement, and 401 Certification) to authorize development that will affect resources under regulatory agency control; however, these approvals have expired and would need to be reissued based on updated analysis.

1.3.1 PROJECT ALTERNATIVES

In accordance with Section 15126.6 of the State CEQA Guidelines, Section 6.0 of this SEIR addresses alternatives to the proposed project. Section 6.0 provides descriptions of each alternative; a comparative analysis of the potential environmental effects of each alternative to those associated with the proposed project; and a discussion of each alternative's ability to meet the project objectives. Following is a summary description of the alternatives evaluated in this SEIR. For a more detailed discussion of these alternatives and the relative impacts associated with each alternative compared to the proposed project, refer to Section 6.0, Alternatives. As required by CEQA, Section 6.0 also identifies alternatives considered but eliminated from detailed analysis and the environmentally superior alternative.

Alternative 1 – No Project/No Development. The No Project/No Development Alternative assumes the retention of the site in its existing undeveloped condition. As described in Section 3.0, Environmental Setting, the project site exists as undeveloped, naturally vegetated land with limited ranch roads throughout the site. On-site vegetation is predominately characterized by limited riparian vegetation, sage scrub, and grassland areas that have been used for cattle grazing. The site is dominated by Grasshopper Canyon, which is a north-south-trending valley located between the two prominent ridgelines to the east and west. Between the two ridgelines, one of which is located to the northwest and designated a Primary Ridgeline, Grasshopper Canyon varies from a heavily incised drainage to areas of more gentle, rolling terrain.

Alternative 2 – No Project/Development Pursuant to the Approved NorthLake Specific Plan. The purpose of the No Project/Development Pursuant To The Approved Northlake Specific Plan is to evaluate the short-term construction and long-term operational impacts related to build-out of the previously approved Specific Plan in comparison to the proposed Project. Under this alternative, future include a greater number of residential units, additional commercial and industrial acreage, and a golf course as the primary recreational use. The maximum allowed development for each land use under this alternative scenario is shown in Table 1-1 below compared to the currently proposed Project.

It is also assumed that off-site project features related to utilities and infrastructure, as described in Section 4.0, Project Description, would occur with this alternative.

Alternative 3 – No Industrial Development Alternative. The purpose of the No Industrial Development Alternative is to evaluate the short-term construction and long-term operational impacts related to build-out of the proposed Project without the 13.9-acre industrial component. Under this alternative, future development would be limited to the proposed Project site, similar to the proposed Project; however, the impact footprint would be 13.9 acres smaller than the proposed Project. The maximum allowed development for all other land uses under this alternative scenario would be the same as the proposed Project as shown in Table 6-2 of Section 6.0, Alternatives.

TABLE 1-1
LAND USE AREA COMPARISON

	Existing *NorthLake Specific Plan*		Proposed Plan		Difference	
	(ac)	(du)	(ac)	(du)	(ac)	(du)
Residential	600.3	3,623	341.9	3,150	(258.4)	473
Commercial	13.2		9.2		(4.0)	
Industrial	50.1		13.9		(36.2)	
Open Space	476		624.6		148.6	
Recreation- Golf	167		0		(167)	
Recreation- Trails/Parks	0		167		167	
School/Park Facilities	23.1		43.7[a]		20.6	
Utilities[b]			7.3		7.3	
Right of Way[b]			120.5		120.5	
Public Services (Fire Station Pad) [b]			1.4		1.4	
Total	**1,330.0**		**1,330.0[c]**			

ac: acres; du: dwelling units; (): negative

[a] Northlake Hills Elementary School was previously constructed on a 20.6-acre site.

[b] The *NorthLake Specific Plan* did not provide a breakdown of acreages for utilities, right of way, or public service facilities. Roadways were included in Residential.

[c] Totals may not add due to rounding and mapping.

Source: Sikand 2015.

It is also assumed that off-site project features related to utilities and infrastructure, as described in Section 4.0, Project Description, would occur with this alternative.

Alternative 4 – Phase 1 Development Alternative. The purpose of the Phase 1 Development Alternative is to evaluate the long-term operational impacts related to build-out of only the Phase 1 area of the proposed Project. Under this alternative, no future development would occur beyond the 720-acre area defined by Vesting Tentative Tract Map 073336, as defined in Section 4.0, Project Description and shown Table 1-2.

1.4 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the State CEQA Guidelines requires that an EIR contain a discussion of issues to be resolved, including the choice among alternatives and whether or how to mitigate significant impacts. With respect to the proposed project, the key issues to be resolved include decisions by the County of Los Angeles, as Lead Agency, as to:

- Whether this environmental document adequately describes the potential environmental impacts of the proposed project;
- Whether the recommended mitigation measures and project design features should be modified and/or adopted;
- Whether the project benefits override those environmental impacts that cannot be feasibly avoided or mitigated to a less than significant level;
- Whether there are other mitigation measures that should be applied to the project besides those identified in the EIR; and

- Whether there are any alternatives to the proposed project that would substantially lessen any of its significant impacts while achieving most of the basic project objectives.

TABLE 1-2
LAND USE STATISTICAL SUMMARY TABLE
FOR PHASE 1 (VTTM 073336)

Use	Phase 1 (VTTM 073336)	
	Number of Units	Area (Acres)
Residential: Single-Family	588	78.6
Residential: Multi-Family	1,041	69.2
Residential: Senior[a]	345	49.1
Commercial		6.7
Commercial Highway		2.5
Industrial		13.9
Park(s)		
Trails		10.5
Grasshopper Creek Park		10.6
Enhanced Parkway		38.3
Castaic Lagoon Park		17.2
Sports Park		25.8
Cody Dog Park		1.0
Open Space- Manufactured Slope		136.9
Open Space- Undisturbed		167
Utilities and Water Quality Features		
Water Tank		6.5
Pump Station		0.2
Roadways		84.3
Fire Station Pad		1.4

VTTM: Vesting Tentative Tract Map

[a] This overlay provides for a development option of attached single-family residences and age-restricted areas designated for homeowners that are 55 years of age and older. Lot sizes and configurations will be similar to those in the Single-Family area with the addition of the Attached Single-Family designation as an option. It should be noted that development within these areas may or may not be age-restricted.

Source: Sikand Engineering 2015.

1.5 AREAS OF CONTROVERSY

Section 15123(b)(2) of the State CEQA Guidelines indicates that an EIR summary should identify areas of controversy known to the Lead Agency, including issues raised by agencies and the public. This EIR has taken into consideration the comments received from the public and various agencies in response to the Notice of Preparation (NOP) of a Draft EIR. Written comments received during the NOP and scoping period are contained in Appendix A-2. Environmental issues that have been raised during opportunities for public input regarding the project are summarized in Section 2.2 of this EIR and are addressed in each relevant issue area analyzed in Section 5.1 through Section 5.12 of this Draft EIR.

Some individuals expressed concern regarding the addition of more traffic to an area that is not intended to support a large number of vehicle trips. This issue is specifically addressed in

Section 5.11, Transportation/Traffic. There were also comments raised regarding water supply and current drought conditions. This issue is specifically addressed in Section 5.12, Utilities and Service Systems.

1.6 SUMMARY OF SIGNIFICANT ENVIRONMENTAL IMPACTS

Table 1-3 presents a summary of the environmental impacts resulting from implement of the proposed NorthLake Specific Plan project. Table 1-3 addresses only those thresholds for which the Initial Study prepared for the project (included in Appendix A) concludes that impacts are potentially significant and for which additional project-level analysis has been provided in this Draft EIR. Thresholds for which it was determined that no further analysis is required are presented in the Initial Study and summarized in Section 7.1, Effects Determined Not to be Significant, of this Draft EIR. Based on the Initial Study and comments received on the NOP, the environmental issue areas identified for further study in the Draft EIR are aesthetics, air quality, biological resources, cultural resources, geology and soils, greenhouse gas (GHG) emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services/recreation, transportation/traffic, and utilities and service systems. The potential direct and indirect impacts and cumulative impacts for these topical issues are addressed in Section 5.0 of this Draft EIR. Significant irreversible environmental changes, growth-inducing impacts are addressed in Section 7.0, Other CEQA Topics.

For each environmental topic, Table 1-3 includes applicable mitigation measures are identified for impacts determined to be potentially significant. As shown in Table 1-3, the proposed project would result in less than significant impacts with implementation of MMs for the following topical areas evaluated in this Draft EIR:

- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
  Utilities and Service Systems

As described below, significant and unavoidable air quality, noise, and transportation/traffic impacts resulting from the proposed project are identified in this Draft SEIR. Because unavoidable significant adverse impacts would result from the project, the County, as Lead Agency, must prepare a “Statement of Overriding Considerations” before it can approve the project. A Statement of Overriding Considerations states that the decision-making body has balanced the benefits of the proposed project against its unavoidable significant environmental effects and has determined that the benefits of the project outweigh the adverse effects and, therefore, the adverse effects are considered to be acceptable. A summary of the significant and unavoidable impacts of the project is included below.

- ***Operational Air Quality Impacts.*** Long-term emissions would remain significant and unavoidable for CO, VOC, NO_X, PM10, and PM2.5 on a regional level, after implementation of mitigation measures.
- ***Construction Air Quality Impacts.*** Construction NOx emissions, both regional and local, would be significant and unavoidable with implementation of mitigation measures.
- ***Cumulative Air Quality Impacts.*** The project’s contribution toward long-term cumulative impacts to regional O_3, NO_2, PM10, and PM2.5 concentrations would be cumulatively significant and unavoidable.

- ***Construction Noise Impacts.*** There would be significant and unavoidable vibration and noise impacts from blasting.
- ***Operational Noise Impacts.*** Off-site residential uses and the NorthLake Elementary School would experience a significant and unavoidable impact related to noise from Project-generated traffic on Ridge Route Road north of Castaic Lake Road and off-site residential uses would experience a significant and unavoidable cumulative impact related to noise from Project-generated traffic on Ridge Route Road north of Lake Hughes Road.
- ***Cumulative Noise Impacts.*** The project's contribution toward long-term cumulative off-site residential uses would experience a significant and unavoidable cumulative impact related to noise from Project-generated traffic on Ridge Route Road north of Castaic Lake Road and Ridge Route Road north of Lake Hughes Road.
- ***Project and Cumulative Traffic Impacts.*** The proposed Project would result in significant and unavoidable cumulative impacts at the following intersections:

    - **The Old Road and I-5 Southbound Ramps.** Horizon Year 2028 (The intersection is partially under Caltrans' jurisdiction).
    - **I-5 Northbound Ramps and Lake Hughes Road.** Horizon Year 2028 (The intersection is partially under Caltrans' jurisdiction).
    - **I-5 Southbound On-Ramp and Parker Road.** Existing Plus Project and Horizon Year 2028 (This intersection is partially under Caltrans' jurisdiction).
    - **I-5 Northbound Off-Ramp and Ridge Route Road.** Existing Plus Project and Horizon Year 2028 (This intersection is partially under Caltrans' jurisdiction).
    - **Ridge Route Road at Lake Hughes.** Existing Plus Project and Horizon Year 2028. This intersection would be mitigated to LOS C (0.78), better than the LOS D threshold established in the Los Angeles County General Plan and the Santa Clarita Valley Area Plan, One Valley One Vision. However, the intersection would not be fully mitigated to the LOS C (0.74) threshold utilized in the County's Traffic Impact Analysis Guidelines. Improvements to fully mitigate the intersection to the LOS C threshold were considered, such as a southbound free-right turn lane; however, this was determined to not be geometrically feasible. Therefore, this impact would remain significant and unavoidable.

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
5.1 Air Quality		
Potentially Significant Impacts		
	Regulatory Requirements	
	RR 5.1-1 During construction of future development in the NorthLake Specific Plan area, the Contractor shall comply with South Coast Air Quality Management District (SCAQMD) Rules 402 and 403, in order to minimize short-term emissions of dust and particulates. SCAQMD Rule 402 requires that air pollutant emissions not be a nuisance off site. SCAQMD Rule 403 requires that fugitive dust be controlled with the best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. This requirement shall be included as notes on the contractor specifications. Table 1 of Rule 403 prescribes the Best Available Control Measures that are applicable to all construction projects and is included in Appendix C. The developer of each project in the NorthLake Specific Plan shall provide the County Department of Public Works with a SCAQMD-approved Dust Control Plan or other sufficient proof of compliance with Rule 403, prior to grading permit issuance. This RR is consistent with and implements SP EIR MM 4.7.2 and SCVAP MM 3.3-2.	
	RR 5.1-2 Architectural coatings shall be selected so that the volatile organic compound (VOC) content of the coatings is compliant with SCAQMD Rule 1113. This requirement shall be included as notes on the contractor specifications. The specifications for each project in the NorthLake Specific Plan shall be reviewed by the County Department of Public Works, Building and Safety Division for compliance with this requirement prior to issuance of a building permit.	
	RR 5.1-3 Industrial, commercial, medical office, school, or similar uses developed in the NorthLake Specific Plan area shall comply with SCAQMD Rule 201 and Regulation II (requiring a Permit to Construct prior to the installation of any equipment that may cause air contaminants) as well as Rule 203 (requiring a Permit to Operate prior to the use of any equipment that may cause air contaminants). These rules and regulation are required unless the equipment or aspects of the project are exempt under Rule 219, which identifies those equipment, processes, or operations that do not require permits. The developer of each building or group of buildings shall provide the County with the SCAQMD-approved Permit to Construct and Permit to Operate or other sufficient proof of compliance with Rules 201 and 203, prior to occupancy permit issuance.	
	RR 5.1-4 Future development in the NorthLake Specific Plan area shall comply with SCAQMD Rule 445, Wood Burning Devices. Rule 445 was adopted to reduce emissions of fine particulate matter with a diameter of 2.5 microns or less (PM2.5) and precludes the installation of indoor or outdoor wood burning devices (i.e., fireplaces/hearths) in new development on or after March 9, 2009. This RR is consistent with and implements SCVAP MM 3.3-7.	

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
Threshold 5.1-2 Would the project violate any air quality standards or contribute substantially to an existing or projected air quality violation?	**Construction Activities**	**Construction Activities**
	Recommended SCVAP 2012 EIR Mitigation Measures	Significant and Unavoidable
	MM 5.1-1 Prior to implementing project approval, applicants shall develop a Construction Traffic Emission Management Plan to minimize emissions from vehicles including, but not limited to, scheduling truck deliveries to avoid peak hour traffic conditions, consolidating truck deliveries, and prohibiting truck idling in excess of 5 minutes. **(SCVAP MM 3.3-1)**	
	MM 5.1-2 Prior to grading permit issuance, applicants shall develop a Construction Dust Emission Management Plan to minimize construction-related dust and particulate emissions. The Construction Emission Management Plan shall require the use of Best Available Control Measures, as specified in Table 1 of SCAQMD's Rule 403. If potentially significant impacts are identified after the implementation of the SCAQMD recommended Best Available Control Measures, the Construction Emission Management Plan shall include the following additional elements: **(SCVAP MM 3.3-2 dust measures)** • Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. When wind speeds exceed 15 miles per hour the operators shall increase watering frequency. • Active sites shall be watered at least three times daily during dry weather. • Increase watering frequency during construction or use non-toxic chemical stabilizers if it would provide higher control efficiencies. • Suspend grading and excavation activities during windy periods (i.e., surface winds in excess of 25 miles per hour). • Suspend the use of all construction equipment during first-stage smog alerts. • Application of non-toxic chemical soil stabilizers or apply water to form and maintain a crust on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days). • Application of non-toxic binders to exposed areas after cut and fill operations and hydroseeded areas.	

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
	• Cover or application of water or non-toxic chemical suppressants to form and maintain a crust on inactive storage piles. • Planting of vegetative ground cover in disturbed areas as soon as possible and where feasible. • Operate street sweepers that comply with SCAQMD Rules 1186 and 1186.1 on roads adjacent to the construction site so as to minimize dust emissions. Paved parking and staging areas shall be swept daily. • Reduce traffic speeds on all unpaved roads to 15 miles per hour or less. • Pave or apply gravel on roads used to access the construction sites when possible. • Designate personnel to monitor dust control measures to ensure effectiveness in minimizing fugitive dust emissions. • An information sign shall be posted at the entrance to each construction site that identifies the permitted construction hours and provides a telephone number to call and receive information about the construction project or to report complaints regarding excessive fugitive dust generation. Any reasonable complaints shall be rectified within 24 hours of their receipt. **MM 5.1-3** Prior to grading permit issuance, applicants shall develop a Construction Equipment Exhaust Emission Management Plan to minimize construction-related exhaust emissions. The Construction Equipment Exhaust Emission Management Plan shall require the following elements: **(SCVAP MM 3.3-2 exhaust emission measures)** • Scheduling truck deliveries to avoid peak hour traffic conditions, consolidating truck deliveries, and prohibiting truck idling in excess of 5 minutes. • Schedule construction activities that affect traffic flow to off-peak hours (e.g., between 7:00 PM and 6:00 AM, and between 10:00 AM and 3:00 PM). • Use of diesel-powered construction equipment shall use ultra-low sulfur diesel fuel.	

TABLE 1-3
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Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
	• Use electric welders to avoid emissions from gas or diesel welders when such equipment is commercially available. • Use electricity or alternate fuels for on-site mobile equipment instead of diesel equipment when such equipment is commercially available. • Use on-site electricity or alternative fuels rather than diesel-powered or gasoline powered generators when such equipment is commercially available. • Maintain construction equipment by conducting regular tune-ups according to the manufacturers' recommendations. • Minimize idling time either by shutting equipment when not in use or reducing the time of idling to 5 minutes as a maximum. • Limit, to the extent feasible, the hours of operation of heavy duty equipment and/or the amount of equipment in use. • Retrofit large off-road construction equipment that will be operating for significant periods. Retrofit technologies such as particulate traps, selective catalytic reduction, oxidation catalysts, air enhancement technologies, etc., shall be evaluated. These technologies will be required if they are certified by CARB and/or the US EPA, and are commercially available and can feasibly be retrofitted onto construction equipment. • The project applicant shall require all on-site construction equipment to meet US EPA Tier 4 or higher emissions standards according to the following: o April 2010 through December 31, 2011: All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 2 off-road emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 2 or Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. o January 1, 2012 through December 31, 2014: All off-road diesel-powered construction equipment greater than 50 horsepower (hp)	

TABLE 1-3
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Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
	shall meet Tier 3 off-road emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. o Post-January 1, 2015: All off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. A copy of each unit's certified tier specification, BACT documentations, and CARB, SCAQMD, or ICAPCD operating permit shall be provided at the time of mobilization of each applicable unit of equipment. • The contractor shall utilize low-VOC content coatings and solvents that are consistent with applicable SCAQMD and ICAPCD rules and regulations. • Consideration shall be given to use of other transportation methods to deliver materials to the construction sites (for example, trains or conveyors) if it would result in a reduction of criteria pollutant emissions. ***Recommended 1992 EIR Mitigation Measures*** **MM 5.1-4** The Project Applicant or Construction Manager shall ensure that, during all grading activities, construction grading shall be discontinued on days forecasted for first-stage alerts. ***Recommended Project Specific Mitigation Measures*** *None*	
	Blasting	**Blasting**
	Recommended SCVAP 2012 EIR Mitigation Measures *None*	Less Than Significant

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
	Recommended 1992 EIR Mitigation Measures *None* ***Recommended Project Specific Mitigation Measures*** *None*	
	Localized Significance Thresholds/Ambient Air Quality	**Localized Significance Thresholds/Ambient Air Quality**
	Recommended SCVAP 2012 EIR Mitigation Measures Refer to **MM 5.1-3** identified previously. **MM 5.1-5** Prior to implementing Project approval, applicants shall be required to conduct an LST analysis. **(SCVAP MM 3.3-3)** ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** **MM 5.1-6** The Project Applicant or Construction Manager shall ensure that, during mass grading activities, mass grading shall not occur within 1,600 feet of the Northlake Hills Elementary School when school is not in session to the maximum extent feasible. The following project specific MMs from Section 5.7, Greenhouse Gas Emissions, are relevant to this analysis: **MM 5.7-21, MM 5.7-22**	Significant and Unavoidable
	Operational Activities	**Operational Activities**
	Recommended SCVAP 2012 EIR Mitigation Measures **MM 5.1-7** Prior to final building inspection, the applicant shall provide preferential parking spaces for carpools and vanpools at major commercial and office locations. The spaces shall be clearly identified on plot plans and may not be pooled in one location. **(SCVAP MM 3.3-6)**	Significant and Unavoidable

TABLE 1-3
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Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
	MM 5.1-8 New residential developments shall allow only natural gas-fired hearths and shall prohibit the installation of wood-burning hearths and wood-burning stoves. **(SCVAP MM 3.3-7)** ***Recommended 1992 EIR Mitigation Measures*** **MM 5.1-9** A commuter computer program shall be developed for the NorthLake residents in an attempt to reduce commuter vehicle trips generated by the proposed projects. ***Recommended Project Specific Mitigation Measures*** **MM 5.1-10** Prior to the issuance of each non-residential building permit, the Applicant and its contractors shall provide plans and specifications to the County demonstrating that the following features have been incorporated into the building designs. Proof of compliance shall be provided to the County prior to the issuance of occupancy permits. • For buildings with more than ten tenant-occupants, changing/shower facilities shall be provided as specified in Section A5.106.4.3, Nonresidential Voluntary Measures, of the California Green Building Standards (CALGreen) Code. • Facilities shall be installed to support future electric vehicle charging at each non-residential building with 30 or more parking spaces. Installation shall be consistent with Section A5.106.5.3, Nonresidential Voluntary Measures (Tier 1), of the CALGreen Code. • The Project shall install 135 electric vehicle (EV) chargers[a] at non-residential parking spaces within the community. **MM 5.1-11** Prior to the issuance of each residential building permit, the Applicant and its contractors shall provide plans and specifications to the County demonstrating that the following features have been incorporated into the building designs or specifications. Proof of compliance shall be provided to the County prior to the issuance of occupancy permits • Visitor parking shall include preferentially located parking spaces for alternative-fueled vehicles. • Bicycle parking shall be provided as specified in Section A4.106.9, Residential Voluntary Measures, of the CALGreen Code, or, provide required long-term	

[a] Assumed to be Level 2 chargers that can provide enough electricity to provide a 25 mile driving range per hour spent charging.

TABLE 1-3
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Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
	and short-term bicycle parking for buildings as specified in Section 22.52.1225 of the County Zoning Ordinance, whichever is more stringent. • 100 percent of residences shall be pre-wired for an EV charging station and at least 10 percent of residences shall have an EV charging station. **MM 5.1-12** Prior to issuance of each building permit for parking structures and parking lots with 20 or more parking spaces, the Applicant and its contractors shall provide plans and specifications to the County demonstrating that the following features have been incorporated into the parking facility. Proof of compliance shall be provided to the County prior to the issuance of occupancy permits. • The parking facility shall include a minimum of five percent preferentially located parking spaces for alternative-fueled (electric, natural gas, or similar low-emitting technology) vehicles. • The parking facility shall include at least one electric vehicle charging station. Electrical lines shall be designed and sized to add additional charging stations for up to three percent of the total parking spaces when a demand is demonstrated. The design and installation shall be consistent with Section A4.106.8.2, Residential Voluntary Measures, of the CALGreen Code. • For residential parking facilities, bicycle parking shall be provided as specified in Section A4.106.9, Residential Voluntary Measures, of the CALGreen code. **MM 5.1-13** Once constructed, the Applicant shall ensure that the tenants/operators of non-residential uses include the following features and procedures. Proof of compliance shall be provided to the County within one month following the issuance of each occupancy permit. • Post signs requiring that trucks shall not be left idling for prolonged periods (i.e., in excess of 5 minutes, as required by State law). • Post both bus and Metrolink schedules in conspicuous areas. • Configure the employee work schedules around the local bus schedule and provide said schedules as evidence of compliance to Regional Planning upon request.	

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Threshold 5.1-3 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standards (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None in addition to those measures recommended under Threshold 5.1-2.* ***Recommended 1992 EIR Mitigation Measures*** *None in addition to those measures recommended under Threshold 5.1-2.* ***Recommended Project Specific Mitigation Measures*** *None in addition to those measures recommended under Threshold 5.1-2.*	Significant and Unavoidable
Threshold 5.1-4 Would the Project expose sensitive receptors to substantial pollutant concentrations?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** **MM 5.1-14** Prior to the issue of occupancy permits for each industrial building, the Permit Applicant/Developer shall demonstrate that ambient air quality concentrations of criteria pollutants at sensitive receptors resulting from the proposed use(s) shall not exceed the following: • Nitrogen dioxide (NO_2) – 0.10 parts per million (ppm), 1 hour average; 0.03 ppm, annual arithmetic mean • Inhalable particulate matter (PM10) – 2.5 micrograms per cubic meter (µg/m^3), 24-hour average; 1.0 µg/m^3-annual average • Fine particulate matter (PM2.5) – 2.5 µg/m^3, 24-hour average The Permit Applicant/Developer shall also demonstrate through preparation of a subsequent health risk assessment that the incremental health risks from toxic air pollutants at sensitive receptors resulting from the proposed use(s) shall not exceed the following: • Maximum incremental cancer risk – 10 in 1 million • Cancer burden – 0.5 excess cancer cases in areas where the cancer risk exceeds 1 in 1 million	Less Than Significant

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	• Chronic hazard index – 1.0 • Acute hazard index – 1.0 **MM 5.1-15** No playgrounds, ball fields, or other facilities that encourage active recreation shall be built west of the Southern California Edison (SCE) easement. **MM 5.1-16** Prior to the commencement of brush clearing, grading, or other activity that would generate fugitive dust, the Property Owner/Developer shall employ a Dust-Control Supervisor who will be on the site within 30 minutes of the start of work taking place each morning; will have the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all South Coast Air Quality Management District (SCAQMD) Rule 403 requirements; and will have completed the SCAQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class. **MM 5.1-17** To aid in the prevention of Valley Fever among construction crews on the Project site, the following measures shall be implemented by the Construction Contractor during all construction activities: • Hire crews from local populations where possible, since it is more likely that they have been previously exposed to the fungus and are therefore immune. • Require crews to use masks or respirators that are adequate to restrict inhalation of particulates during Project clearing, grading, and excavation operations in accordance with California Division of Occupational Safety and Health regulations. • Where acceptable to the County of Los Angeles Fire Department, control weed growth by mowing instead of disking, thereby leaving the ground undisturbed and with a mulch covering. • During rough grading and construction, the access way into the Project site from adjoining paved roadways shall be paved or treated with environmentally safe dust-control agents. **MM 5.1-18** Prior to sale, lease, or rental of any residential structure or portion thereof on the NorthLake Project site, the Property Owner/Developer shall provide to each prospective purchaser or tenant a notice and statement of acknowledgment that shall be executed (i.e., read and signed) by the prospective purchaser, lessee, or tenant that the property within NorthLake may present a temporary risk of exposure to Valley Fever spores during construction or other earth-moving activities. The	

TABLE 1-3
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Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
	form shall include strategies to reduce potential exposure to Valley Fever spores. The form and method of distribution of said notice and statement of acknowledgment shall be as approved by the County of Los Angeles Department of Regional Planning.	
Less Than Significant Impacts		
Threshold 5.1-1 Would the project conflict with or obstruct implementation of an applicable air quality management plan?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant
5.2 BIOLOGICAL RESOURCES		
Potentially Significant Impacts		
Threshold 5.2-1 Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	***Recommended SCVAP 2012 EIR Mitigation Measures*** **MM 5.2-1** If special-status species may potentially be subject to direct loss through implementation of construction activities, mitigation measures proposed as part of biological site survey reports shall include a requirement for preconstruction special-status species surveys, followed by measures to ensure avoidance, relocation or safe escape of special-status species from construction activity, whichever action is the most appropriate. If special status species are found to be brooding, denning, nesting, etc. on site during the preconstruction survey, construction activity shall be halted until offspring are weaned, fledged, etc. and are able to escape the site or be safely relocated to appropriate off-site habitat areas. A qualified biologist shall be on site to conduct surveys, to perform or oversee implementation of protective measures, and to determine when construction activity may resume. **(SCVAP 2012 EIR MM 3.7-2)** **MM 5.2-2** Impacts on sensitive habitats resulting from implementation of the Area Plan shall be compensated for through the acquisition of lands described in Policies CO 10.1.3, CO 10.1.11 and CO 10.1.12. Said acquisition shall prioritize habitat types that are particularly at risk in the region. At risk habitats include but are not limited to waterways, wetlands and vernal pools; alluvial scrub; native grasslands;	Less Than Significant

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	savannas, woodlands and forests; holly-leaf cherry and Great basin sagebrush associations; and rocklands. **(SCVAP 2012 EIR MM 3.7-2)** ***Recommended 1992 EIR Mitigation Measures*** **MM 5.2-3** Removal of riparian habitat will require coordination with the California Department of Fish and Wildlife and the U.S. Army Corps of Engineers. Mitigation for riparian habitat lost may include one or a combination of the following measures: 1) project alteration to avoid impacting the onsite riparian habitat; 2) the onsite creation of at least an equal amount of equal quality habitat; 3) enhancement of poor quality onsite habitat, usually greater than 1:1 ratio (habitat lost to habitat enhanced); and 4) creation of offsite habitat where none currently exists. Final mitigation requirements shall be determined through consultation with the appropriate agencies. **(1992 SP EIR MM 4.7-5)** ***Recommended Project Specific Mitigation Measures*** **MM 5.2-4** Mitigation for the club-haired mariposa lily and the slender mariposa lily shall consist of transplantation of lilies to a mitigation site and establishment of a self-sustaining population. Seeds will be collected from all lilies that are located within the impact boundaries and bulbs will be subsequently excavated and stored for later transplantation to a suitable mitigation site(s). The Biological Monitor shall prepare a Mitigation Plan for review and approval by LACDRP and shall oversee its implementation. Development of the Mitigation Plan shall consist of the following activities: • A pre-grading survey shall be conducted during the peak flowering period (approximately March through June) by the Biological Monitor. The Biological Monitor shall clearly identify each lily location within the impact area with a pin flag for later collection. The pre-grade survey shall also document the approximate coverage of native and non-native plants at each lily population to be impacted. • The existing lily locations shall be monitored every two weeks by Biological Monitor or a qualified Seed Collector to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities.	

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	• Individual lily bulbs shall be excavated and collected following the seed collection and once the bulbs have entered their winter dormancy period (approximately September 1). The bulbs shall be stored by a qualified nursery or institution with appropriate storage facilities and all non-target bulbiferous species shall be discarded. • A mitigation site, shall be located in dedicated open space in the study area or at an off-site mitigation site. The mitigation site shall have similar soils, associated native species, and topographical features to the impact areas. If any lily species occur in the mitigation site, no pesticides or herbicides shall be used. • Approximately 60 percent of the seeds and bulbs collected shall be spread and/or placed in the fall following soil preparation. Forty percent of the seed and bulbs shall be kept in storage for subsequent seeding, if necessary. • Approximately 60 percent of the seeds and bulbs collected shall be spread and/or placed in the fall following soil preparation. Forty percent of the seed and bulbs shall be kept in storage for subsequent seeding, if necessary. • A detailed Maintenance and Monitoring Plan shall be developed by the Biological Monitor. The plan shall include detailed descriptions of maintenance appropriate for the site, monitoring requirements, and annual report requirements. • Performance criteria shall be developed in the Maintenance and Monitoring Plan and approved by the LACDRP Biologist. The performance criteria shall address (1) native and non-native plant coverage requirements (mitigation site conditions should be consistent with lily populations in the impact area) and (2) percentage of lilies that bloom each year (e.g., 70 percent of transplanted bulbs bloom during the first year after transplantation, 60 percent the second year, 50 percent the third year, 40 percent the fourth year, and 30 percent the fifth year). • The monitoring shall be conducted for five years, or until the mitigation site reaches its performance standards. If the performance standards are not being met during the first year, remediation measures shall be implemented prior to seeding with the remaining 40 percent of seed and	

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	bulbs. Remedial measures may include the following actions based on the recommendations of the Biological Monitor: soils testing, control of invasive species, placement of mulch, application of native seed, and/or protection from herbivores. Additional mitigation measures may be suggested as determined appropriate by the Biological Monitor, including identification of a new mitigation site(s) if it is determined that the initial mitigation site(s) are incompatible with lily establishment. • Potential seed sources from additional donor sites shall also be identified in case it becomes necessary to collect additional seed for use on the site following performance of remedial measures. **MM 5.2-5** The Project Applicant shall prepare and implement a Special Status Plant Species Restoration Plan covering the round-leaved filaree, paniculate tarplant, and southwestern spiny rush that shall specify, at a minimum, the following: (1) procedures for the collection and temporary storage of seed (all available seed from every impacted occurrence shall be collected); (2) planting procedures, including soil preparation and irrigation; (3) a schedule and action plan to maintain and monitor restored and/or created populations; (4) methods to control plant densities (of competing plants) to promote the establishment of round-leaved filaree, paniculate tarplant, and southwestern spiny rush; and (5) a list of County-approved success criteria (e.g., germination rates, growth, plant cover) to compare to the density of existing populations. The Project Applicant shall develop the Special Status Plant Species Restoration Plan and the County shall approve it prior to any vegetation clearing or grading on the site. Adoption of this plan shall be used as the performance standard. An overview of the plan objectives is provided in the Biological Resource Mitigation Program to be submitted and approved by the County prior to issuance of grading permits. Prior to the commencement of vegetation clearing and/or grading activities, the Project Applicant shall contract a qualified firm to harvest round-leaved filaree, paniculate tarplant, and southwestern spiny rush seeds from the impacted populations on the Project site. In addition, seeds of Peirson's morning glory shall also be collected. The seed shall be collected in the manner and time described in the Special Status Plant Species Restoration Plan. The harvested seed of round-leaved filaree, paniculate tarplant, and southwestern spiny rush shall be used for the creation and/or enhancement of these species' populations that will be preserved in open space areas on the Project site, or off-site preserved areas if open space areas on the Project site are not suitable. The harvested seeds of	

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SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
	Peirson's morning glory will be included in the seed mixes for the restoration of Foothill needlegrass grasslands described in Mitigation Measures 1 and 2. Round-leaved filaree, paniculate tarplant, and southwestern spiny rush shall be planted in appropriate areas on the site within preserved open space (if feasible), or at designated off-site preserve locations that are suitable at a 1:1 ratio to compensate for the loss of individuals impacted by the Project. Due to the fact that round-leaved filaree has not been detected since 2001 (these species were not re-located during subsequent focused plant surveys), the occurrence location will be checked prior to construction during the appropriate blooming period to determine if this species still occurs on the site. If it is not found, the population will be assumed extirpated; no impacts to them would then be expected and no mitigation for this species would be required. **MM 5.2-6** The loss of sage scrub habitat within the impact area is considered a significant impact. Sage scrub habitat shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP). The ratio shall be no less than 2:1 for habitat restoration or preservation. Habitat enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. The mitigation ratio for habitat enhancement shall depend on the initial quality of the habitat area to be enhanced, and would be determined by the Project Applicant and the LACDRP. Sage scrub habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The Project Applicant shall develop a Habitat Mitigation and Monitoring Program (HMMP) and shall submit it to the LACDRP for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). Habitat restoration/enhancement will consist of seeding and/or installing container plants of suitable sage scrub species. If it is ecologically appropriate for the selected mitigation site (e.g., soil types), Peirson's morning-glory will be incorporated into the restoration/enhancement planting and/or seeding palettes. The Project Applicant shall implement the HMMP as approved by the LACDRP and according to its specified materials, methods, and performance criteria, which shall include the following items: a. **Responsibilities and Qualifications.** The responsibilities and qualifications of the Project Applicant, ecological specialists, and	

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
	restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration programs, implemented under LACDRP mitigation measures and/or State or federal natural resource agency permit conditions. A successful program shall be defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency. b. **Performance Criteria.** Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The HMMP shall state that the use of the mitigation site by special status wildlife species (e.g., coastal California gnatcatcher), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program sign-off. c. **Site Selection.** The mitigation sites shall be determined in coordination with the Project Applicant and the LACDRP. The site(s) shall be located in dedicated open space areas, and shall be contiguous with other natural open space areas. d. **Native Plant and Seed Materials Procurement.** At least two years prior to mitigation implementation of the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. All container plants shall be propagated from seed of local origin as defined above. No plant or seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in the following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations. e. **Wildlife Surveys and Protection.** The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., coastal California gnatcatcher]) and biological	

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

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	monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. The HMMP shall also describe potential restrictions on these management tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits). f. **Site Preparation and Plant Materials Installation.** Mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, de-compacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photo-degradable'] fiber roll); (f) application of salvaged native plant materials (i.e., duff) as available, and supervised by a biological monitor; (g) temporary irrigation installation; (h) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)—including specification of approved herbicides; (i) planting of container species; and (j) seed mix application. g. **Schedule.** An implementation schedule shall be developed that includes planting and seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below). h. **Maintenance Program.** The Maintenance Program shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal—including specification of approved herbicides; (d) maintenance of erosion-control measures; (e) inspection/repairs of irrigation components; (f) replacement of dead container plants (as needed); (g) application of remedial seed mixes (as needed); (h) herbivory control; and (i) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. The mitigation site shall be maintained for a period of five years to ensure the successful sage scrub habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to	

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

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	be released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria. i. **Monitoring Program.** The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative monitoring (e.g., randomly placed point-intercept transects); (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the Project Applicant has been released from maintenance requirements by the LACDRP. j. **Long-term preservation.** Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program. **MM 5.2-7** The loss of California annual grassland/wildflower fields within the impact area is considered to be a significant impact. California annual grassland/wildflower fields shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP). Habitat enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. The ratio shall be no less than 2:1 for habitat restoration or preservation. The mitigation ratio for habitat enhancement shall depend on the initial quality of the habitat area to be enhanced, and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). California annual grassland/wildflower fields habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The project applicant shall develop a HMMP and shall submit it to the LACDRP for review and approval. The	

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
	HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for burrowing owl. Habitat restoration/enhancement shall consist of seeding of suitable California annual grassland/wildflower fields plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP and according to its specified materials, methods, and performance criteria, which shall include the following items: • The responsibilities and qualifications of the project applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration programs, implemented under LACDRP mitigation measures or State and/or federal natural resource agency permit conditions. A successful program shall be defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency. • Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The performance criteria shall reflect the habitat requirements for burrowing owl; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The HMMP shall state that the establishment of burrowing owls, and/or special status plant species (e.g., Peirson's morning-glory), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program sign-off. • The mitigation sites shall be determined in coordination with the project applicant and the LACDRP. The site(s) shall be (1) located in dedicated open space areas, and shall be contiguous with other natural open space areas; (2) configured to provide maximum habitat values for burrowing owl and other wildlife species; e.g., opportunities for escape and refuge from	

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

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	stochastic events such as fire, flood, etc.; (3) consist of level or gently sloping terrain, soil types, and microhabitat conditions suitable for occupation by the burrowing owl as determined by a qualified Biologist; and (4) include, to the extent feasible, soil types and microhabitat conditions suitable for the special status plant species listed above. • At least two years prior to mitigation plant and seed installation, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. No seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in the following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations. • The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., burrowing owl]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. Specifically, the HMMP shall specify the performance of wintering and breeding season surveys for burrowing owl, to determine the species' occupation of the mitigation site(s). The HMMP shall also describe potential restrictions on these tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits). • Mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, de-compacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photo-degradable'] fiber roll); (f) temporary irrigation installation; (g) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)—including specification of approved herbicides; and (g) seed mix application. Mitigation site preparation and installation shall reflect the habitat	

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
	requirements for burrowing owl; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. • An implementation schedule shall be developed that includes seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below). • The Maintenance Program shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal—including specification of approved herbicides; (d) maintenance of erosion-control measures; (e) inspection/repairs of irrigation components; (f) application of remedial seed mixes (as needed); (g) herbivory control; and (h) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owl; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The mitigation site shall be maintained for a period of five years to ensure successful foothill needlegrass grassland habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria. • The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative monitoring; (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the project applicant has been released from maintenance requirements by the LACDRP.	

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

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	• Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program:	
	MM 5.2-8 The loss of foothill needlegrass grassland within the impact area is considered to be a significant impact. Foothill needlegrass grassland shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP). Habitat enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. The ratio shall be no less than 2:1 for habitat restoration or preservation. The mitigation ratio for habitat enhancement shall depend on the initial quality of the habitat area to be enhanced, and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). Foothill needlegrass grassland habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The project applicant shall develop a HMMP and shall submit it to the LACDRP for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for burrowing owl. Habitat restoration/enhancement shall consist of seeding of suitable foothill needlegrass grassland plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP and according to its specified materials, methods, and performance criteria, which shall include the following items: a. **Responsibilities and Qualifications.** The responsibilities and qualifications of the project applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern	

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

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	California native habitat mitigation/restoration programs, implemented under LACDRP mitigation measures or State and/or federal natural resource agency permit conditions. A successful program shall be defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency. b. **Performance Criteria.** Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The performance criteria shall reflect the habitat requirements for burrowing owl; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The HMMP shall state that the establishment of burrowing owls, and/or special status plant species (e.g., Peirson's morning-glory), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program sign-off. c. **Site Selection.** The mitigation sites shall be determined in coordination with the project applicant and the LACDRP. The site(s) shall be (1) located in dedicated open space areas, and shall be contiguous with other natural open space areas; (2) configured to provide maximum habitat values for burrowing owl and other wildlife species; e.g., opportunities for escape and refuge from stochastic events such as fire, flood, etc.; (3) consist of level or gently sloping terrain, soil types, and microhabitat conditions suitable for occupation by the burrowing owl as determined by a qualified Biologist; and (4) include, to the extent feasible, soil types and microhabitat conditions suitable for the special status plant species listed above. d. **Seed Materials Procurement.** At least two years prior to mitigation plant and seed installation, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. No seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in the following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations.	

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

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	e. **Wildlife Surveys and Protection.** The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., burrowing owl]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. Specifically, the HMMP shall specify the performance of wintering and breeding season surveys for burrowing owl, to determine the species' occupation of the mitigation site(s). The HMMP shall also describe potential restrictions on these tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits). f. **Site Preparation and Plant Materials Installation.** Mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, de-compacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photo-degradable'] fiber roll); (f) temporary irrigation installation; (g) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)—including specification of approved herbicides; and (g) seed mix application. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owl; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. g. **Schedule.** An implementation schedule shall be developed that includes seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below). h. **Maintenance Program.** The Maintenance Program shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal—including specification of approved herbicides; (d) maintenance of erosion-control measures; (e) inspection/repairs of irrigation components; (f) application of remedial seed mixes (as needed); (g) herbivory control; and (h) removal of all non-	

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

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	vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owl; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The mitigation site shall be maintained for a period of five years to ensure successful foothill needlegrass grassland habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria. i. **Monitoring Program.** The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative monitoring; (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the project applicant has been released from maintenance requirements by the LACDRP. j. **Long-term preservation.** Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program **MM 5.2-9** A relocation program for western spadefoot toad shall be conducted prior to construction during the spring at the height of the breeding season for this species (February through May, or as determined by a qualified Biologist monitoring a known location of this species). A detailed methodology for this effort shall be reviewed by the CDFW and the LACDRP prior to implementation of the relocation program. Results of the relocation program shall be provided to the CDFW and the LACDRP. • The intent of the Relocation Plan is to capture and relocate as many western spadefoot toads as possible. Western spadefoot toads shall be relocated on or off site to an area of suitable habitat, as reviewed by the	

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

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	CDFW and the LACDRP. The relocation site shall be of similar (or better) quality as the habitat within the project impact area where the western spadefoot toads are captured. If no suitable habitat is available for the relocation, suitable habitat shall be created. **MM 5.2-10** A Biological Monitor shall be on site during the all vegetation clearing activities and thereafter on an as-needed basis. The Biological Monitor will conduct a clearance sweep prior to clearing activities to minimize potential for special status reptile mortality. If feasible, special status reptiles will be removed from the disturbance area and relocated to suitable habitat in adjacent areas. **MM 5.2-11** Riparian vegetation shall be preserved, restored, or enhanced on site or off site at a ratio identified in the USACE and CDFW permits/agreements for the project. The ratio shall be no less than 2:1 for habitat restoration or preservation. Habitat enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. The mitigation ratio for habitat enhancement shall depend on the initial quality of the habitat area to be enhanced, and would be determined by the Project Applicant, the USACE, the CDFW, and the LACDRP. Riparian habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The Project Applicant shall develop a HMMP and shall submit it to the USACE, the CDFW, and the LACDRP for review and approval. The HMMP shall be developed by a qualified restoration ecologist and approved by the USACE, the CDFW, and the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). Habitat restoration/enhancement will consist of seeding and/or installing container plants and cuttings of suitable riparian plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil types), spiny rush will be incorporated into the restoration/enhancement planting and/or seeding palettes. The Project Applicant shall implement the HMMP as approved by the LACDRP and according to its specified materials, methods, and performance criteria, which shall include the following items: a. **Responsibilities and Qualifications.** The responsibilities and qualifications of the Project Applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern	

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
	California native habitat mitigation/restoration programs, implemented under USACE and CDFW permit conditions. A successful program shall be defined as one that has been signed off on by the USACE and the CDFW. b. **Performance Criteria.** Mitigation performance criteria to be specified in the HMMP shall conform to USACE and CDFW permit conditions. The HMMP shall state that the use of the mitigation site by special status wildlife species (e.g., least Bell's vireo), though not a requirement for site success, would be regarded by the USACE, the CDFW, and the LACDRP, as a significant factor in considering eligibility for program sign-off. c. **Site Selection.** The mitigation sites shall be determined in coordination with the Project Applicant, the USACE, the CDFW, and the LACDRP. The site(s) shall be located in dedicated open space areas, and shall be contiguous with other natural open space areas. d. **Seed Materials Procurement.** At least two years prior to mitigation implementation, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. No seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in the following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations. e. **Wildlife Surveys and Protection.** The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., least Bell's vireo]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. The HMMP shall also describe potential restrictions on these tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits).	

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

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	f. **Site Preparation and Plant Materials Installation.** Mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, de-compacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photo-degradable'] fiber roll); (f) application of salvaged native plant materials (i.e., coarse woody debris), as available and supervised by a biological monitor; (g) temporary irrigation installation; (h) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)—including specification of approved herbicides; (i) planting of container plant and cutting species; and (j) seed mix application. g. **Schedule.** An implementation schedule shall be developed that includes planting and seeding to occur in late fall and early winter (i.e., between November 1 and February 15) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below). h. **Maintenance Program.** The Maintenance Program shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal—including specification of approved herbicides; (d) maintenance of erosion-control measures; (e) inspection/repairs of irrigation components; (f) replacement of dead container plant and cuttings (as needed); (g) application of remedial seed mixes (as needed); (h) herbivory control; and (i) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. The mitigation site shall be maintained for a period of five years to ensure the successful sage scrub habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the USACE, the CDFW, and the LACDRP prior to five years if the mitigation program has achieved all performance criteria. i. **Monitoring Program.** The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative	

TABLE 1-3
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	monitoring (in conformance with the USACE 2015 Guidelines); and (c) annual monitoring reports, which shall be submitted to the USFWS, the CDFW, and the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the Project Applicant has been released from maintenance requirements by the USACE, the CDFW, and the LACDRP. j. **Long-term preservation.** Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program. **MM 5.2-12** Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of vegetation associated with project implementation, the limits of disturbance shall be clearly defined and marked in the field using lath and flagging or orange snow fencing. The Biological Monitor shall review the limits of disturbance prior to initiation of construction activities. The Biological Monitor shall be on site during the initial vegetation clearing and thereafter on an as-needed basis to assist the Project Applicant with mitigation measure compliance and to provide guidance in avoiding and/or minimizing impacts to biological resources. **MM 5.2-13** The Project shall be conducted in compliance with the conditions set forth in the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code with methods approved by USFWS and CDFW to protect active bird/raptor nests. The nature of the Project requires that work would be initiated during the breeding season for nesting birds (March 15–September 15) and nesting raptors (February 1–June 30). LACFCD, in consultation with a qualified biologist, may employ bird exclusionary measures (e.g., mylar flagging) prior to the start of bird breeding season to minimize opportunities for birds to nest within established boundaries of the Project. In order to avoid direct impacts on active nests, a pre-construction survey shall be conducted by a qualified Biologist for nesting birds and/or raptors within 3 days prior to clearing of any vegetation or any work near existing structures (i.e., within 50 feet for nesting birds and within 500 feet for nesting raptors). If the Biologist does not find any active nests within or immediately adjacent to the impact area, the	

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

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		vegetation clearing/construction work shall be allowed to proceed. Results of the surveys will be provided to the CDFW and the LACDRP. If the Biologist finds an active nest within or immediately adjacent to the construction area and determines that the nest may be impacted or breeding activities substantially disrupted, the Biologist shall delineate an appropriate buffer zone (at a minimum of 25 feet) around the nest depending on the sensitivity of the species and the nature of the construction activity. Any nest found during survey efforts shall be mapped on the construction plans. The active nest shall be protected until nesting activity has ended. To protect any nest site, the following restrictions to construction activities shall be required until nests are no longer active, as determined by a qualified Biologist: (1) clearing limits shall be established within a buffer around any occupied nest (the buffer shall be 25–100 feet for nesting birds and 300–500 feet for nesting raptors), unless otherwise determined by a qualified Biologist and (2) access and surveying shall be restricted within the buffer of any occupied nest, unless otherwise determined by a qualified Biologist. Encroachment into the buffer area around a known nest shall only be allowed if the Biologist determines that the proposed activity would not disturb the nest occupants. Construction can proceed when the qualified Biologist has determined that fledglings have left the nest or the nest has failed. Burrowing owls are raptors that use burrows for wintering and nesting (during the raptor breeding season). If a wintering burrow is observed during the non-nesting season, the burrow will be monitored by a qualified Biologist and, when the raptor is away from the burrow, the burrow will be removed (or the burrow closed) so raptors cannot return to the burrow. The qualified Biologist will supervise the removal of the burrow.	
	MM 5.2-14	Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of potentially suitable wintering burrowing owl habitat, the area shall be assessed. If the habitat assessment concludes that the area lacks potentially suitable burrowing owl burrows, no additional action is required. However, if potentially suitable burrows are located in the assessment area, any burrows that may be impacted by the project will be replaced with artificial burrows within on-site or off-site (if applicable) preserved areas with potentially suitable burrowing owl habitat.	
	MM 5.2-15	Due to the close proximity of occupied habitat of a federally listed coastal California gnatcatcher, the Project shall not commence without consultation with the USFWS due to the potential for take per the FESA. The consultation will occur within the framework of Section 7 through the USACE regulatory permitting process. If	

TABLE 1-3
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		required by the USFWS, a Biological Assessment will be provided to support the Service's Biological Opinion.	
	MM 5.2-16	To limit the amount of operational noise (i.e., from residents) to surrounding natural open space areas, a 100-foot buffer within the fuel-modification zone shall be planted along the boundary of developed land uses with plant species to be reviewed and approved by the Los Angeles County Fire Department and the LACDRP Biologist. The vegetation within the transition zone buffer will block sound waves and screen noise from the adjacent development so that the amount of indirect noise reaching the wildlife habitat would be reduced. Landscaping in areas adjacent to natural open space shall use species native to the project region that are considered fire-retardant (e.g., toyon [*Heteromeles arbutifolia*]). The Planting Plan shall be submitted to the Los Angeles County Fire Department and LACDRP Biologist for review and approval prior to issuance of a building permit.	
	MM 5.2-17	Prior to the issuance of building permits, a Lighting Plan for the subject tract shall be submitted to the LACDRP for review and approval to demonstrate that lighting from the proposed project shall be directed away from natural open space areas and any proposed biological resources mitigation sites. Land uses with high-intensity lighting shall be relocated within the development to areas away from natural open space.	
	MM 5.2-18	To limit the amount of human disturbance to surrounding natural open space areas, a Fencing Plan to deter project occupants from entering the natural areas shall be prepared by the project developer and implemented. The Fencing Plan shall include provisions for signs and split-rail fencing to direct residents to keep out of sensitive natural open space and revegetation and/or mitigation areas. In areas bordering natural open space and fuel-modification zones, the Landscape Plan shall reflect a transition zone designed to buffer natural habitats from developed areas. This transition zone should reduce impacts associated with invasion by introduced species and should help buffer human activity adjacent to the wildlife habitat. Landscaping in areas adjacent to natural open space shall use species native to the project region (e.g., toyon) and be consistent with guidelines from the Los Angeles County Fire Department.	
	MM 5.2-19	Landscaping designs shall be submitted to LACDRP for review and approval by a qualified Biologist. The review shall ensure that no invasive, exotic plant species are used in any proposed landscaping and that suitable substitutes are proposed.	

TABLE 1-3
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		Ideally, only native species from the Santa Clarita Valley region shall be used in landscaping along the project boundaries adjacent to open space.	
	MM 5.2-20	Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of potentially suitable bat roosting habitat, namely rocky outcrops or trees, a qualified Biologist shall conduct a pre-construction bat habitat assessment of the potential habitat marked for removal. Potential for roosting will be categorized by (1) potential for solitary roost sites and (2) potential for colonial roost sites (i.e., ten bats or more). If the potential for colonial roosting is determined, those rocky outcrops or trees shall not be removed during the bat maternity roost season (March 1 to July 31). Trees potentially supporting colonial roosts outside the maternity roost season and trees potentially supporting solitary roosts may be removed via a two-step removal process whereby, at the direction of the Biologist, some level of disturbance (such as trimming of lower branches of trees) is applied to the habitat on the day prior to removal to allow bats to escape during the darker hours. In the case of a tree, it shall be removed the following day (i.e., there shall be no less or more than one night between initial disturbance and the grading or tree removal). Rock outcrops potentially supporting colonial roosts outside the maternity roost season and rock outcrops potentially supporting solitary roosts may be fitted with a bat exclusionary device, at the entry location, whereby bats are allowed to leave the structure but unable to return. The structure can be demolished the following day.	
	MM 5.2-21	Prior to the issuance of a grading permit, the project applicant will apply for coverage under the State Water Resources Control Board's General Permit for Storm Water Discharge Associated with Construction Activity (Construction Activities General NPDES Permit) and will comply with all the provisions of the permit, including the development of a Storm Water Pollution Prevention Plan, which includes provisions for the implementation of Best Management Practices and erosion control measures. Best Management Practices will include both structural and non- structural measures. The purpose of this mitigation measure is to ensure that site runoff does not adversely affect downstream biological resources including Castaic Lake, Castaic Creek, and the Santa Clara River.	

TABLE 1-3
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Threshold 5.2-2 Would the Project have a substantial adverse effect on any sensitive natural communities (e.g., riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetlands) identified in local or regional plans, policies, regulations, or by CDFW or USFWS?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** Refer to MMs 5.2-6 through 5.2-8, and MM 5.2-11, identified previously.	Less Than Significant
Threshold 5.2-3 Would the project have a substantial adverse effect on federally or state protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, and drainages) or waters of the United States, as defined by Section 404 of the federal Clean Water Act or California Fish and Game Code Section 1600, et. seq. through direct removal, filling, hydrological interruption, or other means?	***Recommended SCVAP 2012 EIR Mitigation Measures*** Refer to MM 5.2-2 identified previously. ***Recommended 1992 EIR Mitigation Measures*** Refer to MM 5.2-3 identified previously. ***Recommended Project Specific Mitigation Measure*** Refer to MM 5.2-11 identified previously.	Less Than Significant
Threshold 5.2-4 Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** Although a significant impact was not identified, implementation of MMs 5.2-9 and 5.2-13, identified previously, would further reduce less than significant impacts on native wildlife nursery sites.	Less Than Significant

TABLE 1-3
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5.3 CULTURAL RESOURCES		
Potentially Significant Impacts		
Threshold 5.3-1 Would the Project disturb any human remains, including those interred outside of formal cemeteries?	***Recommended SCVAP 2012 EIR Mitigation Measures*** **MM 5.3-1** If human remains are encountered during a public or private construction activity, other than at a cemetery, State Health and Safety Code 7050.5 states that no further disturbance shall occur until the Los Angeles County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The Los Angeles County Coroner must be notified within 24 hours. If the coroner determines that the burial is not historic, but prehistoric, the Native American Heritage Commission (NAHC) must be contacted to determine the most likely descendent (MLD) for this area. The MLD may become involved with the disposition of the burial following scientific analysis. (**SCVAP 2012 EIR MM 3.8.7)** ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant
Threshold 5.3-3 Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5? and **Threshold 5.3-4** Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic features, or contain rock formations indicating potential paleontological resources?	***Recommended SCVAP 2012 EIR Mitigation Measures*** **MM 5.3-2** In the unlikely event that artifacts are found during grading within the County's Planning Area or future roadway extensions, an archaeologist will be notified to stabilize, recover, and evaluate such finds. (**SCVAP 2012 EIR MM 3.8.3)** **MM 5.3-3** For archeological sites accidentally discovered during future construction, there shall be an immediate evaluation of the find by a qualified archeologist. If the find is determined to be a historical or unique archeological resource, as defined under CEQA, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be provided. Construction work may continue on other parts of the construction site while historical/archeological mitigation takes place, pursuant to Public Resources Code Section 21083.2(i). (**SCVAP 2012 EIR MM 3.8.5)** **MM 5.3-4** During grading activities. In the unlikely event that artifacts are found during grading within the Project site, a paleontologist will be notified to stabilize, recover, and evaluate such finds. (**SCVAP 2012 EIR MM 3.8.6, modified)**	Less Than Significant

TABLE 1-3
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	MM 5.3-5 Avoidance is the preferred treatment for cultural resources. Where feasible, project plans shall be developed to allow avoidance of cultural resources. Where avoidance of construction impacts is possible, covering of the cultural resource site with a layer of chemically stable soil and avoidance planting (e.g., planting of prickly pear cactus) shall be employed to ensure that indirect impacts from increased public availability to the site are avoided. Where avoidance is selected, cultural resource sites shall be deeded into permanent conservation easements or dedicated open space. **(SCVAP 2012 EIR MM 3.8.1)** **MM 5.3-6** If avoidance and/or preservation of in place cultural resources is not possible, the following mitigation measures shall be initiated for each impacted site: a. A participant-observer, as determined by the Native American Heritage Commission (NAHC), shall be used during archaeological testing or excavation in the project site. b. Prior to the issuance of a grading permit for the project, the project proponent shall develop a test level research design detailing how the cultural resource investigation shall be executed and providing specific research questions that shall be addressed through the excavation program. In particular, the testing program shall characterize the site constituents, horizontal and vertical extent, and, if possible, period of use. The testing program shall also address the California Register and National Register eligibility of the cultural resource and make recommendations as to the suitability of the resource for listing on either Register. The research design shall be submitted to the County of Los Angeles Regional Park and Open-Space District for review and comment. For sites determined, through the Testing Program, to be ineligible for listing on either the California or National Register, execution of the Testing Program will suffice as mitigation of project impacts to this resource. **(SCVAP 2012 EIR MM 3.8.2)** ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** **MM 5.3-7** All Project-related ground-disturbing activities in archaeologically sensitive sediments shall be monitored by a qualified Archaeologist to reduce any archaeological resources impacts to a level considered less than significant. The construction monitoring program shall be preceded by a pre-grade meeting in the	

TABLE 1-3
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	field in which the Project Archaeologist shall explain the procedures necessary to protect and safely remove potentially significant archaeological resources, and shall establish procedures for monitoring based on the sensitivity of the sediments being graded, schedule, and other information received from the applicant. If potential cultural sites are identified during construction-related ground disturbances, all work in that location shall cease or be immediately diverted until the qualified archaeologist has evaluated the nature and significance of the find. The Project Applicant shall then be notified if the materials are believed to be potentially significant, and the archaeologist may recommend further study and mitigation to the satisfaction of LACDRP. **MM 5.3-8** At such time when the Project Archaeologist is on-site for monitoring activities, a qualified Native American Tribal Monitor shall be notified and invited to observe ground-disturbing activities. The Native American Tribal Monitor shall coordinate with the Project Archaeologist and provide input regarding potential resources or cultural sites. Should any resources be discovered, the procedures set forth in MM 4.3-2 shall be followed. **MM 5.3-9** All Project-related ground-disturbing activities in paleontologically sensitive sediments shall be monitored by a qualified Paleontologist to reduce any impacts to non-renewable fossil resources to a level considered less than significant. The construction monitoring program shall be preceded by a pre-grade meeting in the field in which the Project Paleontologist shall explain the procedures necessary to protect and safely remove potentially significant fossil materials for study and curation at the Natural History Museum of Los Angeles County, and shall establish procedures for monitoring based on the sensitivity of the sediments being graded, schedule, and other information received from the applicant. If potential paleontological sites are identified during construction-related ground disturbances, all work in that location shall cease or be immediately diverted until the qualified paleontologist has evaluated the nature and significance of the find. The Project Proponent will then be notified if the materials are believed to be potentially significant, and the paleontologist may recommend further study and mitigation to the satisfaction of LACDRP.	

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

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Less Than Significant Impacts		
Threshold 5.3-2 Would the Project cause a substantial adverse change in the significance of a historical resources as defined in CEQA Guidelines?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant
5.4 ENERGY		
Less Than Significant Impacts		
Threshold 5.4-1 Would the project involve the inefficient use of energy resources (see Appendix F of the CEQA Guidelines)?	***Recommended SCVAP 2012 EIR Mitigation Measures*** Although compliance with regulatory plans, policies and regulations would ensure that impacts related to the inefficient use of energy resources would not occur, implementation of the following measures would apply and would further ensure that a significant impact would not occur. **MM 5.4-1** The County shall review all development plans to guarantee that energy conservation and efficiency standards of Title 24 are met and are incorporated into the design of the proposed project prior to approval. (**SCVAP 2012 EIR MM 3.17-7)** **MM 5.4-2** The County shall review all development proposals to guarantee that sufficient energy resources and facilities are available to supply adequate energy to the proposed project and associated uses prior to approval. (**SCVAP 2012 EIR MM 3.17-6)** ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

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Threshold 5.4-2 Would the proposed project create energy utility system capacity problems, or result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant
5.5 FIRE HAZARDS, EMERGENCY RESPONSE, AND ENVIRONMENTAL SAFETY		
Less Than Significant Impacts		
Threshold 5.5-1 Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or waste into the environment?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant
Threshold 5.5-2 Would the project impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan? and **Threshold 5.5-3** Would the project result in inadequate emergency access?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

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Threshold 5.5-4 Would the project expose people of structures to a significant risk of loss, injury or death involving fires, because the project is located within a Very High Fire Hazard Severity Zone (Fire Zone 4)?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant
Threshold 5.5-5 Would the Project expose people or structures to a significant risk of loss, injury or death involving fires, because the project is located within a high fire hazard area with inadequate access?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant
Threshold 5.5-6 Would the Project expose people of structures to a significant risk of loss, injury or death involving fires, because the project is located within an area with inadequate water and pressure to meet fire flow standards?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant
Threshold 5.5-7 Would the Project expose people of structures to a significant risk of loss, injury or death involving fires, because the project is located within proximity to land uses that have the potential for dangerous fire hazard?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

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5.6 GEOLOGY AND SOILS		
Potentially Significant Impacts		
Threshold 5.6-2 Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking? **Threshold 5.6-3** Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction and lateral spreading? and **Threshold 5.6-4** Would the Project be located on a geologic unit or soils 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?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant
Threshold 5.6-5 Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant
Threshold 5.6-6 Would the project result in substantial soil erosion or the loss of topsoil?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures***	Less Than Significant

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

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	None ***Recommended Project Specific Mitigation Measures*** *None*	
Threshold 5.6-7 Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant
Less Than Significant Impacts		
Threshold 5.6-1 Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known active fault trace? Refer to Division of Mines and Geology Special Publication 42.	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant
5.7 Greenhouse Gas Emissions		
Potentially Significant Impacts		
Threshold 5.7a Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? **Threshold 5.7b** Would the project conflict with an applicable plan, policy	***Recommended SCVAP 2012 EIR Mitigation Measures*** **MM 5.7-1** Prior to the issuance of building permits, the applicant shall provide evidence of green building practices and design elements that reduce GHG emissions, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. **(SCVAP MM 3.4-1)**	Less Than Significant

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures		Level of Significance After Mitigation
or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	**MM 5.7-2**	Prior to the issuance of building permits, the applicant shall provide evidence of energy- efficient designs, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards, such as those found in the Leadership in Energy and Environmental Design ("LEED") Green Building Ratings and/or comply with Title 24, Part 11, the California Green Building Standards Code.	
	MM 5.7-3	Prior to the issuance of building permits, the applicant shall provide evidence of energy efficient lighting, heating and cooling systems, appliances, equipment, and control systems, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards.	
	MM 5.7-4	Prior to the issuance of building permits, the applicant shall provide evidence of light colored "cool" roofs and cool pavements, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards.	
	MM 5.7-5	Prior to the issuance of building permits, the applicant shall provide evidence of efficient lighting (including LEDs) for traffic, street, and other outdoor lighting purposes, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards.	
	MM 5.7-6	Prior to the issuance of building permits, the applicant shall provide evidence of efficient pumps and motors for pools and spas, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards.	
	MM 5.7-7	Prior to the issuance of building permits, the applicant shall provide evidence of the ability to install solar, and solar hot water heaters, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards.	
	MM 5.7-8	Prior to the issuance of building permits for, the applicant shall provide evidence of water-efficient landscapes, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards.	
	MM 5.7-9	Prior to the issuance of building permits, the applicant shall provide evidence of water efficient irrigation systems and devices, such as soil-based irrigation controls and use water-efficient irrigation methods, in accordance with the requirements of	

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
	the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. **MM 5.7-10** Prior to the issuance of building permits, the applicant or their contractor shall submit a site construction management plan for the reuse and recycle construction and demolition (including soil, vegetation, concrete, lumber, metal, and cardboard) to the Department of Public Works for review and approval in accordance with the requirements of the ordinances developed pursuant to the County's Green Building Program and other applicable State and County standards. **MM 5.7-11** Prior to the issuance of building permits, the applicant shall provide evidence of reuse and recycling receptacles in residential, industrial, and commercial projects, in accordance with the requirements of the ordinances developed pursuant to the County's Green Building Program and other applicable State and County standards. **MM 5.7-12** Prior to the issuance of building permits, the applicant shall provide evidence of consistency with "smart growth" principles to reduce GHG emissions (i.e., ensure mixed- use, infill and higher density projects provide alternatives to individual vehicle travel and promote efficient delivery of goods and services). **MM 5.7-13** Prior to implementing project approval, the applicant shall preserve existing trees, to the extent feasible and consistent with mitigation measures, encourage the planting of new trees consistent with the final landscape palettes, and create open space where feasible. The following recommended SCVAP MMs from Section 5.1, Air Quality are relevant to this analysis: **MM 5.1-1; MM 5.1-3; MM 5.1-7; MM 5.1-8** ***Recommended 1992 EIR Mitigation Measures*** **MM 5.1-9** A commuter computer program shall be developed for the NorthLake residents in an attempt to reduce commuter vehicle trips generated by the proposed projects. ***Recommended Project Specific Mitigation Measures*** **MM 5.7-14** Prior to the issuance of each residential occupancy permit, the Applicant or successor developer shall submit for approval to the County the plan for the applicable future homeowners association(s) to provide educational information to each homeowner on (1) water conservation; (2) energy conservation, including the use of energy-efficient lighting and the limiting of outdoor lighting; (3) the capabilities	

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
	of buildings to support solar electricity generation and/or solar water heating; (4) mobile source emission reduction techniques, such as use of alternative modes of transportation and zero- or low-emission vehicles; (5) the use of solar heating, automatic covers, and efficient pumps and motors for pools and spas; and (6) recycling to all homeowners prior to individual purchase of property and again annually. **MM 5.7-15** Prior to the issuance of each nonresidential occupancy permit, the Applicant or successor developer shall submit for approval to the County the plan to provide educational information to each owner or tenant on (1) water conservation; (2) energy conservation, including the use of energy-efficient lighting and the limiting of outdoor lighting; (3) the capabilities of buildings to support solar electricity generation and/or solar water heating; (4) mobile source emission reduction techniques, such as use of alternative modes of transportation and zero- or low-emission vehicles; and (5) recycling to all homeowners prior to individual purchase of property and again annually. **MM 5.7-16** Prior to the issuance of each grading and building permit, the applicant/developer shall require in contract specifications, that contractors set goals to limit unnecessary construction equipment idling to 3 minutes and include methods to encourage equipment operators to achieve the 3-minute goal. **MM 5.7-17** Prior to the issue of the occupancy permit for the 1,000th residential unit, the master developer shall provide the County with plans for a weekly farmers' market to be sponsored by the homeowners' association or similar entity. The following project specific MM from Section 5.1, Air Quality are relevant to this analysis: **MM 5.1-13**	
5.8 HYDROLOGY AND WATER QUALITY		
Potentially Significant Impacts		
Threshold 5.8-1a Would the project violate any water quality standards? and **Threshold 5.8-2** Would the project otherwise substantially degrade water quality? and **Threshold 5.8-3** Would the project generate construction or post-	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures***	Less Than Significant

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
construction runoff that would violate applicable stormwater NPDES permits or otherwise significantly affect surface water or groundwater quality?	**MM 5.8-1** The Project will develop and implement an Integrated Pest Management Plan as a mitigation measure in accordance with the integrated pest management and pesticide and fertilizer application guidelines established by the University of California Division of Agriculture and Natural Resources Statewide Integrated Pest Management Program (http://www.ipm.ucdavis.edu/). The IPM Plan, which will serve to control nutrients and reduce pesticide use, will include the following components: 1. Roles and responsibilities. The IPM Plan will identify the key decision makers in the program, other key roles (such as the person responsible for recordkeeping), and the program funding mechanisms. 2. Pest identification. The IPM Plan will identify plant species and potential pests for these plant species. The Plan shall provide references to resources (e.g., existing field manuals) and identify tools (e.g., hand lens) that can be used to facilitate identification. 3. Practices to prevent pest incidence and reduce pest buildup. The IPM Plan will include a list of acceptable management strategies for each potential pest. For example, effective practices include modifying landscaping to be less conducive to pest survival, using pest-resistant plant varieties, using mulch to suppress weeds, encouraging naturally occurring biological controls, educating the public to be more tolerant of pests, removing pests mechanically or with barriers and traps, developing a list of pesticides that are less toxic to the environment, and developing formulations that will control the pest if other methods are not successful. 4. Monitoring to examine vegetation and surrounding areas for pests to evaluate trends and to identify when controls are needed. The IPM Plan will establish monitoring guidelines for the potential pests and beneficial insects. Monitoring procedures shall include regular visual inspections or checking with traps and methods to quantify observations. The monitoring program shall be used to evaluate when pests may become intolerable and to evaluate the level of effectiveness of controls. 5. Establishment of action thresholds that trigger control actions. The IPM Plan will establish injury levels and action thresholds for each potential pest that is listed in the plan. The injury level is the number of pests associated with intolerable damage. Action thresholds are the set of conditions required to trigger a control action, usually pesticide application.	

TABLE 1-3
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	6. Pest control methods. The IPM Plan will describe cultural, mechanical, environmental, and biological pest control methods and shall list pesticides authorized for use and the Safety Data Sheets for each pesticide. The Plan will include specific criteria for selecting pest management methods, for example, those that are least disruptive to natural controls and least damaging to water quality, and procedures for evaluating the effectiveness of the control method. 7. Fertilizer management. The IPM Plan will describe soil assessment techniques, fertilizer types, application methods, and proper storage and handling of fertilizers. 8. Pesticide management. The IPM Plan will discuss pesticide safety (e.g., Material Safety Data Sheets, precautionary statements, and protective equipment); regulatory requirements; spill mitigation; groundwater and surface water protection measures associated with pesticide use; and pesticide applicator certifications, licenses, and training (i.e., all pesticide applicators must be certified by the California Department of Pesticide Regulation). The IPM Plan will include a pesticide application guidelines/checklist. For example, the application equipment must be calibrated correctly and written records must be kept of any pesticide application. 9. Irrigation management. The IPM Plan will describe the low volume water approaches to landscape irrigation, such as drip type and sprinkler systems with SMART controllers, and shall also describe the training to be provided to landscape crews that will focus on applying water only when needed to enhance plant root growth, managing irrigation to avoid conditions conducive to disease development, and minimizing runoff containing pollutants. 10. Record keeping. The IPM Plan will describe the records that will be maintained for program implementation, including pest identification and monitoring results, when and where various pest suppression techniques were implemented, pesticide application records, observed side effects of the treatment on non-target species, and public complaints and positive feedback received. 11. Training. The IPM Plan will describe continuing education of pest management personnel.	

TABLE 1-3
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	12. Effectiveness evaluation. The IPM Plan will describe the methods to be used to evaluate the overall effectiveness of the program and the schedule for reviewing the Plan to incorporate new IPM technology.	
Less Than Significant Impacts		
Threshold 5.8-1b Would the project violate any waste discharge requirements?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant
Threshold 5.8-4 Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant
Threshold 5.8-5 Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
Threshold 5.8-6 Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant
Threshold 5.8-7 Would the project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant
Threshold 5.8-8 Would the project conflict with the Los Angeles County Low Impact Development Ordinance (L.A. County Code, Title 12, Ch. 12.84)?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant

TABLE 1-3
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Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
5.9 Land Use		
Less Than Significant Impacts		
Threshold 5.9-1 Would the project be inconsistent with the applicable County plans for the subject property including, but not limited to, the General Plan, specific plans, local coastal plans, area plans, and community/neighborhood plans?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant
Threshold 5.9-2 Would the project be inconsistent with the County zoning ordinance as applicable to the subject property?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	No Impact
5.10 Noise		
Potentially Significant Impacts		
Threshold 5.10-1 Would the Project expose persons to, or generate, noise levels in excess of standards established in the County General Plan or noise ordinance (Los Angeles County Code, Title 12, Chapter 12.08), or applicable standards of other agencies?	***Regulatory Requirement*** **RR 5.10-1** The Project will be constructed in accordance with Section 12.08.440 of the County Code, which prohibits construction activities that generate noise that could create a disturbance across a residential or commercial property line from occurring between 7:00 PM and 7:00 AM on weekdays, or at any time on Sunday or a federal holiday. For this project, this limit would apply to noise-generating construction activities within ¼ mile of a residential, school, or commercial receptor. ***Recommended SCVAP 2012 EIR Mitigation Measures*** **MM 5.10-1** Maintain adequate buffer distances from nearby residences to freeways, high traffic volume roads, railroads, airports, manufacturing facilities, industrial facilities,	Less Than Significant

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
	mining centers and other existing processing plants where the public may be affected by noise. **(SCVAP MM 3.18-2)** **MM 5.10-2** Sound barriers should be required of the owners of the proposed sensitive land uses adjacent to high noise sources, to protect the public from significant noise impacts. **(SCVAP MM 3.18-4)** **MM 5.10-3** The placement of telecommunication towers and antennas power boxes should comply with noise ordinances. All related equipment should be rated not to exceed 45 dB(A) at any residential property line. **(SCVAP MM 3.18-6)** ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** **MM 5.10-4** Prior to the issuance of each permit for clearing, grading, or building within 500 feet of existing residences or the Northlake Elementary School, the Developer shall demonstrate that the construction plans or specifications include the following noise-abatement and control measures. This measure applies to all phases of construction. • All construction equipment, including internal combustion engines and stationary equipment (used for construction purposes) shall be equipped with noise-reducing features such as, but not limited to, improved mufflers, intake silencers, ducts, engine enclosures, and acoustical shields or shrouds. • Stationary sources located within 450 feet of the Northlake elementary School or off-site residences shall have noise abatement, such as engine enclosures or placed behind barriers, to limit the noise level at the sensitive receptor to 60 dBA L_{eq} or less. • Stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers. • On-site and off-site construction haul routes shall be designed to avoid noise-sensitive uses, as feasible. • Equipment and material staging areas and equipment maintenance areas shall be located at least 500 feet from sensitive noise receivers, if feasible. **MM 5.10-5** To the extent feasible, intensive noise activity (e.g., operation of earth moving equipment) within 750 feet of the Northlake Elementary School shall be scheduled	

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures		Level of Significance After Mitigation
		to occur when classroom instruction is not scheduled. If grading or similar construction activity within 150 feet of the school is to occur for longer than one day while school is in session, the Developer shall install a temporary noise barrier between the construction area and the school. The barrier shall be 12 feet high and solid from the ground to the top. The barrier shall be constructed with plywood that is at least ½ inch thick or with another material that creates a noise transmission loss of at least 20 dBA. The barrier shall be located to break the line of sight between the school and the construction area. Where feasible, the barrier shall remain in place until the completion of construction near the school. This measure applies to all phases of construction.	
	MM 5.10-6	If grading or similar construction activity within 150 feet of off-site residences is to occur for longer than one day, the Developer shall install a temporary noise barrier between the construction area and the residences. The barrier shall be 12 feet high and solid from the ground to the top. The barrier shall be constructed with plywood that is at least ½ inch thick or with another material that creates a noise transmission loss of at least 20 dBA. The barrier shall be located to break the line of sight between the residences and the construction area. Where feasible, the barrier shall remain in place until the completion of construction near the residences. This measure applies to all phases of construction.	
	MM 5.10-7	Prior to issuing of a building permit for each industrial and commercial land use, the Developer shall submit a noise analysis to the County demonstrating that projected noise levels from stationary sources, vehicle activity, loading docks, and similar sources will not exceed the exterior noise standards of Section 12.08.390 of the County Code. For purposes of this MM, school use shall be considered as a residential use (Zone II) in the County Code. The noise analysis shall, to the extent feasible, be cumulative, considering not only the noise generated by the proposed development but also noise generated by adjacent and nearby stationary sources. Where the adjacent properties have not been developed, the analysis should show that the noise level from the proposed development would be far enough below the standard to allow a reasonable increment for future noise sources without exceeding the standard.	
	MM 5.10-8	Prior to issuing of a building permit for each multi-family residential use, the Developer shall submit a noise analysis to the County demonstrating that projected air conditioning and refrigeration equipment noise levels would not exceed the standards of Section 12.08.530 of the County Code.	
	MM 5.10-9	Prior to issuing of building permits for single family and duplex residences adjacent to Ridge Route Road, Northlake Boulevard, A Street, B Street, or E Street, and for	

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
	multi-family residences adjacent to Ridge Route Road and Northlake Boulevard, the Developer shall submit a noise analysis to the County demonstrating that projected exterior noise levels at areas where residents would reasonably be expected to spend more than one hour, such as back yards, would not exceed 60 dBA CNEL for single family and duplex residences and 65 dBA CNEL for multi-family residences. This standard is based on the California Land Use Compatibility Guidelines. Noise abatement may be achieved by setbacks, berms, and walls. The noise analysis shall also demonstrate that interior noise levels in all habitable rooms would of duplexes and multi-family residences would not exceed 45 dBA CNEL, as required by the California Building Code. **MM 5.10-10** Prior to issuing of building permits for commercial land uses adjacent to Ridge Route Road, the Developer shall submit a noise analysis to the County demonstrating that projected exterior noise levels at areas where patrons would reasonably be expected to spend more than one hour, such as outdoor restaurant seating, would not exceed 70 dBA CNEL.	
Threshold 5.10-2 Would the project expose persons to or generate excessive groundborne vibration or groundborne noise levels?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Measures*** **MM 5.10-11** Prior to the issuance of each grading permit, the Developer shall submit plans and/or specifications to the County demonstrating that site preparation and grading within 265 feet of a residence or the NorthLake Elementary School shall be performed with equipment that will not cause a vibration exceeding 0.01 peak particle velocity (ppv) inch per second (in/sec).	Less Than Significant

TABLE 1-3
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Threshold 5.10-3 Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from parking areas?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Measures*** **MM 5.10-4; MM 5.10-8**	Significant and Unavoidable
Threshold 5.10-4 Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from amplified sound systems?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Measures*** **MM 5.10-12** If blasting is required, the Applicant or its contractor shall hire a certified blasting expert to develop a blasting program to be approved by the County Department of Public Works. The program shall include but not be limited to the following elements: • Design the blast to limit noise and vibration at any residence or the NorthLake Elementary School to the limits recommended by the Office of Surface Mining Reclamation and Enforcement or similarly recognized authority. • Based on the blasting locations, define an impact area where noise and vibration impacts are anticipated to be distinctly perceptible. • Inform all homeowners and tenants in the impact area of the Project, the planned blasting program, and the anticipated noise and vibration impacts. In addition to printed literature, have a public meeting. Provide a contact for homeowners for pre- and post-blast questions. • Use blast signals to notify residents prior to each blast. • Monitor blasts to verify noise and vibration levels at the nearest receptor(s)	Significant and Unavoidable

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
5.11 TRAFFIC, ACCESS AND CIRCULATION		
Potentially Significant Impacts		
Threshold 5.11-1 Would the Project conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** **MM 5.11-1** Prior to the issuance of building permits for Phase 2, the Project Applicant shall submit evidence to the County that the following intersection improvements have been or are being completed unless Caltrans has not approved the measure. • **Ridge Route Road and Lake Hughes Road.** Install traffic signal and include a southbound right-turn overlap phase. Restripe eastbound approach to include two left-turn lanes, one through lane and one right-turn lane. In the northbound direction, add one right-turn lane. In the westbound direction, add a dedicated right-turn lane. • **I-5 Southbound On-Ramp and Parker Road.** Reconstruct the bridge to four lanes. Install traffic signal. At the intersection, add one eastbound right-turn lane and two westbound left-turn lanes. • **I-5 Northbound Off-Ramp and Ridge Route Road.** Reconstruct the bridge to four lanes. Install traffic signal. At the intersection, add a second northbound right-turn lane and add a second westbound through lane.	Significant and Unavoidable

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation

OFF-SITE MITIGATION MEASURES FOR PROJECT-SPECIFIC (EXISTING PLUS PROJECT) IMPACTS

Location	Jurisdiction	Mitigation
5. Ridge Route Rd and Lake Hughes Rd	County	Install traffic signal and include a southbound right-turn overlap phase. Restripe eastbound approach to include two left-turn lanes, one through lane and one right-turn lane. In the northbound direction, add one right-turn lane. In the westbound direction, add a dedicated right-turn lane. [1]
7. I-5 SB On-Ramp and Parker Rd	County/ Caltrans	Reconstruct bridge to 4 lanes. Install Traffic Signal. At intersection add one eastbound right-turn lane and two westbound left-turn lanes.
8. I-5 NB Off-Ramp and Ridge Route Rd	County/ Caltrans	Reconstruct bridge to 4 lanes. Install Traffic Signal. At intersection add a second northbound right-turn lane and add a second westbound through lane.

[1] With the improvements described above, Ridge Route Road at Lake Hughes intersection would be mitigated to a desirable LOS C (0.78), better than the LOS D threshold established in the Los Angeles County General Plan and the Santa Clarita Valley Area Plan, One Valley One Vision. However, the intersection would not be fully mitigated to the LOS C (0.74) threshold utilized in the County's Traffic Impact Analysis Guidelines. Improvements to fully mitigate the intersection to the LOS C threshold were considered, such as a southbound free-right turn lane; however, this was determined to not be geometrically feasible. Therefore, this impact would remain significant and unavoidable.

I: Interstate; SB: southbound; NB: northbound.

Source: Stantec 2016.

MM 5.11-2 Prior to issuance of a building permit and in compliance with the County's Castaic Bridge and Major Thoroughfare Construction Fee District, the Project Applicant shall pay their fee based on the per unit fee applicable at that time. These fees will be used to fund transportation projects throughout the County's Castaic Bridge and Major Thoroughfare District, including improvements required to mitigate impacts related to the NorthLake Specific Plan; however, the priority assigned to individual projects is at the County's discretion. After development of Phase 1, the Project Applicant shall be responsible for monitoring of traffic conditions at the six impacted intersections, beginning at the time of first occupancy, to determine the point at which the identified improvements for each intersection would be required. Monitoring shall be required at the following milestones: 1,000 dwelling units or 100,000 square feet of commercial development, 2,000 dwelling units or 200,000 square feet of commercial development, and 3,000 dwelling units or 300,000 square feet of commercial development. The monitoring requirement for each intersection shall cease upon construction of the required improvement or at full buildout of the *NorthLake Specific Plan,* whichever comes first. If these intersection improvements will not be constructed by the County prior to the identified time, the

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

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<tr><th>Summary of Environmental Impacts</th><th>Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures</th><th>Level of Significance After Mitigation</th></tr>
<tr><td></td><td>
Project Applicant shall implement these improvements subject to a fee credit from the County's Castaic Bridge and Thoroughfare District.

2028 WITH PROJECT OFF-SITE MITIGATION MEASURES FOR PROJECT AND CUMULATIVE IMPACTS
<table>
<tr><th>Location</th><th>Jurisdiction</th><th>Mitigation</th></tr>
<tr><td>1. The Old Rd and I-5 SB Ramps</td><td>County/ Caltrans</td><td>Install traffic signal with a northbound right-turn overlap phasing.</td></tr>
<tr><td>3. I-5 NB Ramps and Lake Hughes Rd</td><td>County/ Caltrans</td><td>Install traffic signal. Widen off ramp to add one left-turn lane and restripe center lane to a shared left/through/right turn lane.</td></tr>
<tr><td>5. Ridge Route Rd and Lake Hughes Rd</td><td>County</td><td>Install traffic signal and include southbound right-turn overlap phasing. Restripe eastbound approach to include two left-turn lanes, one through lane and one right-turn lane. In the northbound direction, add one right-turn lane. In the westbound direction, add a dedicated right-turn lane.[1]</td></tr>
<tr><td>7. I-5 SB On-Ramp and Parker Rd</td><td>County/ Caltrans</td><td>Reconstruct bridge to 4 lanes. Install traffic signal. Eastbound lane configuration includes one through lane and one dedicated right-turn lane. In the westbound direction, two left-turn lanes and one through lane.</td></tr>
<tr><td>8. I-5 NB Off-Ramp and Ridge Route Rd</td><td>County/ Caltrans</td><td>Reconstruct bridge to 4 lanes. Install traffic signal. At intersection add a second northbound right-turn lane and add a second and third westbound through lane.</td></tr>
<tr><td>9. Castaic and Ridge Route Rd</td><td>County</td><td>Install traffic signal. Restripe northbound approach to include two left-turn lanes, one through lane, and one right-turn lane. In the eastbound direction, stripe a right-turn lane. Signal modification to include southbound right-turn overlap phasing.</td></tr>
<tr><td colspan="3">[1] With the improvements described above, Ridge Route Road at Lake Hughes intersection would be mitigated to a desirable LOS C (0.78), better than the LOS D threshold established in the Los Angeles County General Plan and the Santa Clarita Valley Area Plan, One Valley One Vision. However, the intersection would not be fully mitigated to the LOS C (0.74) threshold utilized in the County's Traffic Impact Analysis Guidelines. Improvements to fully mitigate the intersection to the LOS C threshold were considered, such as a southbound free-right turn lane; however, this was determined to not be geometrically feasible. Therefore, this impact would remain significant and unavoidable.
I: Interstate; SB: southbound; NB: northbound.
Source: Stantec 2016.</td></tr>
</table>

MM 5.11-3 Prior to construction activities, the Project Applicant shall prepare and submit a detailed Construction Traffic Control Plan to the County of Los Angeles Department of Public Works for review and approval. The Construction Traffic Control Plan shall describe in detail safe detours and provide temporary traffic control during construction activities for the project. To reduce traffic congestion, the Plan shall include, as necessary, appropriate, and practicable, the following: temporary traffic
</td><td></td></tr>
</table>

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
	controls (e.g., a flag person) during all phases of construction to maintain smooth traffic flow; dedicated turn lanes for movement of construction trucks and equipment on and off site; scheduling of construction activities that affect traffic flow on the arterial system to off-peak hours; consolidation of truck deliveries; rerouting of construction trucks away from congested streets or sensitive receptors; and/or signal synchronization to improve traffic flow.	
Less Than Significant Impacts		
Threshold 5.11-2 Would the Project conflict with an applicable congestion management program (CMP), including, but not limited to, level of service standards and travel demand measures, or other standards established by the CMP for designated roads or highways?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant
Threshold 5-11.3 Would the Project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant
5.12 UTILITIES		
Potentially Significant Impacts		
Threshold 5.12-1 Would the project create water or wastewater system capacity problems, or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** **MM 5.12-1** The project applicant shall provide all onsite water system improvements and shall contribute to required new or upgraded existing offsite improvements to meet all water supply needs for the proposed development. (**1992 SP EIR MM 4.12.1)**	Less Than Significant

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
	MM 5.12-2 All water system improvements shall be sized at the water improvement plan check stage of development. (**1992 SP EIR MM 4.12.2)** **MM 5.12-3** Project connection fees would be deposited into a capital improvement fund to help pay for new facilities and expansion required by the Districts; (**1992 SP EIR MM 4.9.3)** **MM 5.12-4** Payment of the connection fees is required for issuance of a permit to connect the project to surrounding Los Angeles County Sanitation District facilities, if necessary. (**1992 SP EIR MM 4.9.4)** **MM 5.12-5** Routine testing of pre-discharge treated effluent should be conducted to monitor compliance with established water quality control limits. (**1992 SP EIR MM 4.9.7)** ***Recommended Project Specific Mitigation Measures*** **MM 5.12-6** Prior to issuance of occupancy permits, the Project Applicant shall provide evidence to the County of payment of connection fees in compliance with the requirements of the Newhall County Water District. **MM 5.12-7** Prior to connection to the Los Angeles County Sanitation District's wastewater system, the Project Applicant shall provide evidence of payment of the Santa Clarita Valley Sanitation District's Connection Fee Program. **MM 5.12-8** Prior to issuance of occupancy permits, the Project Applicant shall coordinate with the Los Angeles County Sanitation Districts to upsize the existing 12-inch VCP Castaic Trunk Sewer in Ridge Route Road (south of the intersection with Lake Hughes Road), as determined necessary by the LA County Sanitation Districts to accommodate future flow volumes.	
Threshold 5.12-2 Would the project have sufficient reliable water supplies available to serve the project demands from existing entitlements and resources, considering existing and projected water demands from other uses?	***Recommended SCVAP 2012 EIR Mitigation Measures*** **MM 5.12-9** Monitor growth, and coordinate with water districts as needed to ensure that long-range needs for potable and reclaimed water will be met. (**SCVAP 2012 EIR MM 3.13.3)** **MM 5.12-10** If water supplies are reduced from projected levels due to drought, emergency, or other unanticipated events, take appropriate steps to limit, reduce, or otherwise modify growth permitted by the Area Plan in consultation with water districts to ensure adequate long-term supply for existing businesses and residents. (**SCVAP 2012 EIR MM 3.13.4)**	Less Than Significant

TABLE 1-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND STANDARDS AND GUIDELINES AND MITIGATION MEASURES (MMS) FOR THE NORTHLAKE SPECIFIC PLAN

Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
	MM 5.12-11 Require that all new development proposals demonstrate a sufficient and sustainable water supply prior to approval. (**SCVAP 2012 EIR MM 3.13.5)** **MM 5.12-12** Require the use of drought tolerant landscaping, native California plant materials, and evapotranspiration (smart) irrigation systems. (**SCVAP 2012 EIR MM 3.13.6)** **MM 5.12-13** In making land use decisions, consider the complex, dynamic, and interrelated ways that natural and human systems interact, such as the interactions between energy demand, water demand, air and water quality, and waste management. (**SCVAP 2012 EIR MM 3.13.8)** **MM 5.12-14** In coordination with applicable water suppliers, adopt and implement a water conservation strategy for public and private development. (**SCVAP 2012 EIR MM 3.13.9)** **MM 5.12-15** Provide examples of water conservation in landscaping through use of low water use landscaping in public spaces such as parks, landscaped medians and parkways, plazas, and around public buildings. (**SCVAP 2012 EIR MM 3.13.10)** **MM 5.12-16** Require low water use landscaping in new residential subdivisions and other private development projects, including a reduction in the amount of turf-grass. (**SCVAP 2012 EIR MM 3.13.11)** **MM 5.12-17** Provide informational materials to applicants and contractors on the Castaic Lake Water Agency's Landscape Education Program, and/or other information on xeriscape, native California plants, and water conserving irrigation techniques as materials become available. (**SCVAP 2012 EIR MM 3.13.12)** **MM 5.12-18** Promote the use of low-flow and/or waterless plumbing fixtures and appliances in all new non-residential development and residential development of five or more dwelling units. (**SCVAP 2012 EIR MM 3.13.13)** **MM 5.12-19** Support amendments to the County Building Code that would promote upgrades to water and energy efficiency when issuing permits for renovations or additions to existing buildings. (**SCVAP 2012 EIR MM 3.13.14)** **MM 5.12-20** Apply water conservation policies to all pending development projects, including approved tentative subdivision maps to the extent permitted by law. Where precluded from adding requirements by vested entitlements, encourage water conservation in construction and landscape design. (**SCVAP 2012 EIR MM 3.13.15)**	

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	MM 5.12-21 Upon the availability of non-potable water services, discourage and consider restrictions on the use of potable water for washing outdoor surfaces. (**SCVAP 2012 EIR MM 3.13.16)** **MM 5.12-22** In cooperation with the Sanitation District and other affected agencies, expand opportunities for use of recycled water for the purposes of landscape maintenance, construction, water recharge, and other uses as appropriate. (**SCVAP 2012 EIR MM 3.13.17)** **MM 5.12-23** Require new development to provide the infrastructure needed for delivery of recycled water to the property for use in irrigation, even if the recycled water main delivery lines have not yet reached the site, where deemed appropriate by the reviewing authority. (**SCVAP 2012 EIR MM 3.13.18)** **MM 5.12-24** Participate and cooperate with other agencies to complete, adopt, and implement an Integrated Regional Water Management Plan to build a diversified portfolio of water supply, water quality, and resource stewardship priorities for the Santa Clarita Valley. (**SCVAP 2012 EIR MM 3.13.20)** **MM 5.12-25** Require that all new development proposals demonstrate a sufficient and sustainable water supply prior to approval. (**SCVAP 2012 EIR MM 3.13.21)** **MM 5.12-26** Promote energy efficiency and water conservation upgrades to existing non-residential buildings at the time of major remodel or additions. (**SCVAP 2012 EIR MM 3.13.22)** ***Recommended 1992 EIR Mitigation Measures*** No additional mitigation is required; however, the following mitigation measures shall be implemented to further reduce the potential for an impact. **MM 5.12-27** Landscaping shall emphasize drought-tolerant vegetation (xeriscaping) where not watered with reclaimed water. Plants of similar water use shall be grouped to reduce over-irrigation of low-water-using plants. Those areas not designed in xeriscape shall be gauged to receive irrigation using the minimal requirements. (**1992 SP EIR MM 4.12.6)** **MM 5.12-28** Residential occupants shall be informed as to the benefits of low-water-using landscaping and sources of additional assistance in xeriscaping. (**1992 SP EIR MM 4.12.7)**	

TABLE 1-3
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	Recommended Project Specific Mitigation Measures *None*	
Less Than Significant Impacts		
Threshold 5.12-3 Would the project be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs?	***Recommended SCVAP 2012 EIR Mitigation Measures*** No mitigation is required; however, the following mitigation measures shall be implemented to further reduce the potential for an impact. **MM 5.12-29** The County of Los Angeles shall follow state regulations in implementing the goals, policies, and programs identified in the Los Angeles County Integrated Waste Management Plan in order to achieve and maintain a minimum of 50 percent reduction in solid waste disposal through source reduction, reuse, recycling, and composting. In response to California's 75 Percent Initiative, at least 75 percent of all solid waste will be recycled or reused by 2020.Additionally, the Project Applicant or Construction Manager shall ensure that a minimum of 65 percent of the non-hazardous construction and demolition debris will be recycled and/or salvaged or meet a local construction and demolition waste management ordinance. (**SCVAP 2012 EIR MM 3.17.1)** **MM 5.12-30** The County shall require all future commercial, industrial and multifamily residential development to provide adequate areas for the collection and loading of recyclable materials (i.e., paper products, glass, and other recyclables) in compliance with the State Model Ordinance, implemented on September 1, 1994, in accordance with AB 1327, Chapter 18, California Solid Waste Reuse and Recycling Access Act of 1991. (**SCVAP 2012 EIR MM 3.17.2)** **MM 5.12-31** The County shall require all development projects to coordinate with appropriate County agencies to ensure that there is adequate waste disposal capacity to meet the waste disposal requirements of the County's Planning Area, and the County shall recommend that all development projects incorporate measures to promote waste reduction, reuse, recycling, and composting. (**SCVAP 2012 EIR MM 3.17.3)** **MM 5.12-32** All new development in the County's Planning Area will be required to implement existing and future waste reduction programs in conformance with the County's Planning Area SRRE program. (**SCVAP 2012 EIR MM 3.17.4)** **MM 5.12-33** Any hazardous waste that is generated on site, or is found on site during demolition, rehabilitation, or new construction activities shall be remediated, stored, handled,	Less Than Significant

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Summary of Environmental Impacts	Recommended SCVAP 2012 EIR Mitigation Measures, Recommended 1992 EIR Mitigation Measures, and Recommended Project Specific Mitigation Measures	Level of Significance After Mitigation
	and transported in compliance per appropriate local, state, and federal laws, as well as with the County's SRRE. (**SCVAP 2012 EIR MM 3.17.5)** ***Recommended 1992 EIR Mitigation Measures*** No mitigation is required; however, the following mitigation measures shall be implemented to further reduce the potential for an impact. **MM 5.12-34** Collection/storage facilities for recyclables shall be incorporated into all building designs and/or a conveniently located recycling area shall be developed on the project site for use by all occupants/users of the commercial/industrial uses. (**1992 SP EIR MM 4.13.1)** **MM 5.12-35** The owner and/or tenants of all onsite commercial and industrial uses shall comply with all applicable federal, state and local requirements for handling hazardous materials. Onsite businesses handling hazardous materials shall submit a Business Plan which will include information or inventories, employee training and emergency response plans and procedures. (**1992 SP EIR MM 4.13.2)** **MM 5.12-36** Removal of hazardous materials, waste from the project site shall be conducted by registered waste hauler in accordance with all applicable rules and regulations. (**1992 SP EIR MM 4.13.3)** **MM 5.12-37** All hazardous materials used in association with future onsite businesses shall be stored in specific locations and clearly marked as to contents. (**1992 SP EIR MM 4.13.4)** ***Recommended Project Specific Mitigation Measures*** *None*	
Threshold 5.12-4 Would the project not comply with federal, state, and local statutes and regulations related to solid waste?	***Recommended SCVAP 2012 EIR Mitigation Measures*** *None* ***Recommended 1992 EIR Mitigation Measures*** *None* ***Recommended Project Specific Mitigation Measures*** *None*	Less Than Significant

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SECTION 2.0 INTRODUCTION

2.1 THE CALIFORNIA ENVIRONMENTAL QUALITY ACT AND THE ENVIRONMENTAL IMPACT REPORT

The California Environmental Quality Act (CEQA) (*California Public Resources Code,* Sections 21000–21177) requires that all public agencies in the State of California that regulate project activities that have the potential to affect the quality of the environment shall regulate such activities so that impacts to the environment can be prevented to the extent that is feasible. Such activity is reviewed and monitored through the CEQA process, as defined in the State CEQA Guidelines (*California Code of Regulations,* Title 14, Division 6, Chapter 3, Sections 15000–15387). The CEQA process distinguishes varied levels of documentation and public review based on a project's anticipated level of effect to the environment.

When it is determined through preliminary review that a project may likely have one or more significant effects on the environment, then an Environmental Impact Report (EIR) must be prepared. The "scope" of the EIR may be determined through preparation of an Initial Study and a public scoping process. The EIR should consider both the potential project-specific (direct and indirect) and cumulative environmental impacts that could result from the implementation of the proposed project.

Pursuant to Section 15121 of the State CEQA Guidelines, the EIR is primarily an informational document intended to inform the public agency decision makers and the general public of the potentially significant environmental effects of a proposed project. The EIR should disclose all known potentially significant impacts (as identified through the Initial Study, public scoping process, and environmental analysis); should identify possible means to minimize or mitigate those effects; and should consider reasonable alternatives to the project that might further reduce significant impacts while still attaining the project objectives. The decision makers must consider the information in an EIR before taking action on a proposed project. The EIR may constitute substantial evidence in the record to support the agency's action on a project.

An EIR is prepared by or under the direction of the Lead Agency. The Lead Agency is the public agency with the primary responsibility for approving or carrying out a project. Responsible Agencies, which are public agencies that have a level of discretionary approval over some component of the proposed project, may rely upon the EIR prepared by the Lead Agency (State CEQA Guidelines, Section 15096).

2.2 THE NORTHLAKE ENVIRONMENTAL IMPACT REPORT PROCESS

2.2.1 LEAD AGENCY

For the *NorthLake Specific Plan* (Specific Plan), the County of Los Angeles (County) is the Lead Agency under CEQA and is responsible for ensuring compliance with CEQA and determining the type of environmental document that is required. As described in Section 2.4, the County has determined that an EIR is required and, as Lead Agency, is also responsible for having the NorthLake Specific Plan Draft Supplemental EIR (Draft SEIR) be prepared. For each significant impact identified in the EIR, the County must make findings and, if appropriate, prepare a Statement of Overriding Considerations if mitigation presented does not reduce impacts to below a level of significance. Other responsible agencies, discussed in the following section, will use this EIR in their discretionary approval processes involving issuance of the required permits.

2.2.2 PREVIOUS ENVIRONMENTAL IMPACT REPORT DOCUMENTATION AND CURRENT CALIFORNIA ENVIRONMENTAL QUALITY ACT DOCUMENTATION

In 1992, the County adopted the *NorthLake Specific Plan.* The Specific Plan established land uses and development standards for an approximate 1,330-acre area within Grasshopper Canyon that previously was limited to minimal development. In conjunction with consideration of the Specific Plan project, in 1992, the NorthLake Specific Plan EIR (1992 SP EIR) (SCH No. 1988071329) was prepared and certified as a Program EIR. As defined in the State CEQA Guidelines (Section 15168), a Program EIR is an EIR prepared on a series of actions that can be generally characterized as one large and related project. The Program EIR is used with later/subsequent activities to determine whether additional environmental documentation will be necessary and/or to simplify the scope of additional environmental documentation.

The current Project (described in detail in Section 4.0, Project Description) would implement the previously adopted Specific Plan and involves an area and intensity of physical development that was previously considered in the 1992 SP EIR. The 1992 SP EIR considered development impacts of the entire approximate 1,330-acre NorthLake Specific Plan project area. The 1992 SP EIR, which was a Program EIR, has been used to clarify and simplify the need/scope for additional environmental documentation. Further, in 2012, the Final Program EIR for the Santa Clarita Valley Area Plan, One Valley One Vision, 2012 (2012 SCVAP EIR) was certified and included the *NorthLake Specific Plan* as a future entitled development. As the Lead Agency responsible for CEQA compliance, the County has reviewed the need for additional environmental documentation to tier off of the Program EIR and determined that a Supplemental EIR (SEIR) should be prepared. Consistent with the State CEQA Guidelines (Section 15163), which define the role and use of a Supplemental EIR, the purpose of the NorthLake Specific Plan SEIR, which is described in greater detail in this section, is two-fold: (1) to address minor additions and changes that would update information in the 1992 SP EIR and 2012 SCVAP EIR to reflect current environmental conditions and thereby make the previous EIR adequate for continued use of the project, (2) to provide project-level analysis as appropriate for those issues for which more detailed Project information is now known for Project implementation, and (3) to provide updated program-level analysis as appropriate for those issues pertaining to Phase 2 for which more detailed Project information is not now known.

Because the current Project has a clear connection to an earlier project, the following reports and/or studies are applicable to development of the project site and are hereby incorporated by reference:

- *Final Program EIR for the County of Los Angeles' Proposed Santa Clarita Valley Area Plan, One Valley One Vision 2012*, Los Angeles County Department of Regional Planning, certified in 2012 (2012 SCVAP EIR).
- *NorthLake Specific Plan Draft Environmental Impact Report* (SCH No. 1988071329), County of Los Angeles Department of Regional Planning, certified in 1992 (1992 SP EIR).
- *NorthLake Specific Plan*, County of Los Angeles Department of Regional Planning, approved in 1992 (NorthLake SP)

The 1992 SP EIR and the 2012 SCVAP EIR have been used to refine and focus the scope of this SEIR and are available for review at the Los Angeles County Department of Regional Planning at the address noted in Section 2.5; they have also been summarized and/or excerpted throughout this SEIR as appropriate.

2.2.3 PURPOSE OF THIS ENVIRONMENTAL IMPACT REPORT

A Program EIR was completed and certified in 1992 (1992 SP EIR) to address the development of the adopted *NorthLake Specific Plan.* Under the current Project proposal, there are minor additions and changes made to the 1992 SP EIR to adequately analyze: (1) minor modifications to the Specific Plan, as defined in Section 4.0, Project Description, and (2) changes to environmental conditions and the addition of project-specific analysis since its adoption. A lead agency can approve subsequent actions without additional environmental documentation, unless otherwise required by Section 15162 and 15163 of the State CEQA Guidelines (*California Public Resources Code,* Section 21166). A Supplemental EIR (SEIR) has therefore, been prepared in accordance with the State CEQA Guidelines (Section 15163). It was determined that an SEIR, instead of a Subsequent EIR, be prepared because only minor changes and additions are necessary to supplement the previously certified CEQA documentation (the 1992 SP EIR), and any new information is only the information necessary to make the previous EIR adequate for the project as revised. This SEIR will meet these requirements by serving to update information included in the previously approved 1992 SP EIR, and it will provide Project-specific analyses of environmental effects associated with the current project (for example, existing biological resources for the entire Specific Plan site are updated through this SEIR to reflect any changes in the background biological resources information since 1992). The County (which has the principal responsibility for processing and approving the Project) and other public agencies (i.e., responsible and trustee agencies) that may use this SEIR in their decision-making or permitting processes will consider the information in this SEIR along with other information that may be presented during the CEQA process. In addition, this SEIR is the primary reference document in the formulation and implementation of the Mitigation Monitoring and Reporting Program for the proposed Project.

This document, referred to as the Draft SEIR, represents one part and the primary informational component of the complete SEIR. Following public review of this Draft SEIR, responses to public comments received and any additional Project information will be compiled in the Final SEIR. References to this specific document will refer to the “Draft SEIR” while references to the complete environmental record will refer to the SEIR more generally.

2.3 USE OF THIS SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT AND PROJECT APPROVAL ACTIONS

The County and the responsible agencies identified in this section are expected to use the information contained in this SEIR during their respective deliberations. This SEIR, when used in conjunction with the previously certified 1992 SP EIR, has been prepared to support the discretionary actions and approvals necessary to implement the proposed Project.

The proposed Project will require the approvals and permits listed in Table 2-1, Required Approvals and Permits.

TABLE 2-1
REQUIRED APPROVALS AND PERMITS

Discretionary Approval or Permit	Agency	Status
Conditional Use Permit No. 201500019	County of Los Angeles	Lead Agency
Vesting Tentative Tract Map No. TR073336	County of Los Angeles	Lead Agency
Service Agency Annexation to Los Angeles County Santa Clarita Valley Sanitation District	Local Agency Formation Commission (LAFCO)	Responsible Agency
Clean Water Act Section 401 Permit	California Regional Water Quality Control Board (RWQCB)	Responsible Agency
Section 404 Individual Permit	U.S. Army Corps of Engineers (USACE)	Responsible Agency
Streambed Alteration Agreement	California Department of Fish and Wildlife (CDFW)	Trustee Agency
Certificate of Public Convenience and Necessity and/or Exemption	California Public Utilities Commission (CPUC)	Responsible Agency

2.4 ENVIRONMENTAL IMPACT REPORT FOCUS

2.4.1 INITIAL STUDY AND NOTICE OF PREPARATION

In compliance with the State CEQA Guidelines, the County conducted an Initial Study of the proposed Project and determined that an EIR would be required, and more specifically, that an SEIR (see Section 2.2 above) would be the appropriate environmental document to analyze the Project's potential impacts to the environment, as there have been additions and changes to the NorthLake Specific Plan project, but they would not require major revisions to the 1992 SP EIR. The Initial Study identified a preliminary range of potential impact issues to be analyzed. A Notice of Preparation (NOP) and the Initial Study were distributed to responsible and interested agencies and key interest groups to solicit comments and to inform the public of the proposed Project. The NOP/Initial Study was distributed on March 23, 2015, for a 30-day review period, as required by CEQA. The NOP/Initial Study is included as Appendix A of this Draft SEIR. NOP responses were received from the agencies, organizations, special interest groups listed below.

Federal and State Agencies

- California Department of Fish and Wildlife
- California Department of Water Resources
- Santa Monica Mountains Conservancy

Regional, County, and Local Agencies

- City of Santa Clarita
- Los Angeles County Airport Land Use Commission
- Los Angeles County Fire Department
- Los Angeles County Metropolitan Transportation Authority
- Los Angeles County Sanitation District
- South Coast Air Quality Management District

- Southern California Association of Governments
- Ventura County Resource Management Agency

Organizations and Special Interest Groups

- Endangered Habitats League
- Fernandeño Tataviam Band of Mission Indians
- Santa Clarita Organization for Planning and the Environment
- Santa Clarita Valley Historical Society
- Sespe Consulting, Inc.
- Southern California Edison
- Southern California Gas Company

Comments on the NOP were received from 18 agencies and individuals, and are provided in Appendix A-2. The scoping period comment letters are listed in Table 2-2 below, along with a summary of the issues raised and the SEIR section where the issues raised are addressed.

TABLE 2-2
COMMENTS ON THE NOTICE OF PREPARATION

Commenting Agency/Group (Date of Comment Letter)	Issues Raised	EIR Section that discusses the issues
Santa Monica Mountains Conservancy (April 27, 2015)	• Wildlife habitat connection, wildlife movement, and wildlife crossing I-5. • Urban and suburban conflicts with ecologically valuable core habitat. • Ecological integrity of the protected onsite natural open space. • Phases One and Two and Development Agreement. • Changes to the Project Description	Section 5.2, Biological Resources Section 5.9, Land Use Section 5.2, Biological Resources Section 4.0, Project Description
County of Ventura Resource Management Agency, Planning Division (April 21, 2015)	• Natural Landscape Blocks and the Sierra Madre – Castaic Connection. • Wildlife corridors • Mitigation measures, such as wildlife-permeable fencing; Homeowners' Association rules that restrict the extent to which predatory domesticated animals may be located outside; and signage that indicates that the ecological sensitivity of open space areas adjacent to a proposed development should be considered during development of the Draft SEIR.	Sections 5.2, Biological Resources
County of Los Angeles Airport Land Use Commission (ALUC) (March 25, 2015)	• No comment	N/A

TABLE 2-2
COMMENTS ON THE NOTICE OF PREPARATION

Commenting Agency/Group (Date of Comment Letter)	Issues Raised	EIR Section that discusses the issues
California Department of Water Resources (DWR) (April 21, 2015)	• Prohibit access to the State Water Project facilities, such as Castaic Dam and Elderberry Dam and the gauging stations located within critical habitat for Endangered species.	Section 5.9, Land Use
	• Storm water, surface water, landscaping water, potential wastewater discharge, and construction water from runoff from the project	Section 5.8, Hydrology and Water Quality
	• Grading plans and landscaping schemes shall be submitted to DWR for review.	
	• Increase in lake and lagoon nutrients	
Santa Clarita Organization for Planning and the Environment (SCOPE) (April 22, 2015)	**Insufficient Signage Notification** **Failure to Provide Adequate Information** • Reference document as Draft EIR or Draft Supplemental EIR, as appropriate.	Section 2.0, Introduction
	• Failure to provide a copy of the *Northlake Specific Plan.*	
	• Failed to include the required Development Monitoring Plan Analysis.	Section 5.9, Land Use
	• Preparation of a Water Supply Assessment (WSA) within 95 days of the Project's application to the County.	Section 5.12, Utilities
	• Failed to provide External Map Improvements.	Section 4.0, Project Description
	• Request that a public hearing be held.	Section 2.0, Introduction
	Water Supply	Section 5.12, Utilities
	Water Quality	Section 5.8, Hydrology and Water Quality
	Biology	Section 5.2, Biological Resources
	Global Warming	Section 5.7, Greenhouse Gas Emissions
	Cultural Resources	Section 5.3, Cultural Resources
	Traffic	Section 5.11, Traffic
	Solid Waste	Section 5.12, Utilities

TABLE 2-2
COMMENTS ON THE NOTICE OF PREPARATION

Commenting Agency/Group (Date of Comment Letter)	Issues Raised	EIR Section that discusses the issues
Endangered Habitats League (EHL) (March 31, 2015)	• Analyze a No Project Alternative. • Technical studies be completed for traffic and biology in addition to water supply.	Section 6, Alternatives Section 5.11, Traffic Section 5.2, Biological Resources Section 5.12, Utilities
County of Los Angeles Fire Department (April 20, 2015)	• Convey a fire station sites to the Consolidated Fire Protection District of Los Angeles County, also known as the Los Angeles County Fire Department (LACoFD), to serve the project area. • Ingress/egress access for the circulation of traffic and emergency response issues. • Comply with all applicable code and ordinance requirements. • Address loss of oak trees. • Address development in a Fire Hazard Severity Zone. • Address wildland fire hazards.	Section 4.0, Project Description Section 5.11, Traffic Section 5.9, Land Use Section 5.3, Biological Resources Section 5.5, Hazards
Fernandeño Tataviam Band of Mission Indians (Tataviam) (March 25, 2015)	• Mitigation measures for the protection of cultural resources. • Include an ethnographic history.	Section 5.3, Cultural Resources
Southern California Association of Governments (SCAG) (April 22, 2015)	• Discuss/analyze applicable Regional Transportation Plan/Sustainable Communities Strategy Goals (as provided with the letter).	Section 5.9, Land Use
Los Angeles County Metropolitan Transportation Authority (Metro) (April 14, 2015)	• Incorporate roadway and transit components as required by the Congestion Management Program (CMP) statute.	Section 5.11, Traffic
City of Santa Clarita (April 20, 2015)	• Prepare a Water Supply Assessment. • Include discussion of the Jobs/Housing Balance • Prepare a Traffic Analysis, which includes Mitigation.	Section 5.12, Utilities Section 7.0, CEQA-Mandated Sections Section 5.11, Traffic
Southern California Gas Company (SoCalGas) (April 20, 2015)	• Impacts related to the existing high pressure natural gas transmission line as well as several distribution pipelines.	Section 4.0, Project Description Section 5.12, Utilities
Sespe Consulting, Inc. who represents Pacific Clay Inc. owner of the Castaic Clay and Manufacturing facility (April 22, 2015)	• Impacts of the NorthLake Project on the Castaic Facility. • Traffic, air emission, and noise generation associated with the Project. • Proximity of the residences and public use areas to the Castaic Facility.	Section 5.9, Land Use Section 5.11, Traffic Section 5.1, Air Quality Section 5.10, Noise

TABLE 2-2
COMMENTS ON THE NOTICE OF PREPARATION

Commenting Agency/Group (Date of Comment Letter)	Issues Raised	EIR Section that discusses the issues
California Department of Fish and Wildlife (April 17, 2015)	• Lake and Streambed Alteration Agreement (LSAA). • Wetland resources. • California Endangered Species Act (CESA). • Biological baseline assessment. • Biological direct, indirect, and cumulative impacts. • Avoidance, minimization, and mitigation for sensitive plants. • Compensatory mitigation. • Long-term management of mitigation lands. • Nesting birds. • Translocation/salvage of plants and animal species. • Moving biological resources out of harm's way. • Wildlife movement and connectivity. • Revegetation/restoration plan.	Section 5.2, Biological Resources
County Sanitation Districts of Los Angeles County (April 20, 2015)	• Annexation into the District before sewerage service can be provided to the proposed development. • Conveyance to the District's Castaic Trunk Sewer, located in Ridge Route Road at Lake Hughes Drive. • Saugus and Valencia Water Reclamation Plants.	Section 5.12, Utilities and Service Systems
South Coast Air Quality Management District (SCAQMD) (April 6, 2015)	• CEQA Air Quality Handbook in 1993 as a guidance. • Air quality impacts, criteria pollutant emissions, analysis based on regional significance thresholds and localized significance thresholds (LSTs). • Mobile source health risk assessment.	Section 5.1, Air Quality
Southern California Edison (SCE) (April 22, 2015)	• Three transmission lines that traverse the project site: 220 kilovolt (kV) Bailey-Pardee, 220 kV Pardee-Pastoria, 220 kV Pardee-Pastoria-Warner. • Encroach and impact SCE's existing utility corridors and access roads. SCE is concerned that the NorthLake project's new internal roadway system that bisects SCE's existing utility corridors may conflict with SCE's existing transmission line designs. • Impacts that would result from the relocation of the transmission line and towers.	Section 5.12, Utilities

TABLE 2-2
COMMENTS ON THE NOTICE OF PREPARATION

Commenting Agency/Group (Date of Comment Letter)	Issues Raised	EIR Section that discusses the issues
	• Developer should get an electrical service evaluation. • Construction, modification, or relocation of transmission lines.	
Santa Clarita Valley Historical Society (April 10, 2015)	• Human Remains.	Section 5.3, Cultural Resources

I: Interstate; SEIR: Supplemental Environmental Impact Report; N/A: Not applicable; DWR: California Department of Water Resources; SCOPE: Santa Clarita Organization for Planning and the Environment; EIR: Environmental Impact Report; WSA: Water Supply Assessment; EHL: Endangered Habitats League; LACoFD: Los Angeles County Fire Department; SCAG: Southern California Association of Governments; Metro: Los Angeles County Metropolitan Transportation Authority; SoCalGas: Southern California Gas Company; CESA: California Endangered Species Act; LSAA: Lake and Streambed Alteration Agreement; SCAQMD: South Coast Air Quality Management District; CEQA: California Environmental Quality Act; LSTs: Localized Significance Thresholds; kV: kilovolt; SCE: Southern California Edison.

Additionally, the County held a Scoping Meeting for the SEIR on April 8, 2015, at NorthLake Hills Elementary School at 32545 Ridge Route Road in Castaic, California. The Scoping Meeting sign-in sheets, meeting presentation, and meeting summary are provided in Appendix A-3. The purpose of the Scoping Meeting was to receive input on the environmental issues that should be addressed in the SEIR. The following environmental issues were raised and/or discussed at the Scoping Meeting:

- Availability and relationship to the 1992 NorthLake Specific Plan EIR
- Demand for new commercial development
- Use of appropriate baseline
- Impacts of topography on air quality, noise, and greenhouse gases
- Relationship to existing permits
- Development of a Monitoring System
- Hearings should be held locally
- Project Description and Project schedule
- Wind and dust generation
- Sufficiency of energy supplies and infrastructure
- Map showing area faults
- Pipeline safety
- Dam inundation and water quality
- Compatibility of industrial uses; gas station needed
- Impacts to the school and residential uses; account for weather such as fog
- Congestion when I-5 is closed; take into account closed off-ramp; emergency access; safety at the school; acknowledge truck traffic; account for weekend traffic levels
- Water supply and current drought conditions

- Alternatives should evaluate no industrial uses
- Acknowledge other development projects in the area

The specific issues that were contained in comments submitted on the NOP and the issues raised at the Scoping Meeting are discussed in various sections of the SEIR, with those related to Project features addressed in Section 4.0 and those related to environmental impacts discussed in Section 5.0 of this EIR.

2.4.2 ISSUES ADDRESSED IN THIS EIR

The Project's Initial Study determined that most environmental issues should be addressed in the EIR, except for Aesthetics; Agriculture and Forestry Resources; Mineral Resources; Population, Housing, and Employment; and Public Services and Recreation.

All other environmental issues are addressed in the EIR. These include the following:

- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Transportation
- Utilities and Service Systems
- Energy

In compliance with Section 15064 of the State CEQA Guidelines, the determination of significance for each impact analysis question is based on the application of significance standards. Specifically, the significance standards are used to determine whether the impacts of the Project would be significant and unavoidable; would be less than significant with mitigation; would be less than significant; or would have no impact. Significance standards are either (1) qualitative and are presented through substantiation of the impact determination provided in the "Impact Analysis" for each environmental issue area or (2) quantitative and are derived from regulatory standards or directives from the Lead Agency. Where regulatory standards apply, they are specified within that issue area EIR section.

2.5 PROJECT PROPONENTS AND CONTACT PERSONS

The County of Los Angeles is the Lead Agency for the preparation of this Draft SEIR; all inquiries regarding the Draft SEIR should be directed to the County. Key contacts are as follows:

Lead Agency: County of Los Angeles
Department of Regional Planning
320 West Temple Street, Room 1362
Los Angeles, CA 90012

Attention: Mr. Jodie Sackett

Owner/Developer: NorthLake Associates, LLC
1999 Avenue of the Stars, Suite 2850
Los Angeles, CA 90067

Attention: John Arvin

2.6 REVIEW OF THE DRAFT SEIR

This Draft SEIR was distributed to responsible and other affected agencies, surrounding jurisdictions, interested parties, and others who requested a copy of the document in accordance with Section 21092 of the *California Public Resources Code.* The Notice of Completion (NOC) of the Draft SEIR was also distributed as required by CEQA. The Draft SEIR will be available for public review for not less than 45 days, pursuant to Section 15105 of the State CEQA Guidelines. During this public review period, the Draft SEIR including its technical appendices is available for review at the following locations:

Castaic Library
27971 Sloan Canyon Road
Castaic, CA 91384

Stevenson Ranch Library
25950 The Old Road
Stevenson Ranch, CA 91381

San Fernando Library
217 North Maclay Avenue
San Fernando, CA 91340

County of Los Angeles
Department of Regional Planning
320 West Temple Street
Los Angeles, CA 90012
Email: specialprojects@planning.lacounty.gov

Written comments on the Draft SEIR should be addressed to Mr. Jodie Sackett at the Department of Regional Planning (Lead Agency) at the address provided above. Upon completion of the 45-day public review period and conclusion of public hearings on the Project, written responses will be prepared to address comments received on the Draft SEIR and will be made available for review at least ten days prior to when certification of the SEIR is considered by the Los Angeles County Regional Planning Commission and ultimately the Board of Supervisors. These environmental comments and their responses will be included as part of the environmental record for consideration by the decision-makers for the project and will constitute the Final SEIR.

2.7 ORGANIZATION OF THE SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT

This Draft SEIR conforms to the content requirements stated in Sections 15120 through 15130 of the State CEQA Guidelines. The analysis in this Draft SEIR is organized according to the structure of the County's Initial Study Checklist (included in Appendix A). The list of the overall document sections and a brief description of their content is provided here to assist the reader in locating information.

Executive Summary. Located at the front of this document, the Executive Summary provides brief description of the project and a tabular overview of the impact analysis along with the recommended mitigation measures. Summary information of alternatives and key conclusions are also provided.

Section 2.0 Introduction. The Introduction provides a general orientation to the purpose of CEQA and the Draft SEIR, including scoping, availability, and review process.

Section 3.0 Environmental Setting. This section discusses the location and general characteristics of the proposed Project within the regional setting in context. It also provides an overview of the site-specific environmental setting and immediate surrounding area.

Section 4.0 Project Description. Section 4 presents a statement of the Project's objectives, a detailed description of the Project's physical development characteristics, and related information on phasing and implementation.

Section 5.0 Impact Analysis. This section analyzes the potential impacts from implementation of the proposed Project. The impact discussion is organized by topical issues as outlined in the Initial Study. A summary of applicable previous EIR conclusions is provided for each of the topical issues discussed in this SEIR. Background information has been updated as appropriate, and a Project-specific level analysis is provided to address implementation-level effects for the *NorthLake Specific Plan.*

Section 6.0 Alternatives. The Alternatives section includes a discussion and analysis of alternatives to the proposed Project pursuant to Section 15126.6 of the State CEQA Guidelines. Alternatives are analyzed that would feasibly attain most of the basic objectives of the Project, but would avoid or lessen any of the significant effects of the Project. The comparative merits of each alternative are evaluated.

Section 7.0 Other CEQA Topics. Section 7 evaluates the contextual impacts related to growth-inducing effects and cumulative growth. Impacts found not to be significant, unavoidable adverse impacts, and irreversible impacts are also summarized.

Section 8.0 Preparers. Section 8 lists persons that directly contributed to the preparation of this Draft SEIR.

SECTION 3.0 ENVIRONMENTAL SETTING

3.1 PROJECT LOCATION AND SURROUNDING LAND USES

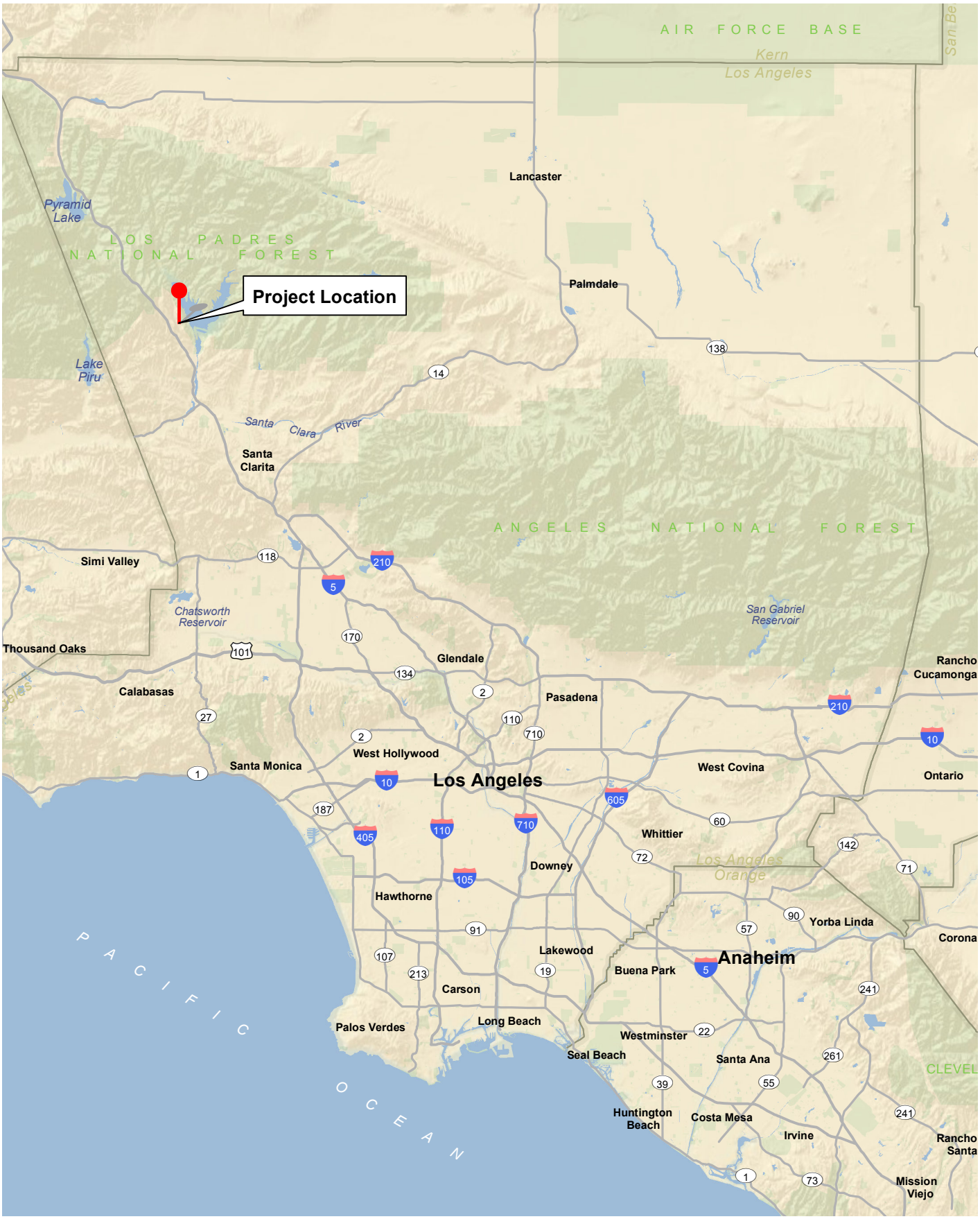
The NorthLake Specific Plan site comprises approximately 1,330 acres of undeveloped land east of Interstate (I) 5, west of Castaic Lake, and north of the community of Castaic, California in unincorporated Los Angeles County. Regional access to the Specific Plan area is provided by I-5, and site access is provided via the Parker Road and Lake Hughes Road exits from I-5. Local access to the Project site is provided by Ridge Route Road, which traverses northerly along the western edge of the Project site. The proposed Project includes development of Phase 1 of the NorthLake Specific Plan to be implemented via Vesting Tentative Tract Map No. 73336 (VTTM 73336), which includes approximately 720 acres of the southern portion of the Specific Plan area and the remaining property for Phase 2 to be developed at a future time. The regional location and local vicinity are depicted in Exhibit 3-1, Regional Location, and Exhibit 3-2, Local Vicinity – Map View, respectively. Detailed information about VTTM 73336 and the Phase 2 development area is provided in Section 4.0, Project Description.

The Specific Plan site is surrounded by undeveloped land to the north and east, and urban development on the south and west. Surrounding land uses are shown Exhibit 3-3, Surrounding Area Orientation.

Existing land uses to the south include a single-family residential subdivision that was developed as an initial phase of the NorthLake community, but is outside the Specific Plan area. A brick yard is immediately east of the southern portion of the Specific Plan area, and the community of Castaic (which is comprised primarily of freeway, commercial, and residential uses) lies further to the south. I-5 runs along the entire western margin of the Specific Plan site, and land west of the freeway is under development as a residential community with some commercial uses. Immediately adjacent to the Specific Plan boundary along the west side of Ridge Route Road is a single-family residence.

North and east of the Project site are undeveloped national forest and State recreational areas with topography and vegetation characteristics similar to that of the Project site. The Castaic Lake State Recreation Area (SRA) is directly adjacent to the eastern edge of the Project site; the Angeles National Forest surrounds the Castaic Lake SRA to the east, north, and northwest. The SRA consists of 8,800 acres of recreational areas, Castaic Lake, and the smaller Castaic Lagoon just south of Castaic Lake. Castaic Lake and Lagoon are reservoirs that are a part of the State Water Project. Castaic Lake is one of the State Water Project's largest recreational lakes and includes 29 miles of shoreline. Castaic Lagoon can be used for non-power boating, canoeing, and seasonal swimming, while Castaic Lake is for sailing; power boating; water and jet skiing; and fishing. Day use facilities include a boat ramp; boat dock and rentals; picnic areas; shade shelters; restrooms; trails; sand beaches; swimming areas; fish cleaning facilities; parking; and maintenance buildings/ yards. A bicycle and motorcycle motocross area has also been developed west of Castaic Lagoon.

General Plan land use designations for areas surrounding the Project site include Rural (R) to the north and south; Open Space (O) to the east; and Industrial (M), Commercial (C), and Urban Residential (6.1–12 dwelling units per acre [du/ac]) to the south and west. The SCVAP 2012 identifies areas north and east of the Project site as Hillside Management (HM). West of I-5, the SCVAP 2012 designations are Urban Residential (U1 1.1–3.3 du/ac and U2 3.4–6.6 du/ac), Industrial (M), Non-Urban (NI), Commercial (C), and Hillside Management (HM). To the south and southeast, the SCVAP 2012 shows HM, M, NI, U1, and U2 uses. Surrounding zoning is A-2-2



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Regional Location

Exhibit 3-1

NorthLake Specific Plan SEIR

N W E S

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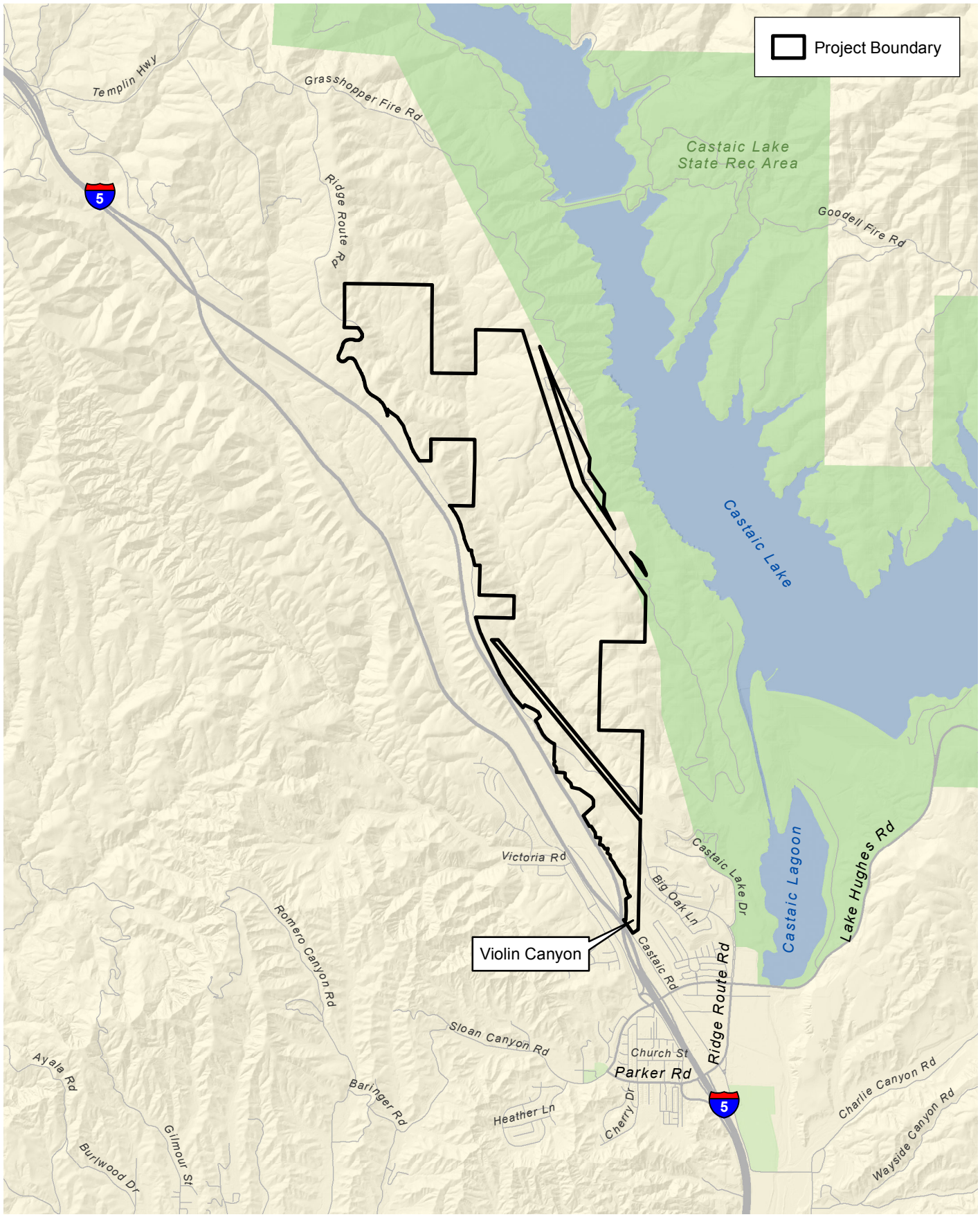

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Local Vicinity - Map View

Exhibit 3-2

NorthLake Specific Plan SEIR

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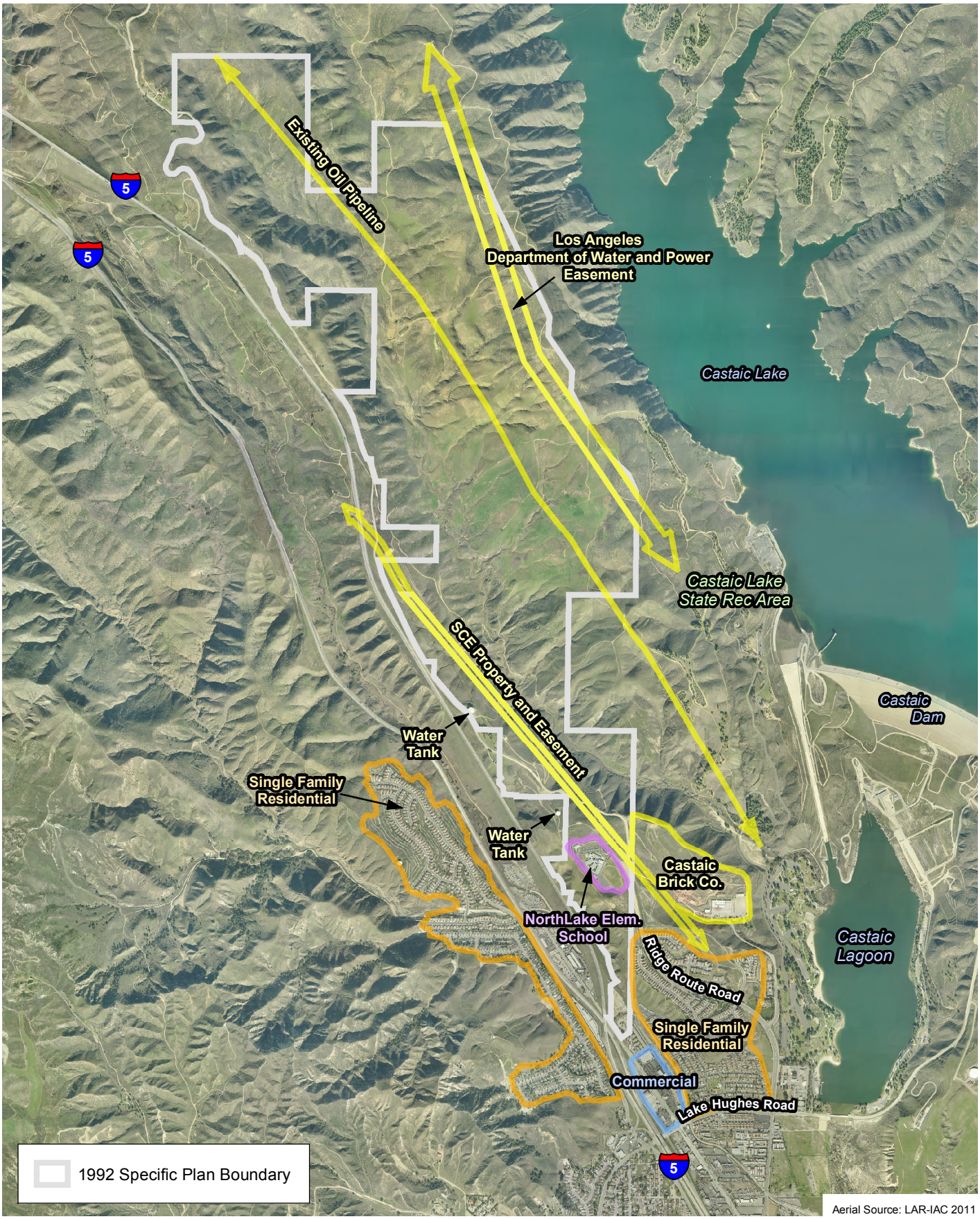

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Surrounding Area Orientation

Exhibit 3-3

NorthLake Specific Plan SEIR

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0.5 0.25 0 0.5 Miles

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(Agriculture), M-1 (Light Manufacturing), C3/C4 (Commercial), OS (Open Space) and W (Watershed).

3.2 PHYSICAL SITE CHARACTERISTICS

Physical site characteristics are summarized in this section in order to provide an understanding of the Project site location and regional context. More detailed technical information is provided in the technical analysis sections of this SEIR, as noted below.

The NorthLake Specific Plan Project site has been used as cattle ranchland since the early 1800s and was occupied by settlement "homesteaders" at various times throughout the 1800s and early 1900s. Approximately 600 acres of the site were acquired by legal homesteading in the name of William Cook in 1916 and became known as the Cook Ranch. Several hundred acres in the northern and western portions of the site were acquired in contemplation of the construction of Castaic Lake in the late 1960s. The Project site continues to be used for limited cattle grazing.

The Project site is generally underlain by Castaic Formation bedrock, which primarily consists of marine sandstone and siltstone. On-site soils are primarily porous, loose, silty-sand and clayey-silty-sand ranging in thickness from 2 to 52 feet. Alluvium occurs along the canyon floors of the site. As discussed in Section 5.6, Geotechnical Hazards, no active faults or fault traces have been identified on the site. Precipitation in the vicinity of the Project site averages between approximately 14 and 16 inches per year and generally occurs from November through April.

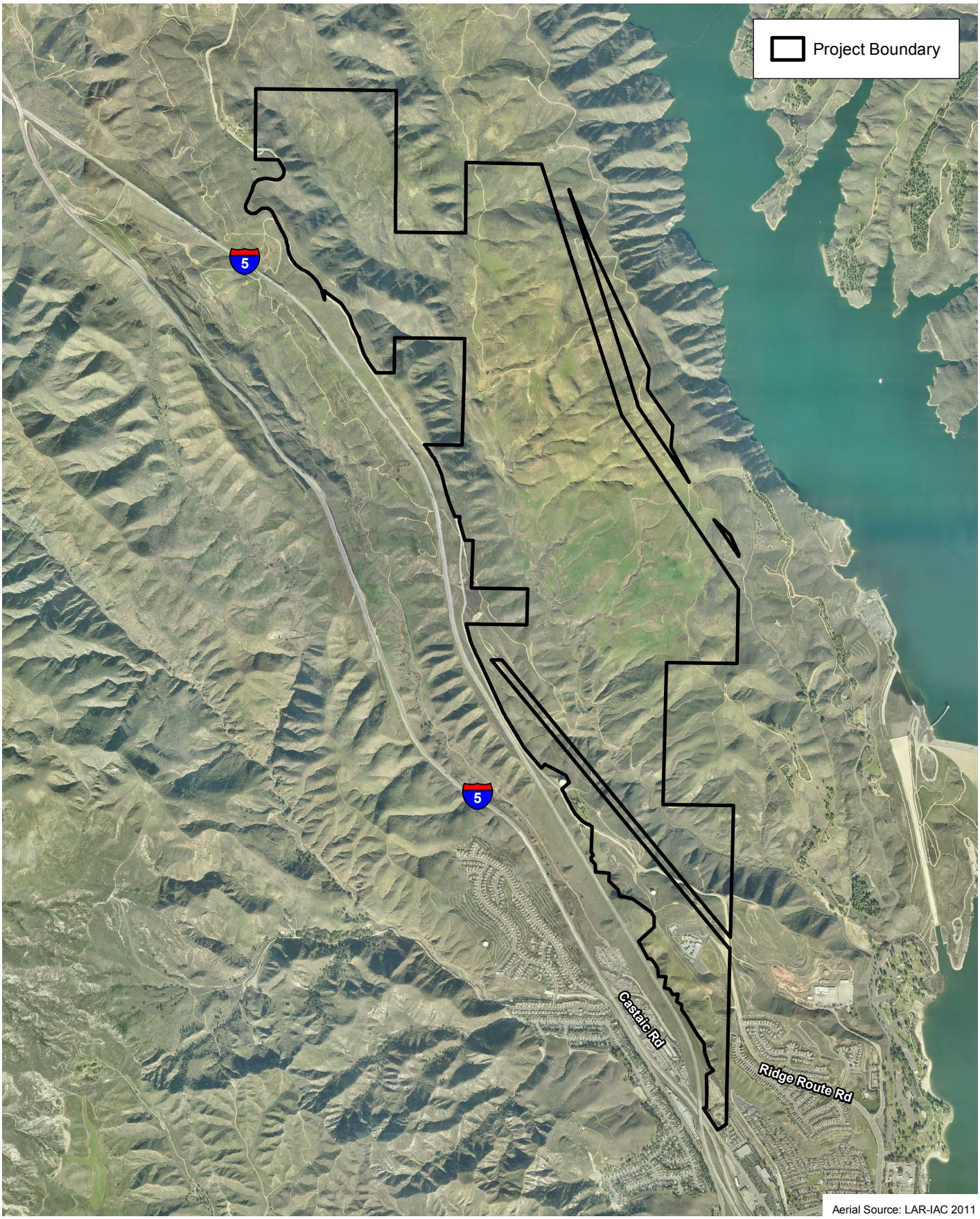
Grasshopper Canyon traverses the central portion of the Project site in a northwest to southeast direction (see Exhibit 3-4, Local Vicinity – Aerial View). The topography of Specific Plan area consists of a steeply sloping ridgeline that runs northwest to southeast along the western boundary of the site adjacent to I-5. The eastern portion of the Project site is characterized by gently rolling topography. To the east of Grasshopper Canyon, slopes gradually rise to a ridge on the site's eastern boundary. An intermittent stream, which is a United States Geologic Survey (USGS) designated "blueline" watercourse, runs through Grasshopper Canyon. Intermittent drainages convey seasonal runoff to Castaic Lagoon, which is located south of Castaic Lake. The main tributary in this area begins well to the north of the Specific Plan area at a point generally parallel with the northern reach of Castaic Lake, and continues in a southeast direction through Grasshopper Canyon, eventually reaching the northwestern edge of Castaic Lagoon. Elevations on the site range from approximately 2,300 feet above mean sea level (msl) along the ridge lines to approximately 1,250 feet above msl in Grasshopper Canyon in the southern portion of the site.

A mix of sage scrub and grassland vegetation types dominate the Project site. Cattle grazing generally occurs east of Grasshopper Canyon and, as a result, this part of the Project site is dominated by non-native grassland. Additionally, much of the southern portion of the Project site burned in 2013. Violin Canyon in the south end of the Project site holds nuisance water from irrigation run-off most of the year, but only contains flowing water for brief periods during storm events.

3.3 LAND USE AND PLANNING CONTEXT

3.3.1 SANTA CLARITA VALLEY AREA PLAN (LOS ANGELES COUNTY GENERAL PLAN)

The Project site is located within the boundaries of the Santa Clarita Valley Area Plan One Valley One Vision 2012 (SCVAP 2012), a component of the *County of Los Angeles General Plan*, which provides a coordinated statement of public policy relating to the future of the Santa Clarita area. The SCVAP 2012 was adopted on November 27, 2012. The NorthLake Specific Plan is included



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Local Vicinity – Aerial View

Exhibit 3-4

NorthLake Specific Plan SEIR

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in the SCVAP 2012 and the entire 1,330-acre Specific Plan area is designated as Specific Plan (SP).

Introduction Section V and Land Use Section VI, of the SCVAP 2012 addresses the *NorthLake Specific Plan.* The SCVAP 2012 states that the *NorthLake Specific Plan* was approved for development of 3,623 residential units, both single-family and multi-family, on 1,330 acres located 2 miles north of Castaic. The Specific Plan was also approved for 666 acres of recreation, open space, school sites, and a golf course. The SCVAP 2012 states, however, that revisions to the *NorthLake Specific Plan* have been requested and are under review by Los Angeles County and that, when developed, the NorthLake Specific Plan area will be considered a part of the Castaic village community.

3.3.2 LOS ANGELES COUNTY PLANNING AND ZONING CODE

Land use, population density, lot coverage, and building sizes and locations on the Project site are regulated through the County's Zoning Code (County of Los Angeles Municipal Code, Title 22). According to the Zoning Code, zoning designations in the project area are subject to the NorthLake Specific Plan. The proposed project would be in compliance with the NorthLake Specific Plan and with the applicable Zoning Code where the NorthLake Specific Plan is silent, therefore it would be consistent with the County Zoning Code. Additionally, the County of Los Angeles has drafted a new Hillside Management Area (HMA) ordinance for unincorporated areas of the County. According to the draft ordinance, an HMA is defined as an area with a natural slope of 25 percent or greater. Based on Figure CO-1, Hillsides and Designated Ridgelines in the Santa Clarita Valley, of the SCVAP 2012, the Project site is characterized by natural slopes of 25 percent or greater and would qualify as an HMA. Because development of the proposed project was contemplated as part of the previously approved and currently entitled NorthLake Specific Plan, which was approved prior to the HMA ordinance, compliance with the HMA ordinance is not required. Development need only to comply with any hillside design standards in effect at the time that the NorthLake Specific Plan was approved and as further addressed in the SCVAP 2012.

3.3.3 NORTHLAKE SPECIFIC PLAN

As required by State law, a Specific Plan must be consistent with and implement an adopted General Plan. The *NorthLake Specific Plan,* adopted in 1992 and included as Appendix B, contains goals and policies that are in conformance with those outlined both generally in the *County of Los Angeles General Plan* and specifically in the SCVAP 2012. A complete list of the Specific Plan goals and policies is provided in Table 4-1 in Section 4.0 of this SEIR. In summary, the adopted *NorthLake Specific Plan* includes the goals listed below.

Land Use Goals

- Encourage high quality design in all development projects compatible with and sensitive to the natural and man-made environment.
- Provide commercial and industrial lands to accommodate a portion of the Project labor force.
- Foster compatible land use arrangements that contribute to reduced energy consumption and improved air quality.
- Encourage conservation, protection, and enhancement of natural ecological, scenic, cultural, and open space resources for the benefit and enjoyment of the current and future residential population in the region.
- Coordinate land use with existing and proposed transportation networks.

Open Space/Recreation Goals

- Improve opportunities for a variety of outdoor recreational experiences.
- Preserve and protect sites with scenic and/or recreational value.
- Reduce the risk to life and property from seismic occurrences, flooding, erosion, wildland fires, and landslides.
- Promote a fire management system to assist Project developers and residents in constructing and maintaining a fire-safe environment.

Community Design/Scenic Goals

- Develop an environment that is visually attractive while being efficiently and effectively organized and maintained.
- Preserve and enhance the visual aspects of the County's circulation system for aesthetic purposes.

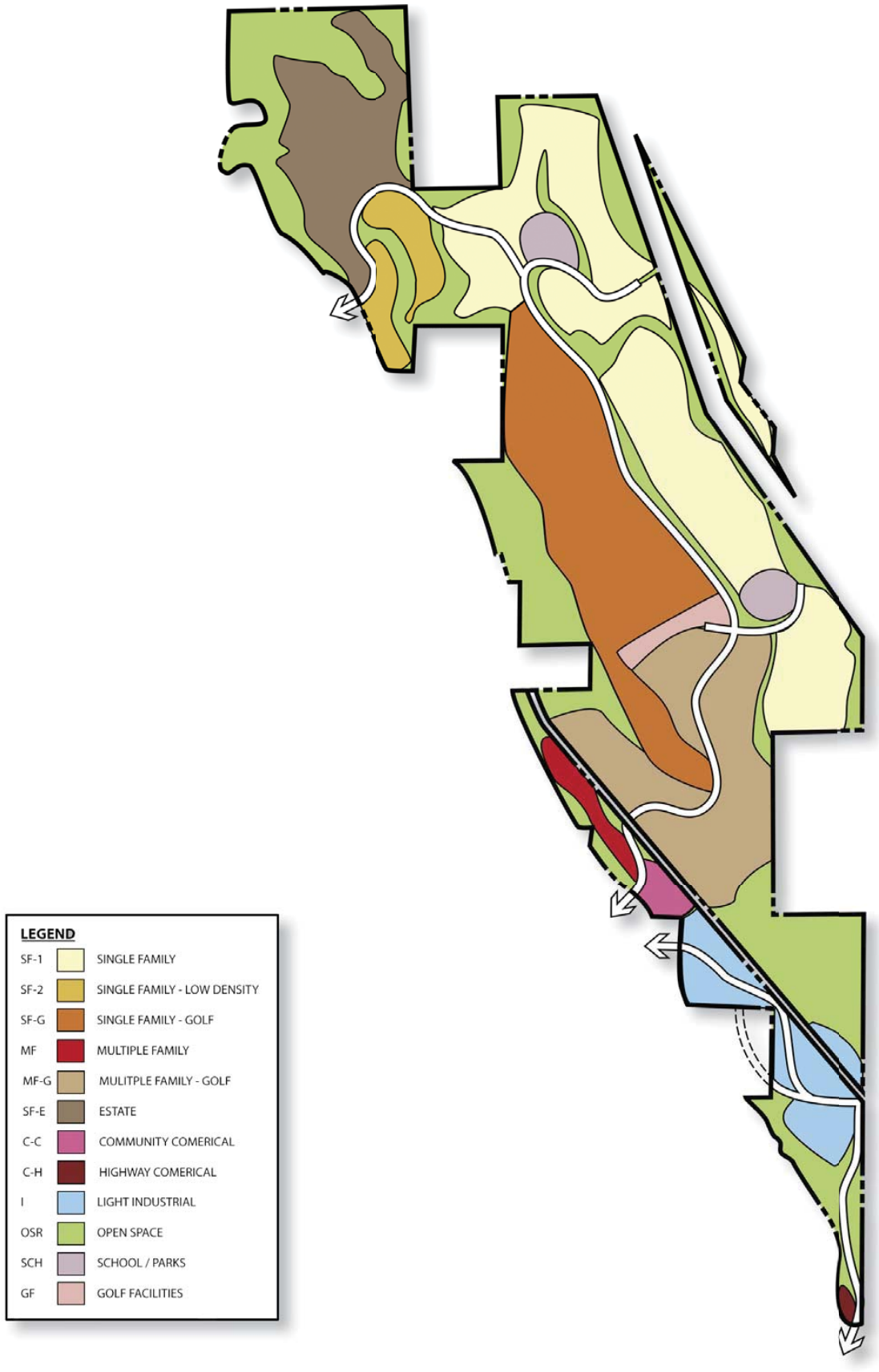
The 1992 Specific Plan also includes information on the location, extent, and intensity of land uses, and these are described in the Land Use Plan of the 1992 Specific Plan. Exhibit 3-5, Existing Land Use Plan (1992 Specific Plan) depicts the current (1992) approved land uses for the NorthLake Specific Plan Project site. The current proposal for implementation of the Specific Plan includes minor land use changes. These changes involve 1) redesigning and reducing the overall number of residential units to fit the existing landforms more closely and result in less site disturbance and 2) redesigning the Project's recreational components to replace the golf course with multiple, more inclusionary recreational and open space features that serve the needs of a higher percentage of the population and are more sensitive to environmental considerations. These changes are described in Section 4.0, Project Description, of this SEIR.

3.3.4 OTHER PREVIOUS PROJECT SITE ENTITLEMENTS

In addition to approval of the *NorthLake Specific Plan,* the County approved a Conditional Use Permit (CUP 87-172) for development consistent with the County of Los Angeles' Grading Ordinance in effect at the time, which coincided with the County's approval of the Specific Plan. The intent of the CUP was to protect natural resources and to ensure the safety of current and future residents from natural hazards that are potentially inherent to these areas, such as slope instability, fire, flood, or erosion hazards, while allowing for controlled development (Los Angeles County 2002a). CUP 87-172, which is available for review at the County of Los Angeles Department of Regional Planning, authorizes development of the Project site, as depicted by the approved Specific Plan. The 1992 Specific Plan and Master CUP acknowledged that future implementation of the Specific Plan would require a subsequent CUP to accomplish Site Plan review for Project implementation. A new CUP (CUP No. 201500019) is proposed as part of the Project and would, thus, supersede the 1992 Master CUP.

3.4 BASELINE CONDITIONS

The Project site is undeveloped except for the Northlake Hills Elementary School located in the southwest; naturally vegetated land and cattle grazing occurs throughout the Project site. However, several utility lines and easements run through the Specific Plan property. These include a single pipeline easement along the eastern ridge of Grasshopper Canyon which carries two underground oil pipelines. One 14-inch diameter line, operated by Pacific Pipeline, is actively used for crude oil conveyance. A second pipeline, under ownership of ARCO and 10 inches in diameter, is inactive. An underground telecommunications/cable line runs in an easement



Source: FORMA 2005

Existing Land Use Plan (1992 Specific Plan)

Exhibit 3-5

NorthLake Specific Plan SEIR

N W E S

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immediately east and adjacent to the oil pipeline easement. Both of these easements run the entire north-south length of the Specific Plan site. Several easements and utility alignments are also located in the vicinity of the western ridge of Grasshopper Canyon and Ridge Route Road. These include a Southern California Edison easement with two transmission lines, and a third set of transmission lines just east of the easement. In that same vicinity is a separate Gas Company easement with an underground gas line that runs along the western boundary of the site. Two water tank reservoirs are located immediately adjacent to and off of the Project site, along the western edge of the site and adjacent to Old Ridge Route Road. The first tank is a 3.0 million gallon (MG) water tank reservoir (Reservoir 1661A) and is owned and operated by the Newhall County Water District (NCWD). The second tank, which is 1.5 MG in size and located northerly of the existing Northlake Hills Elementary School, is un-used and is not part of the NCWD system. Water lines from the water tanks run south along the Ridge Route Road alignment.

Each section of the Draft SEIR will provide a more detailed explanation of the baseline existing conditions related to the respective area of analysis.

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SECTION 4.0 PROJECT DESCRIPTION

This section provides an overview of the proposed Project, which is defined as implementation of the *NorthLake Specific Plan,* and also includes relevant Project background information.

4.1 PROJECT LOCATION AND SURROUNDING AREA

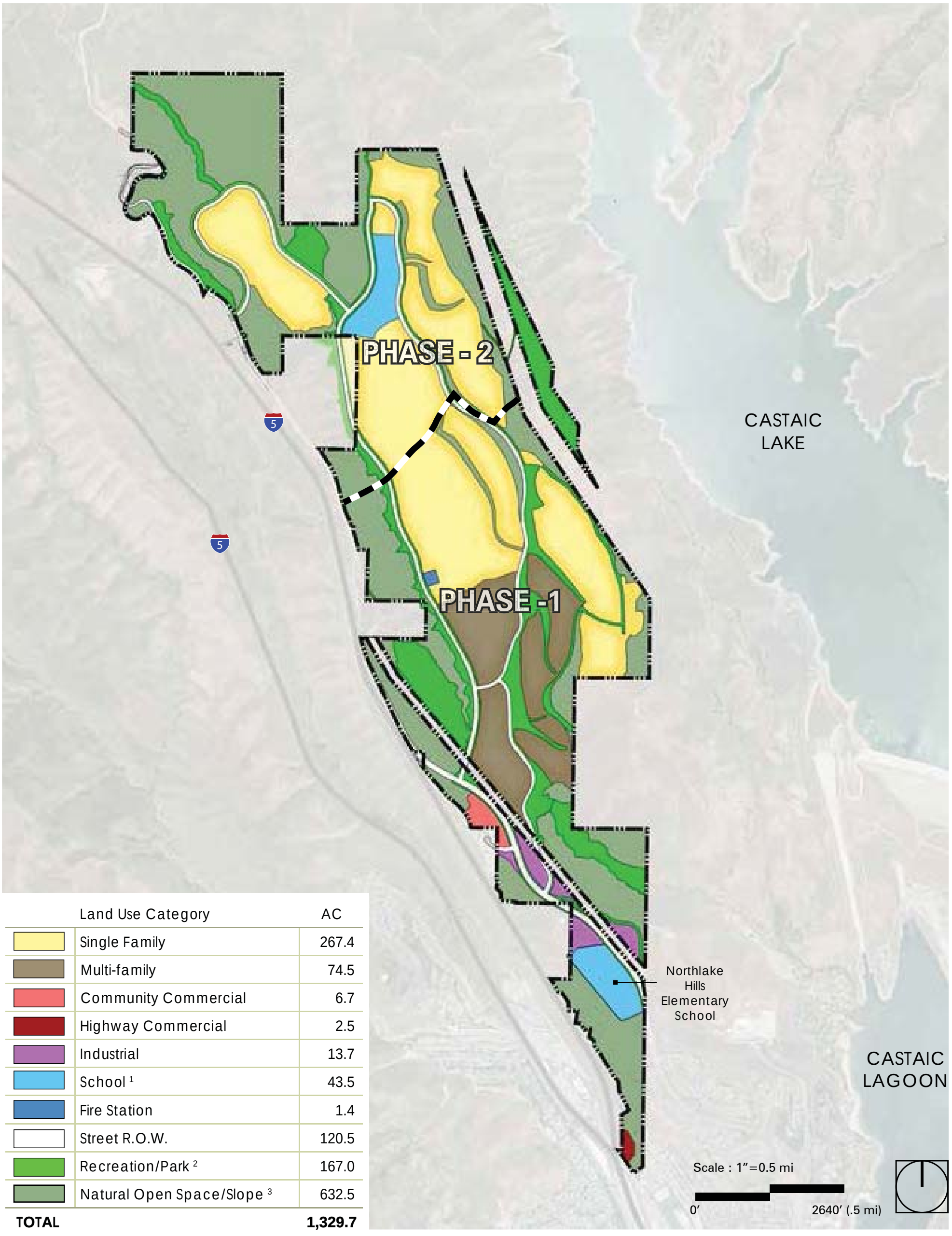
The proposed Project site, as evaluated in the *NorthLake Specific Plan* and as defined herein, comprises approximately 1,330 acres of undeveloped land east of Interstate 5 (I-5), west of Castaic Lake, and north of the community of Castaic in unincorporated Los Angeles County, California. Regional access to the Project site is provided by I-5 via the Parker Road and Lake Hughes Road exits, both of which lead to Ridge Route Road. Primary local access to the Project site is by Ridge Route Road, which traverses north and south along the western edge of the Project site. A secondary access is available from Templin Highway (via an I-5 exit approximately 1.75 miles to the north of the Project site) and Ridge Route Road. Phase 1 implementation of the *NorthLake Specific Plan*, to be implemented via Vesting Tentative Tract Map No. 073336 (VTTM 073336) and a Conditional Use Permit (CUP 201500019), as discussed in more detail below, includes approximately 720 acres and comprises approximately 54 percent of the entire Project site. Exhibit 4-1, Proposed Land Use Plan, provides an overview of the proposed land uses for the Project site, including delineating the Phase 1 development area, also known as VTTM 073336 and the Phase 2 development site which is set aside for future development. Implementation of the proposed Project, discussed in more detail below, also involves related improvements (i.e., grading and infrastructure) that will occur outside the Project site boundary on adjacent, off-site areas and along local roadways.

4.2 PROJECT BACKGROUND

In 1992, the County of Los Angeles adopted the *NorthLake Specific Plan* (SP No.87-172) for a 1,330-acre mixed-use community comprised of 3,623 dwelling units. The NorthLake Specific Plan area, which is synonymous with the proposed Project site, also included 13.2 acres of commercial uses, 50.1 acres of industrial uses, and supporting infrastructure and public services uses, including schools, parks, a potential library site, and a potential fire station site. The *NorthLake Specific Plan* also incorporated an 18-hole golf course. The adopted *NorthLake Specific Plan's* Land Use Plan is shown in Exhibit 3-5, Existing Land Use Plan (*NorthLake Specific Plan*), in Section 3.0 of this Draft SEIR. Subsequent to the 1992 approval of the *NorthLake Specific Plan,* market conditions and changes in property ownership placed development of the *NorthLake Specific Plan* on hold. Implementation of the proposed Project would involve development pursuant to the *NorthLake Specific Plan,* and no amendments would be required.

The *NorthLake Specific Plan* and the associated *NorthLake Specific Plan Environmental Impact Report* (1992 Specific Plan EIR) addressed development of the Project site as a conceptual plan and not as a precise plan of development. The *NorthLake Specific Plan* included a statistical summary of uses allocated within very general land use areas, linked by a conceptual backbone roadway system. At the time of the 1992 approvals, it had been anticipated that a focused Site Plan review and follow-up CEQA review would be conducted, as more project-specific level details were developed to implement phases of the *NorthLake Specific Plan*. The proposed Project would implement the *NorthLake Specific Plan* and requires the following approvals:

1. VTTM No. 073336 to subdivide 720 acres into a total of 384 lots.
2. Conditional Use Permit No. 201500019 to authorize
    - Northlake Specific Plan site plan review;



Land Use Category	AC
Single Family	267.4
Multi-family	74.5
Community Commercial	6.7
Highway Commercial	2.5
Industrial	13.7
School [1]	43.5
Fire Station	1.4
Street R.O.W.	120.5
Recreation/Park [2]	167.0
Natural Open Space/Slope [3]	632.5
TOTAL	**1,329.7**

Source: PlaceWorks 2017

Proposed Land Use Plan

Exhibit 4-1

NorthLake Specific Plan Project

N W E S

1200 600 0 1200 Feet

BonTerra PSOMAS

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- Grading that exceeds 100,000 cubic yards; and
- Construction of water tanks and water supply infrastructure.

Collectively, the proposed Project is defined as the entire 1,330-acre site, including the Phase 1 720-acre VTTM No. 073336 area and associated off-site external map Improvements on 65.13 acres, more particularly described on page 4-8, which include remedial grading, drainage features and road and utility alignments, and the remainder property for Phase 2 to be developed at a future time (the "External Map Improvements"). In addition to updating program-level information from the 1992 Specific Plan EIR, this SEIR evaluates Project-level impacts from implementation of the *NorthLake Specific Plan,* including both development of Phase 1 as well as future development of Phase 2.

In addition to the 1992 approval of the *NorthLake Specific Plan,* a Conditional Use Permit (CUP No. 87-172-(5)) was adopted. This CUP, sometimes referred to as the Master CUP, addressed the proposed land uses as defined in the *NorthLake Specific Plan,* including intensity of development and related grading consistent with the County of Los Angeles' Grading Ordinance in effect at the time. The *NorthLake Specific Plan* and Master CUP acknowledged that future implementation of the *NorthLake Specific Plan* would require a subsequent CUP to accomplish Site Plan review for Project implementation. The CUP request (CUP No. 201500019) is part of the proposed Project, and approval of this CUP would, thus, supersede the 1992 Master CUP.

The 1992 Master CUP anticipated a development footprint that was generally contained within the approved proposed Project boundary. Some portions of the off-site areas were anticipated for grading to accommodate realignment of Ridge Route Road and along Project boundary margins (see Exhibits II-5 and II-6 of the *NorthLake Specific Plan*). Consistent with the project analyzed in the 1992 Specific Plan EIR and addressed in the NorthLake Specific Plan and 1992 Master CUP, the current implementation proposal requires grading to occur outside of the Project site boundaries, including remedial grading along the eastern edge, and excavation and grading associated with drainage features and road and utility line realignments primarily along the western edge of the Project site.

4.3 PROJECT OBJECTIVES

The purpose of the proposed Project is the implementation of the *NorthLake Specific Plan*. An overall requirement of the Project is that such implementation should be consistent with the goals and policies of the adopted *NorthLake Specific Plan.* The adopted *NorthLake Specific Plan* goals and policies, including a consistency analysis, are discussed in Section 5.9, Land Use.

The proposed Project includes the following goals that are specific to the Project as proposed and evaluated in this SEIR:

- **Create a healthy "Community".** Create an innovative, dynamic community focused on active outdoor recreation. Evoke a sense of "pride of place" where people love to live by encouraging social, civic, and leisurely interaction.
- **Celebrate uniqueness of place.** Reinforce and capitalize on the unique qualities of each neighborhood and the surrounding environment through land planning, architecture, and landscape architecture. Integrate the natural beauty and setting of the site into all land uses.
- **Create connectivity.** Encourage community participation and interaction by providing enhanced connections to recreational amenities, open spaces, and regional destinations.

- **Optimize open space relationships.** Provide a comprehensive public and private park system offering a wide variety of passive and active recreational opportunities. Enrich and support the overall walking and bicycling experience by providing significant destinations.
- **Encourage diversity.** Encourage physical, social, and economic diversity through the inclusion of a wide range of home sizes and prices, resulting in a richness of experience for all residents.
- **Integrate environmentally responsible practices.** Conservation of land, energy, materials, and natural resources is of critical importance to our continued well-being. Practices minimizing impact and use of natural resources shall be adapted, resulting in healthy, safe, and responsible environments.
- **Enhance local economic well-being.** Offer commercial and industrial land uses that will create jobs. Allow for a larger population near Castaic Lake that will stabilize and support local businesses.
- **Mix of Uses.** Include a mix of residential, commercial, industrial, recreational, and institutional uses that will reduce offsite vehicle trips and vehicle miles travelled.
- **Provide Needed Housing.** Address the regional housing shoring by maximizing providing a significant amount of housing onsite that includes a wide range of home sizes and prices.

4.4 PROJECT CHARACTERISTICS

4.4.1 PROJECT OVERVIEW

Phase 1 Implementation

In summary, the proposed Project involves development of Phase 1 pursuant to the *NorthLake Specific Plan.* To implement the Project, the Project Applicant has requested approval of the following entitlements:

1. VTTM No. 073336 to subdivide 720 acres into a total of 384 lots.
2. Conditional Use Permit No. 201500019 to authorize
    - Northlake Specific Plan site plan review;
    - Grading that exceeds 100,000 cubic yards; and
    - Construction of water tanks and water supply infrastructure.

The previous Land Use Plan featured a golf course as the centerpiece recreational element; however, changes in the popularity of golf and the current drought conditions in California have led to a reconsideration of the previous plan. Golf has given way to more inclusionary recreational and open space features that serve the needs of a higher percentage of the population, are significantly more desirable to the community, and are more sensitive to environmental considerations. These uses are detailed under the Open Space, Recreation, and Parks discussion later in this section.

Site Constraints and Associated Approvals Required

Consistent with the 1992 approval of the *NorthLake Specific Plan,* implementation of the proposed Project involves site grading that would fill in a portion of Grasshopper Creek Canyon within the Phase 1 footprint to enable development in this area. Project grading for all areas on the Project site will require the relocation of some existing on-site easements, pipelines, and utilities to accommodate the proposed cut depths and Site Plan configuration.

An existing crude oil pipeline easement containing two oil pipelines that traverse the entire north-south length of the Project site will be relocated approximately 1,500 to 2,000 feet east of the property within a new easement. The relocation of the alignment for one of the oil pipelines, the Pacific Oil pipeline, is proposed through adjacent lands owned by the Los Angeles Department of Water and Power (LADWP) and the Castaic Lake State Recreation Area (SRA). Agreements between the Applicant and both agencies for receipt of easements to realign the pipeline through these publicly owned properties are pending and would be a condition of approval prior to initiation of development. The second oil pipeline, which is currently inactive, would be truncated and a new location is not proposed. An existing telecommunications/cable line that runs adjacent to the oil pipeline easement will be relocated along Ridge Route Road. An approximate ½-mile segment of an existing 34-inch natural gas pipeline (which is currently located within Ridge Route Road), will be relocated within the future Ridge Route Road, subject to County approval, when the new alignment is completed. Finally, three electrical transmission lines—operated by Southern California Edison (SCE) and located in an easement and separate adjacent alignment along the Project site's western edge parallel to Ridge Route Road—will be modified to reflect the final grading elevations and the Site Plan configuration. Within an approximate ½-mile segment, the height of the electric transmission towers will be raised and/or lowered to maintain safe clearance from the final grade elevation. Two or three of the towers, dependent on final engineered plans, will be relocated away from the residential land use area. Additional details on the proposed infrastructure relocations are provided below.

Extension of all utilities and some services to the Project site will also be necessary to accommodate Project implementation. To facilitate the provision of utilities and services, annexation to the Los Angeles County Sanitation District and the Consolidated Sewer Maintenance District will be required. Additionally, annexation to the appropriate service and financing districts, such as the Consolidated Fire Protection District of Los Angeles County, will be required as appropriate.

Other incidental approvals (i.e., Section 404 Permit, 1602 Streambed Alteration Agreement, and Section 401 Certification) are required to authorize development that will affect resources under regulatory agency control. These regulatory approvals will address the proposed implementation of the entire *NorthLake Specific Plan.* Need for further coordination with the regulatory agencies overseeing these permits is limited to demonstrating compliance with permit conditions as development proceeds.

The requested Project entitlements and identification of the related agency are summarized in Table 4-1 below. More detailed descriptions of the requested entitlements follow.

TABLE 4-1
REQUIRED AGENCY APPROVALS AND ENTITLEMENTS

Agency	Approval/Permit	Purpose
County of Los Angeles	Conditional Use Permit No. 201500019	For Site Plan Review, as required by the *NorthLake Specific Plan.* See discussion below.
	Tentative Tract Map No. 073336	To obtain subdivision approval.
California Public Utilities Commission	Certificate of Public Convenience and Necessity and/or Exemption	To authorize the realignment of the natural gas pipeline, the oil pipeline, and the telecommunications and electrical transmission line routes.
U.S. Fish and Wildlife Service	Section 7 Consultation/ Biological Opinion	Impacts to federally Threatened or Endangered species.
U.S. Army Corps of Engineers	Section 404 Permit	Impacts to "waters of the U.S."
California Department of Fish and Wildlife	Section 1602 Lake and Streambed Alteration Agreement	Modifications to the natural flow of on-site drainages
Regional Water Quality Control Board	Section 401 Water Quality Certification	Modifications to the natural flow of on-site drainages

4.4.2 PROJECT DETAILS

***NorthLake Specific Plan* Implementation**

The approved *NorthLake Specific Plan* is a concept plan, and not intended to be a precise plan of development. Because the approved *NorthLake Specific Plan* identifies only development concepts, its adoption recognized the need for an implementing mechanism, which is the Site Plan Review that is processed as a CUP. The CUP/Site Plan Review will not exceed the maximum number of dwelling units established by the approved *NorthLake Specific Plan*. The total number of dwelling units proposed is significantly fewer than the total number of dwelling units proposed for the same area in the approved *NorthLake Specific Plan*.

Proposed residential uses include both single-family and multi-family units. The current Land Use Plan includes development parcels for commercial and industrial uses; however, site-specific buildings/uses have not yet been prepared for these parcels. It should be noted that subsequent CUP review and approval for development on the industrial and commercial lots and future lots in Phase 2 will be required and processed once more precise development plans for those uses and Phase 2 are completed. Table 4-2, Land Use Comparison, provides a comparison of development associated with the currently entitled *NorthLake Specific Plan* and the proposed Land Use Plan. A more detailed breakdown of the proposed Project is provided in Table 4-3, Land Use Statistical Summary Table For Phase 1 (VTTM 073336) and Phase 2.

TABLE 4-2
LAND USE AREA COMPARISON

	Existing *NorthLake Specific Plan*		Proposed Plan		Difference	
	(ac)	(du)	(ac)	(du)	(ac)	(du)
Residential	600.3	3,623	341.9	3,150	(258.4)	473
Commercial	13.2		9.2		(4.0)	
Industrial	50.1		13.9		(36.2)	
Open Space	476		624.6		148.6	
Recreation- Golf	167		0		(167)	
Recreation- Trails/Parks	0		167		167	
School/Park Facilities	23.1		43.7[a]		20.6	
Utilities[b]			7.3		7.3	
Right of Way[b]			120.5		120.5	
Public Services (Fire Station Pad) [b]			1.4		1.4	
Total	**1,330.0**		**1,330.0[c]**			

ac: acres; du: dwelling units; (): negative

[a] Northlake Hills Elementary School was previously constructed on a 20.6-acre site.

[b] The *NorthLake Specific Plan* did not provide a breakdown of acreages for utilities, right of way, or public service facilities. Roadways were included in Residential.

[c] Totals may not add due to rounding and mapping.

Source: Sikand 2015.

TABLE 4-3
LAND USE STATISTICAL SUMMARY TABLE
FOR PHASE 1 (VTTM 073336) AND PHASE 2

Use	Phase 1 (VTTM 073336)		Phase 2	
	Number of Units or square footage	Area (Acres)	Number of Units	Area (Acres)
Residential: Single-Family	588	78.6	1,176	145.0
Residential: Multi-Family	1,041	69.2	-	-
Residential: Senior[a]	345	49.1	-	-
Commercial		6.7		-
Commercial Highway		2.5		-
Industrial		13.9		-
Park(s)				
Trails		10.5		1.7
Grasshopper Creek Park		10.6		5.6
Enhanced Parkway		38.3		2.5
Castaic Lagoon Park		17.2		-
North Ridge Route Park		-		8.5
Northvalley Paseo Park		-		8.8
Northvalley Park		-		9.7
Sports Park		25.8		-
Cody Dog Park		1.0		-
Vista Park		-		26.8
Open Space- Manufactured Slope		136.9		190.7
Open Space- Undisturbed		167		130.2
Utilities				
Water Tank		6.5		0.6
Pump Station		0.2		-
Roadways		84.3		36.2
Fire Station Pad		1.4		-

VTTM: Vesting Tentative Tract Map

[a] This overlay provides for a development option of attached single-family residences and age-restricted areas designated for homeowners that are 55 years of age and older. Lot sizes and configurations will be similar to those in the Single-Family area with the addition of the Attached Single-Family designation as an option. It should be noted that development within these areas may or may not be age-restricted.

Source: Sikand Engineering 2015.

Conditional Use Permits

Master Conditional Use Permit No. 87-172(5)

Conditional Use Permit (CUP) No. 87-172(5) was adopted in conjunction with the *NorthLake Specific Plan.* This Master CUP addressed the proposed land uses, the intensity of development, and the proposed grading that would occur within the proposed Project site boundary.[1]

[1] It should be noted that the County of Los Angeles has drafted a new Hillside Management Area (HMA) ordinance for unincorporated areas of the County. According to the draft ordinance, an HMA is defined as an area with a natural slope of 25 percent or greater. The Project site is characterized by natural slopes of 25 percent or greater

The *NorthLake Specific Plan* and Master CUP acknowledged that future implementation of the *NorthLake Specific Plan* would require a subsequent CUP to accomplish Site Plan review:

> The NorthLake Specific Plan shall be implemented through a method of Site Plan review. The Site Plan review will be a Conditional Use Permit, as modified herein, until such time as the County adopts a Specific Plan review procedure. A Site Plan review shall be required for all development within the Specific Plan area requiring a building permit. Tentative parcel and tract maps may be processed independent of the Site Plan review procedures.

As discussed below, a new CUP is proposed as part of the Project and would, thus, supersede the 1992 Master CUP. Furthermore, CUP No. 87-172(5) was not acted on and the 20-year term of the associated Development Agreement expired in April of 2013.

Conditional Use Permit for Site Plan Review (No. 201500019)

The Project includes a request for approval of Conditional Use Permit No. 201500019 to authorize: (a) *Northlake Specific Plan* site plan review; (b) Grading that exceeds 100,000 cubic yards; and (c) construction of water tanks and water supply infrastructure. CUP No. 201500019 is proposed to apply to development proposed in Phase 1 with Phase 2 remaining undeveloped until a future date at which time a project-specific CUP for Phase 2 will be required.

Vesting Tentative Tract Map No. 073336 (Phase 1)

A Vesting Tentative Tract Map (No. 073336) is requested to subdivide approximately 720 acres within the Phase 1 area of the Project site into 389 individual lots, thus implementing the southern portion of the *NorthLake Specific Plan.* The proposed land uses and overall Site Plan concept for Phase 1 (as implemented by VTTM 073336) generally conform to the adopted *NorthLake Specific Plan*. The proposed VTTM 073336 provides for a total of 1,974 dwelling units, including 588 single-family units on approximately 78.6 acres and 1,041 multi-family units on approximately 69.2 acres, and 345 senior multi-family units on approximately 49.1 acres. Lots are also provided for light industrial parcels (13.9 acres), commercial development parcels (9.2 acres), open space and parks (407.3 acres which is comprised of 167 acres golf course replacement), utilities (6.7 acres), roadways (84.3 acres), and a fire station pad (1.4 acres). The *NorthLake Specific Plan* states “the ratio of the internal floor area of all structures constructed within the C-C planning area to the total site area shall not exceed 0.35 FAR. This ratio shall apply to the Community Commercial planning area”.

The proposed lot statistics are summarized previously in Table 4-3, Land Use Statistical Summary Table for Phase 1 (VTTM 073336) and Phase 2.

Off-Site/External Map Improvements

The proposed Project, including both Phases 1 and 2, would include construction of Ridge Route Road at the project’s main entrance to the south and a secondary access route to the northwest.

Additionally, the Project would include construction of NorthLake Parkway within an off-site area in order to provide connectivity of this proposed roadway throughout the Project site and continuity

and would qualify as an HMA. Because development of the proposed Project was contemplated as part of the previously approved and currently entitled *NorthLake Specific Plan,* which was approved prior to the HMA ordinance, compliance with the HMA ordinance is not required. Development need only to comply with any hillside design standards in effect at the time that the *NorthLake Specific Plan* was approved and as further addressed in the *Santa Clarita Valley Area Plan.*

of the proposed linear park. This Project feature would be constructed on an island of County-owned and maintained property located adjacent to and west of the Phase 2 portion of the proposed Project site.

Additional Project-related improvements that would extend outside of the Specific Plan boundary include a 4.64-acre connection of Grasshopper Creek Park, a debris basin, 2.39 acres in trail connections, a 5.1-acre pad for a water tank, 29.79 acres of manufactured slopes and 11.98 acres of natural open space.

Currently, existing electrical distribution circuitry extends to the outskirts of the electrical needs area. Based on the anticipated Project requirements, SCE would require the extension of distribution circuitry for a short distance along the existing Ridge Route Road to reach the proposed Project. The initial stages of the Project would require extensions of the existing 16kV distribution circuitry from its current locations to the proposed Project perimeter such that the circuitry can be further extended within the Project site boundaries. The circuitry extension would occur within existing Ridge Route Road right-of-way.

Additionally, the local Elizabeth Lake Substation, located approximately 1 mile south of the Project site at 31526 Neely Street in Castaic, would be upgraded through installation of one 28 MVA 3-Phase transformer bank, one 4.8 MVAR capacitor bank, and associated substation equipment as necessary to adequately and safely provide electrical service to the proposed Project. All of the proposed upgrades would occur within the existing footprint of the substation and on SCE property.

Grading and Construction

Grading for the proposed Project involves approximately 33 million cubic yards of earthwork. Grading will occur over an approximate 1,330-acre rough grade footprint that accommodates the VTTM 073336 lots, plus the remaining 610 acres associated with future development of Phase 2. An overview of the final grade elevations and primary cut and fill areas are depicted in Exhibit 4-2, Cut/Fill Plan.

Phase 1 mass grading and clearing activities are projected to begin in 2018. It is anticipated that the initial grading activity and bulk cut/fill will take place over approximately 12 months; construction of infrastructure improvements would occur over an additional 12 months.

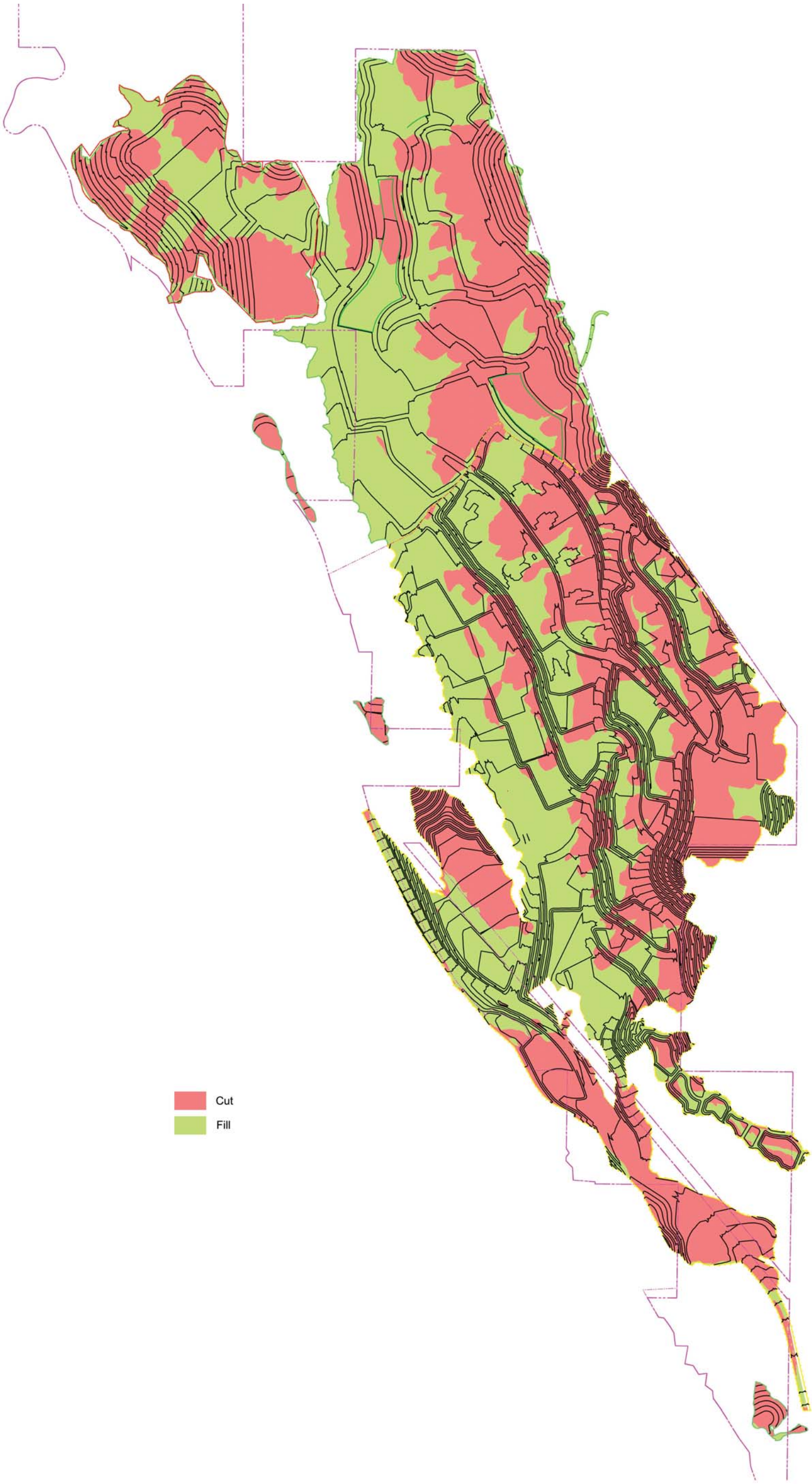
House construction would occur in two phases and is anticipated to begin in 2020. In order to conservatively evaluate Project buildout, the analysis assumes that construction of the two phases would be ongoing over an eight-year period, with final buildout by year 2028.

Phase 2 Undeveloped Area

The remainder of the Project site, referred to as the Phase 2 area, is included in VTTM 073336 and the CUP as 35 large lot parcels (20 acres or more) for future lease and finance purposes. Future development of the Phase 2 area is fully analyzed as part of this SEIR and proposed land uses are detailed previously in Table 4-3.

Proposed Land Uses

The proposed Project, as depicted in the Proposed Land Use Plan (Exhibit 4-1) and Phase 1 Site Plan – VTTM 073336 (Exhibit 4-3), provides for a range of land uses, including residential, commercial, industrial, parks, and open space. Additionally, the Project incorporates community facility uses that will support Project residents, including a potential future school site in Phase 2



Source: SIKAND 2015

Cut/Fill Plan

Exhibit 4-2

NorthLake Specific Plan Project

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and a future fire station site within Phase 1. Reflecting the objectives of the *NorthLake Specific Plan,* the proposed Project has been designed to encourage open space conservation and to provide recreational amenities for the benefit and enjoyment of the Project's future residential population and the current local community. The proposed Project has been designed to remediate potential environmental hazards, and the residential and non-residential uses are separated from each other in order to protect the residential nature of each neighborhood. The proposed land uses for Phase 1 and future Phase 2 of the proposed Project and detailed Project descriptions are provided below.

Proposed Land Uses (Phases 1 and 2)

Residential

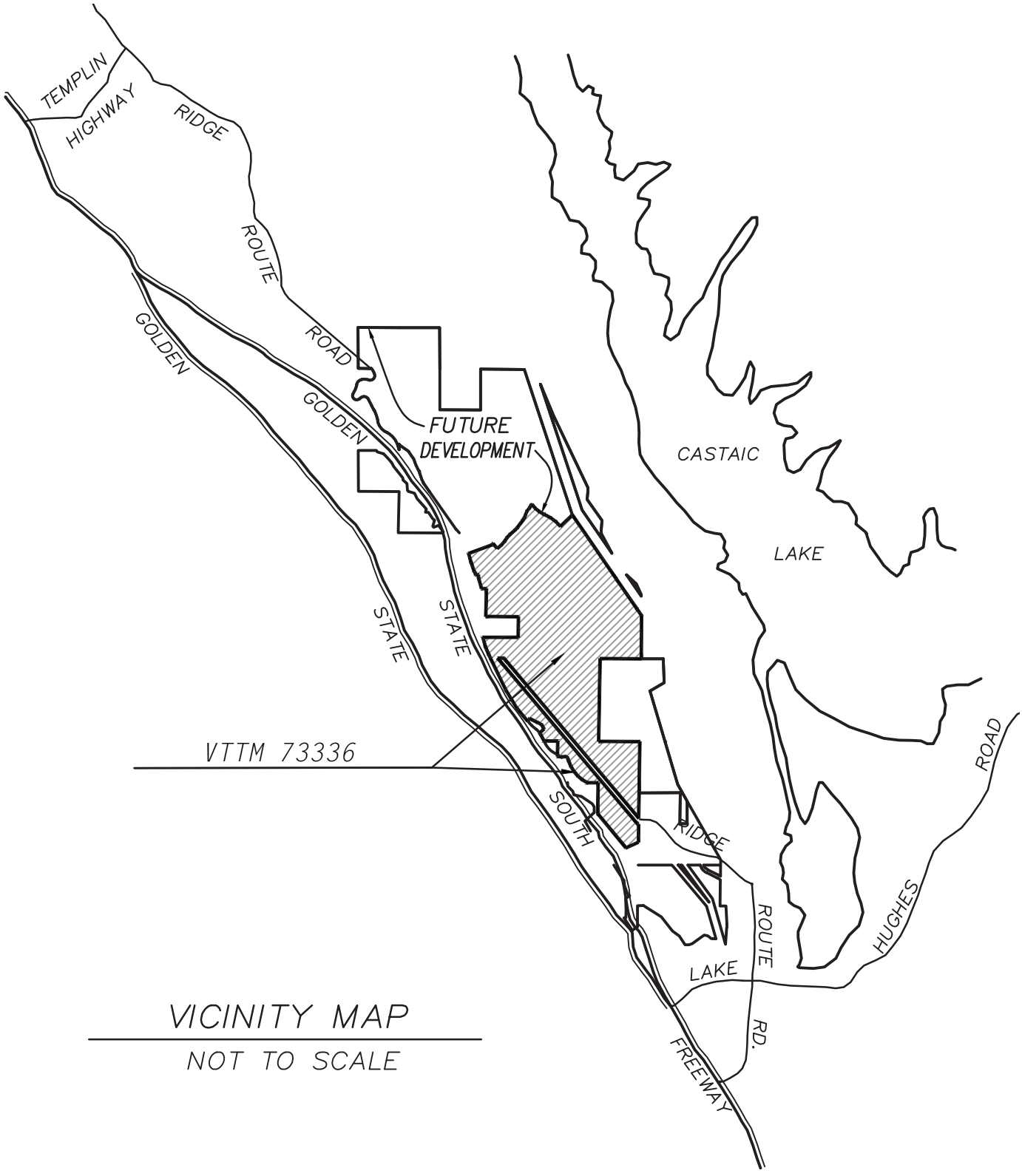
The residential portions of the proposed Project site have been redesigned from the *NorthLake Specific Plan* to fit the existing landforms more closely, resulting in less site disturbance. The planning areas have been arranged in smaller parcels, creating an opportunity for residents to identify more closely with their individual neighborhoods.

Single-Family Residential

The single-family detached area relates to the SF-1 Zone included in the *NorthLake Specific Plan.* These areas allow homes to be clustered in enclaves surrounded by open space. Densities would range from approximately 5.2 dwelling units per acre (du/ac) to 8.6 du/ac. The single-family lots are primarily located in the northern half of the Phase 1 Project site. To ensure County review when development plans are finalized, filing of ministerial Revised Exhibit, as for projects within the approved Phase 1 Tract Map and CUP, and additional subsequent filing of Tract Map and CUP applications for discretionary review of projects not within the Phase 1 Tract Map and CUP such as future Phase 2 projects, will be required.

Development Standards for single-family residential uses are outlined in Section III.D.1 of the *NorthLake Specific Plan* and are summarized below.

1. **Height Limits.** Every residence and every other building in the SF-1 zone shall have a height not to exceed 35 feet.
2. **Yard Requirements.** The *NorthLake Specific Plan* provides for minimum setback requirements for front yards, corner side yards, interior side yards, and rear yards. According to the *NorthLake Specific Plan,* setbacks and yard requirements may be modified through a conditional use permit.
3. **Automobile Parking.** Every dwelling unit shall have a minimum two-car garage provided on the same lot or parcel of land.
4. **Lot Area.** Lots shall have a minimum of 3,000 square feet of area.
5. **Recreation Lots.** The *NorthLake Specific Plan* includes minimum criteria for the dedication of pocket parks associated with single-family development. Each pocket park is required to be a minimum of 10,000 square feet in size and shall be developed at a ratio of 1 park per 100 homes.
6. **Street Frontage.** Each lot shall have a minimum 30-foot frontage and lot width except for lots on culs-de-sac and curved streets where a minimum 20-foot frontage and lot width is required. The *NorthLake Specific Plan* also has further exceptions for flag lots.



VICINITY MAP

NOT TO SCALE

Source: Sikand 2015

Phase I Site Plan – VTTM 73336

Exhibit 4-3

NorthLake Specific Plan Project

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All single-family homes would be situated on individually owned lots with options for special planning overlay designations. Development pursuant to these overlay designations shall be limited to not more than 60 percent of the SF-1 areas.

1. **Residential Zero Side Yard Overlay.** This overlay provides for greater flexibility in design with the use of zero-foot side yards. The *NorthLake Specific Plan* identifies specific development standards for Residential Zero Side Yard Overlay development related to minimum yard requirements. Development standards identified for the SF-1 zone shall apply for lot area and street frontage.
2. **Z-Lot Side Yard Overlay.** This overlay provides for greater flexibility in design with the use of zero side yard single-family lots. The *NorthLake Specific Plan* identifies specific development standards for Z-Lot Side Yard Overlay development related to minimum yard requirements. Development standards identified for the SF-1 zone shall apply for lot area and street frontage.
3. **Paired Single-Family Overlay/Active Adult Single-Family Overlay.** This overlay provides for a development option of attached single-family residences and age-restricted areas designated for homeowners that are 55 years of age and older. Lot sizes and configurations will be similar to those in the Single-Family area with the addition of the Attached Single-Family designation as an option. It should be noted that development within these areas may or may not be age-restricted.

Multi-Family Residential

The multi-family housing component would accommodate a range of densities (ranging from 13 du/ac to 18 du/ac) and living styles. This designation was included in the *NorthLake Specific Plan* and typical unit types would be townhomes, flats, and carriage units. Each neighborhood would include a pocket park and direct access to the community trail system. Parking in the multi-family area would be provided in attached garages with additional at-grade surface parking for guests. The multi-family lots are primarily located in the southern half of the Project site. To ensure County review when development plans are finalized, filing of ministerial Revised Exhibit, as for projects within the approved Phase 1 Tract Map and CUP, including condominium multi-family projects, and additional subsequent filing of Tract Map and CUP applications for discretionary review of projects not within the Phase 1 Tract Map and CUP such as future Phase 2 projects, will be required.

Development Standards for multi-family residential uses are outlined in Section III.D.5 of the *NorthLake Specific Plan* and are summarized below.

1. **Height Limits.** No building in zone MF shall exceed four stories or maximum three stories for building frontages located along public streets or greenbelts.
2. **Yard Requirements.** The *NorthLake Specific Plan* provides for minimum setback requirements for front yards, street frontages, and interior setbacks.
3. **Automobile Parking.** Covered automobile parking shall be provided based on a standard of one parking space per bedroom, but not less than one-and-a-half spaces per unit. Guest parking shall be provided at a ratio of ¼ space per dwelling unit. Parking shall be permitted in tandem if designated and only for units that have two or more bedrooms. On-street parking shall be permitted on those public streets that are not through streets (e.g., culs-de-sac). No automobile parking shall be allowed within the front setback. Senior citizen housing shall be exempt from these parking requirements through the approval of a conditional use permit.

Commercial

Approximately 9.2 acres of commercial area is proposed in the southwestern portion of the Phase 1 development area. The *NorthLake Specific Plan* states "the ratio of the internal floor area of all structures constructed within the C-C zone to the total site area shall not exceed 0.35 FAR. This ratio shall apply to the Community Commercial planning area". Permitted land uses, accessory uses, and land uses subject to use permits for the Community Commercial zone are similar in nature to the County of Los Angeles C-2 Neighborhood Business zone, but are limited to the uses listed in Section III.E.1 of the *NorthLake Specific Plan* or the applicable section of Title 22 of the County Zoning Ordinance currently in effect as referenced in the Specific Plan.

Development Standards for the Community Commercial zone are outlined in Section III.E.1 of the *NorthLake Specific Plan* and are summarized below.

1. **Parking.** Parking shall comply with the design layout, landscaping, and allotment requirements set forth by Chapter 22.52, Part 11, or equivalent then in effect of the Los Angeles County Planning and Zoning Code.
2. **Landscaping.** Landscaping shall be provided in off-street parking areas.
    a. A minimum of 15 percent of the total planning area shall be landscaped.
    b. All landscaped areas shall be uniformly distributed through the parking areas; shall be perpetually maintained; and shall conform to the design guidelines established by the *NorthLake Specific Plan* (Section IV.C).
3. **Building Site Coverage.** The ratio of the internal floor area of all structures shall not exceed 0.35 FAR. Each lot shall have a minimum of 10,000 square feet.
4. **Building Heights.** The maximum height limit shall be three stories, excluding the basement, for all structures.
5. **Storage.** No outside storage shall be permitted.

Industrial

Approximately 13.9 acres of industrial areas are proposed in the southwestern portion of the proposed Project site, north of the existing Northlake Hills Elementary School and south of all proposed residential uses. The *NorthLake Specific Plan* denotes that the FAR for Light Industrial uses is the same as that for commercial uses (0.35 FAR). Light industrial uses are permitted in accordance with the approved *NorthLake Specific Plan.*

The Light Industrial zone is similar in nature to the County of Los Angeles Light Manufacturing (M-1) zone, but is limited to only the permitted uses listed in Section III.F.1 of the *NorthLake Specific Plan.*

Schools

Elementary and Middle Schools

The *NorthLake Specific Plan* identified the potential need for one elementary school and one middle school within the proposed Project site boundaries. Two conceptual school sites were identified in the *NorthLake Specific Plan.* In the intervening time since the *NorthLake Specific Plan* was adopted, the Castaic Union School District acquired (by a separate action) an elementary school site in light industrial-designated land near the southern tip of the proposed Project site.

This site was initially planned for school district administration buildings. The Northlake Hills Elementary School was opened in 2004 at this site and serves existing residential development to the south.

There is an existing school mitigation agreement between the Project Applicant and the Castaic Union School District (CUSD). Both parties are working to finalize the long-term plan for elementary and middle schools supporting the proposed Project. As noted previously, the Project includes a potential future school site in Phase 2. This school site would be located on approximately 23 acres of land designated for residential uses and manufactured slopes in Phase 2 as shown on Exhibit 4-1. However, CUSD may instead choose to locate the school site within the Phase 1 area of the Project site. Exhibit 4-4, Proposed Land Use Plan With Optional Phase 1 School Site, shows the location of the optional Phase 1 school site and Tables 4-4 and 4-5 detail the modified acreages that would accommodate this option. Under this option, approximately 23 acres of land designated for residential uses and manufactured slopes may be developed as a school site within the Phase 1 area of the Project site. The final school plans will be documented in an amended school mitigation agreement.

TABLE 4-4
LAND USE AREA COMPARISON WITH OPTIONAL PHASE 1 SCHOOL SITE

	Existing *NorthLake Specific Plan*		**Proposed Plan**		**Difference**	
	(ac)	**(du)**	**(ac)**	**(du)**	**(ac)**	**(du)**
Residential	600.3	3,623	333.4	3,150	(266.9)	
Commercial	13.2		9.2		(4.0)	
Industrial	50.1		13.9		(36.2)	
Open Space	476		633.1		157.1	
Recreation- Golf	167		0		(167)	
Recreation- Trails/Parks	0		167		167	
School/Park Facilities	23.1		43.7[a]		20.6	
Utilities[b]			7.3		7.3	
Right of Way[b]			120.5		120.5	
Public Services (Fire Station Pad) [b]			1.4		1.4	
Total	**1,330.0**		**1,330.0[c]**			

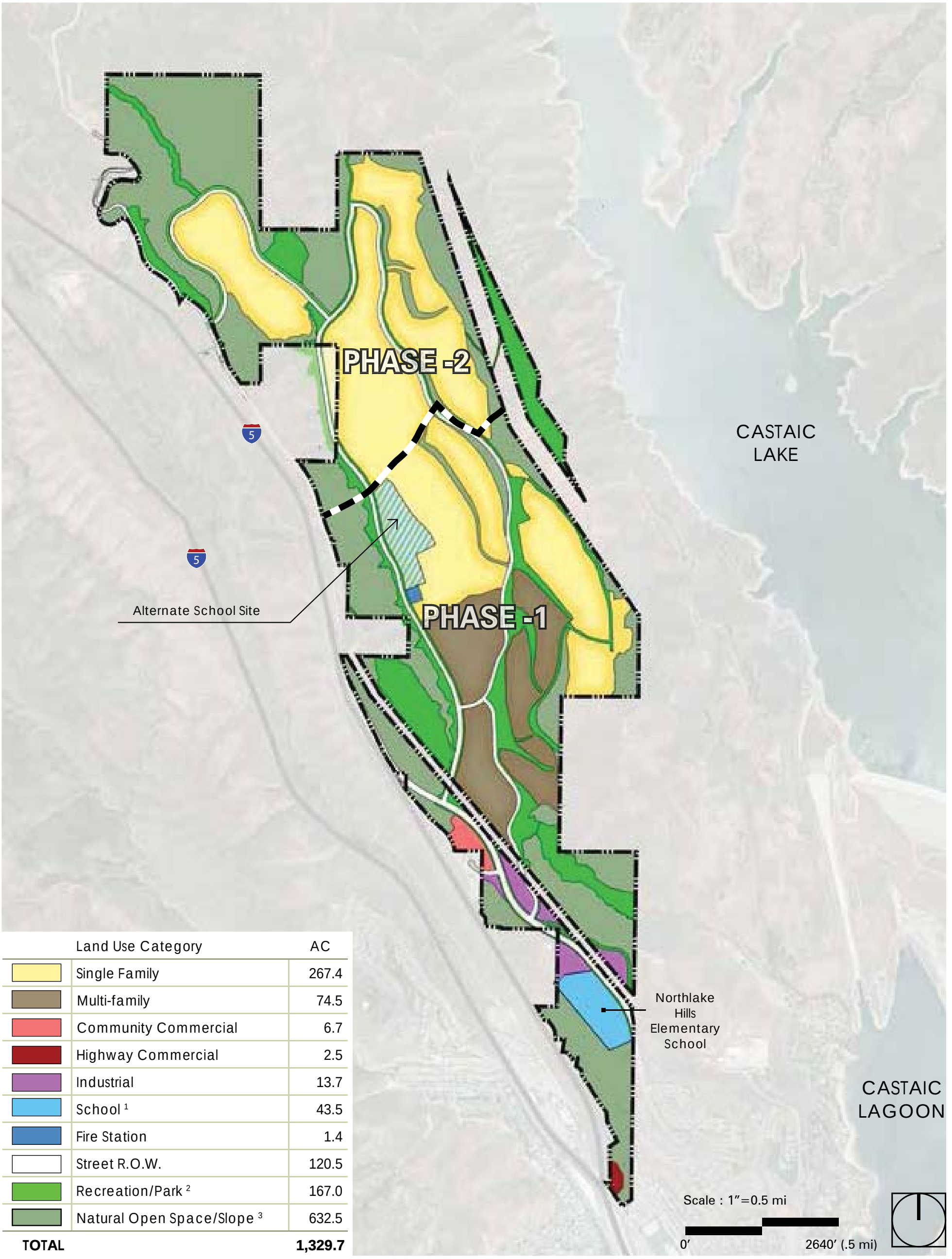
ac: acres; du: dwelling units; (): negative

[a] Northlake Hills Elementary School was previously constructed on a 20.6-acre site.

[b] The *NorthLake Specific Plan* did not provide a breakdown of acreages for utilities, right of way, or public service facilities. Roadways were included in Residential.

[c] Totals may not add due to rounding and mapping.

Source: Sikand 2015.



Land Use Category	AC
Single Family	267.4
Multi-family	74.5
Community Commercial	6.7
Highway Commercial	2.5
Industrial	13.7
School [1]	43.5
Fire Station	1.4
Street R.O.W.	120.5
Recreation/Park [2]	167.0
Natural Open Space/Slope [3]	632.5
TOTAL	**1,329.7**

Source: PlaceWorks 2017

Proposed Land Use Plan With Optional Phase 1 School Site

Exhibit 4-4

NorthLake Specific Plan Project

N W E S 1200 600 0 1200 Feet

BonTerra PSOMAS

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TABLE 4-5
LAND USE STATISTICAL SUMMARY TABLE FOR PHASE 1 (VTTM 073336) AND PHASE 2 WITH OPTIONAL PHASE 1 SCHOOL SITE

Use	Phase 1 (VTTM 073336)		Phase 2	
	Number of Units or square footage	Area (Acres)	Number of Units	Area (Acres)
Residential: Single-Family	431	59.1	1,176	156.0
Residential: Multi-Family	1,041	69.2	-	-
Residential: Senior[b]	345	49.1	-	-
Commercial		6.7		-
Commercial Highway		2.5		-
Industrial		13.9		-
Park(s)				
Trails		10.5		1.7
Grasshopper Creek Park		10.6		5.6
Enhanced Parkway		38.3		2.5
Castaic Lagoon Park		17.2		-
North Ridge Route Park		-		8.5
Northvalley Paseo Park		-		8.8
Northvalley Park		-		9.7
Sports Park		25.8		-
Cody Dog Park		1.0		-
Vista Park		-		26.8
Open Space- Manufactured Slope		133.3		202.6
Open Space- Undisturbed		167		130.2
Utilities				
Water Tank		6.5		0.6
Pump Station		0.2		-
Roadways		84.3		36.2
Fire Station Pad		1.4		-

VTTM: Vesting Tentative Tract Map

[a] This overlay provides for a development option of attached single-family residences and age-restricted areas designated for homeowners that are 55 years of age and older. Lot sizes and configurations will be similar to those in the Single-Family area with the addition of the Attached Single-Family designation as an option. It should be noted that development within these areas may or may not be age-restricted.
Source: Sikand Engineering 2015.

High Schools

There is currently a school mitigation agreement between the Project Applicant and William S. Hart Union High School District (Hart District). That agreement is being updated to account for current Hart District needs and anticipated Project-related impacts. Based on coordination with the Hart District, a high school is not needed; therefore, this SEIR does not assume construction of a high school.

Fire Station

In compliance with the *NorthLake Specific Plan* and in consultation with the Los Angeles County Fire Department, a 1.4-acre site has been designated as a future fire station site located within the residential component of Phase 1 of the proposed Project site as shown on Exhibit 4-1.

Open Space, Recreation, and Parks

The Project includes a total of 791.6 acres of land for recreation and open space purposes, consisting of a sports park; community and neighborhood parks; and an extensive greenbelt and trails system, as described below. Park acreages have been detailed previously in Table 4-3.

Public Parks and Recreation Facilities

Under the proposed Project, the public park system would be the centerpiece of the community, providing both programmed activity areas and passive green space. As shown on Exhibit 4-5, Parks and Recreation Plan, the Project proposes development of a public community sports park, which would be located west of the proposed NorthLake Boulevard and within the Phase 1 development area. Proposed to be developed in the future Phase 2, the public NorthValley Park is proposed as a passive park in the northwest portion of the proposed Project site. Additionally, also in Phase 2, the public Vista Park is a proposed passive park located in the extreme eastern edge of the proposed Project site. Access to Vista Park would be via a proposed community trail.

Publicly Accessible Private Parklands

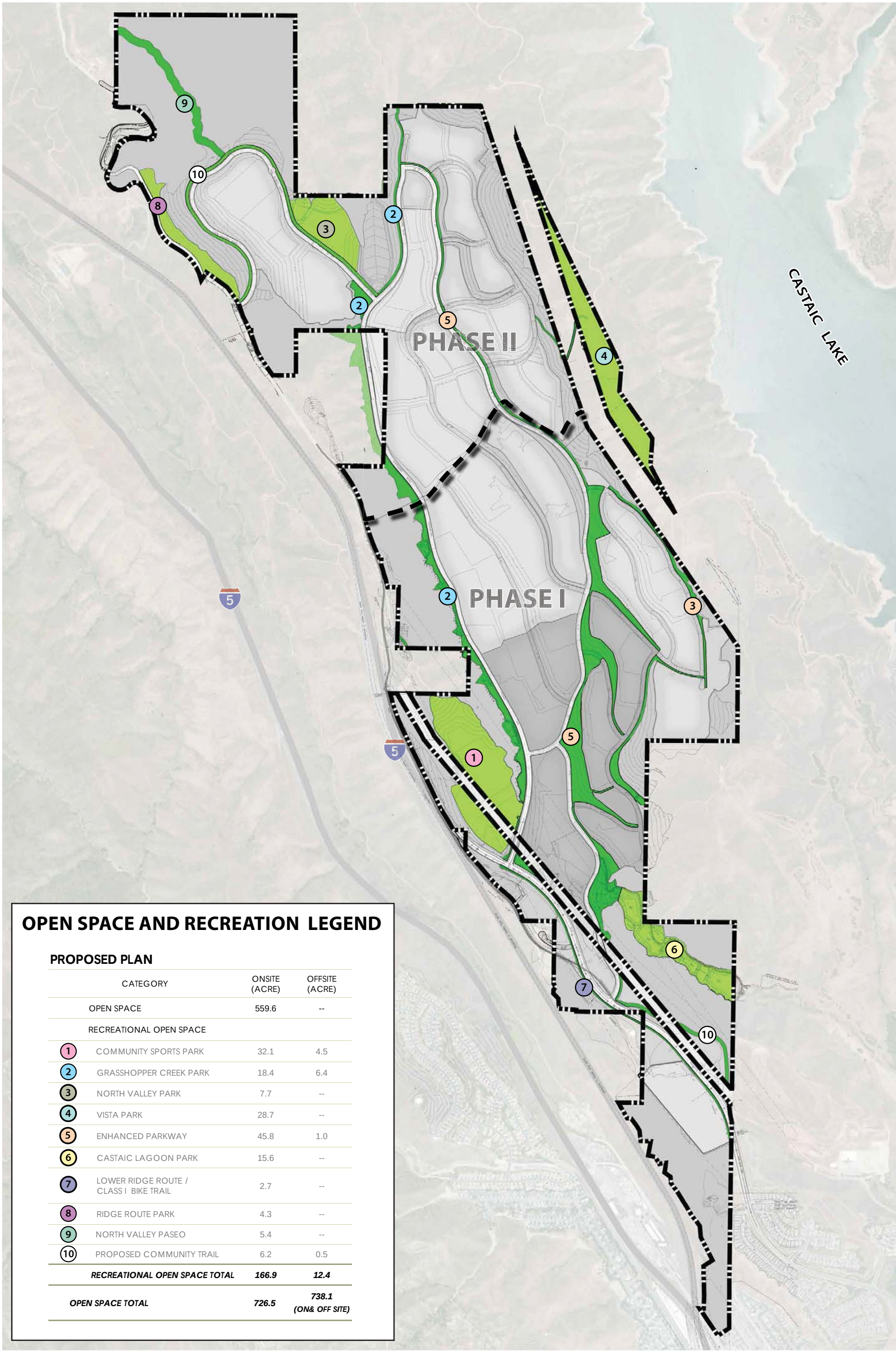
The Project proposes development of several publicly accessible private recreational amenities. As shown on Exhibit 4-5, Parks and Recreation Plan, these parklands include Castaic Lagoon Park with anticipated views of Castaic Lagoon to the south; Enhanced Parkway areas are proposed to be located along the Project's residential corridors; Grasshopper Creek Park is a linear park proposed to be located along the western edge of the proposed NorthLake Boulevard; North Ridge Route Park would be located in the northwest portion of the proposed Project site; NorthValley Paseo would be a greenbelt area in the northern and southern areas of the Project site; and several neighborhood parks throughout the Project site.

Pedestrian Circulation and Trails

In addition to the increase in parklands, another new feature under the proposed Project is an extensive greenbelt and trail system connecting schools, parks, amenities, and neighborhoods throughout the community and the Castaic Lake Recreation Area. Exhibit 4-6, Pedestrian Circulation and Trails, shows the location of the trail system, which includes approximately 91,150 linear feet of multi-use trails, regional equestrian trails, and neighborhood pedestrian trails as well as potential future connections to the off-site Regional Trail system. Approximately 68,290 linear feet of these trails would be developed as part of Phase 1 of the proposed Project and an additional 22,860 linear feet would be developed as part of Phase 2.

Open Space

Open space is integrated throughout the proposed Project site to respond to topographical conditions; to preserve ridgelines and hillsides; to create a buffer adjacent to natural resources; to provide view amenities; to accommodate the greenbelt trail; and to separate residential neighborhood enclaves. Approximately 624.6 acres of open space will remain undeveloped on the Project site, including 303.9 acres in Phase 1 and 320.9 acres in Phase 2. Much of this open space area consists of interior and perimeter slopes. The largest expanses of undeveloped open



OPEN SPACE AND RECREATION LEGEND

PROPOSED PLAN

	CATEGORY	ONSITE (ACRE)	OFFSITE (ACRE)
	OPEN SPACE	559.6	--
	RECREATIONAL OPEN SPACE		
1	COMMUNITY SPORTS PARK	32.1	4.5
2	GRASSHOPPER CREEK PARK	18.4	6.4
3	NORTH VALLEY PARK	7.7	--
4	VISTA PARK	28.7	--
5	ENHANCED PARKWAY	45.8	1.0
6	CASTAIC LAGOON PARK	15.6	--
7	LOWER RIDGE ROUTE / CLASS I BIKE TRAIL	2.7	--
8	RIDGE ROUTE PARK	4.3	--
9	NORTH VALLEY PASEO	5.4	--
10	PROPOSED COMMUNITY TRAIL	6.2	0.5
	RECREATIONAL OPEN SPACE TOTAL	***166.9***	***12.4***
	OPEN SPACE TOTAL	***726.5***	***738.1 (ON& OFF SITE)***

Source: PlaceWorks 2015

Parks and Recreation Plan

Exhibit 4-5

NorthLake Specific Plan Project

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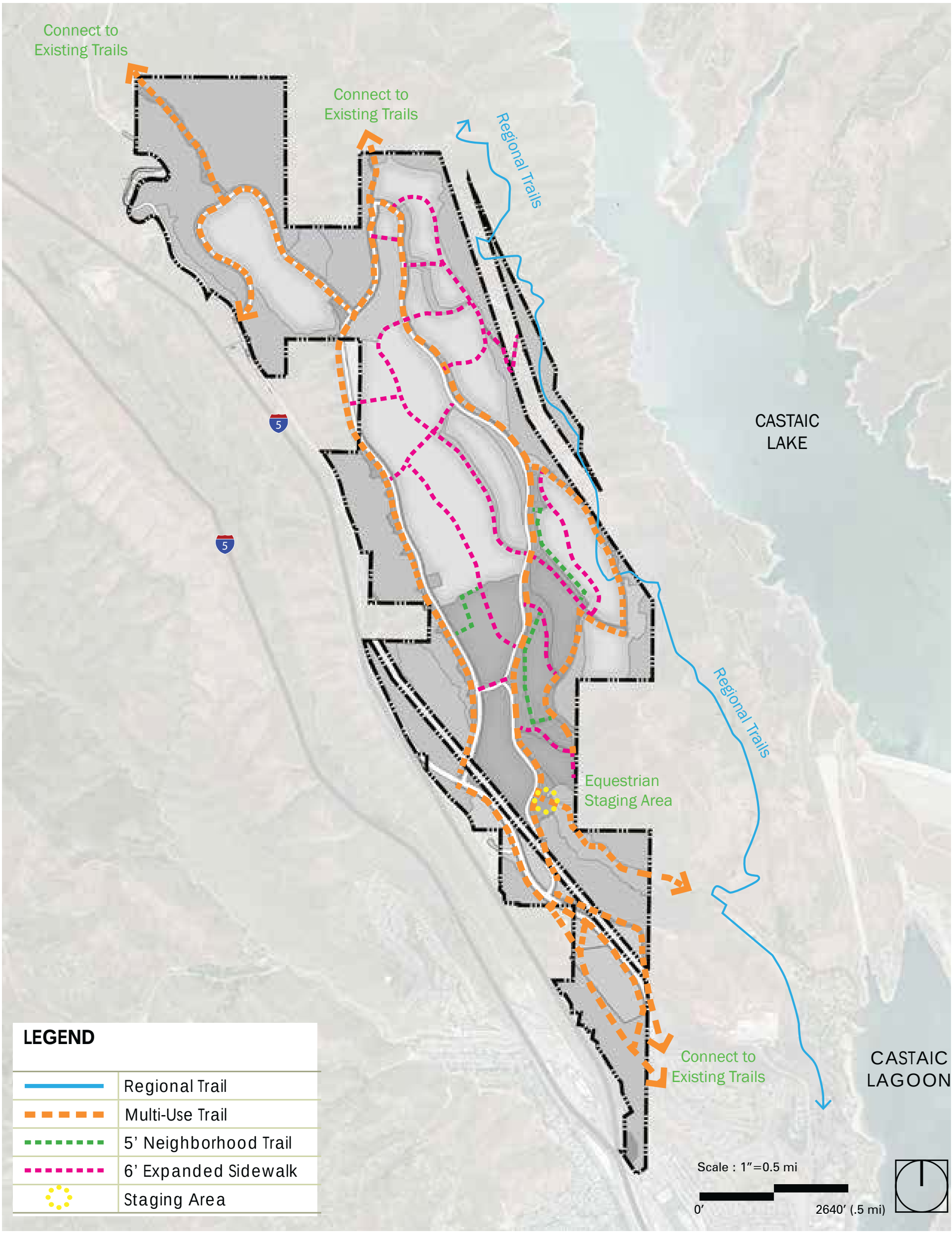

Source: PlaceWorks 2017

Pedestrian Circulation and Trails

Exhibit 4-6a

NorthLake Specific Plan Project

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BonTerra PSOMAS

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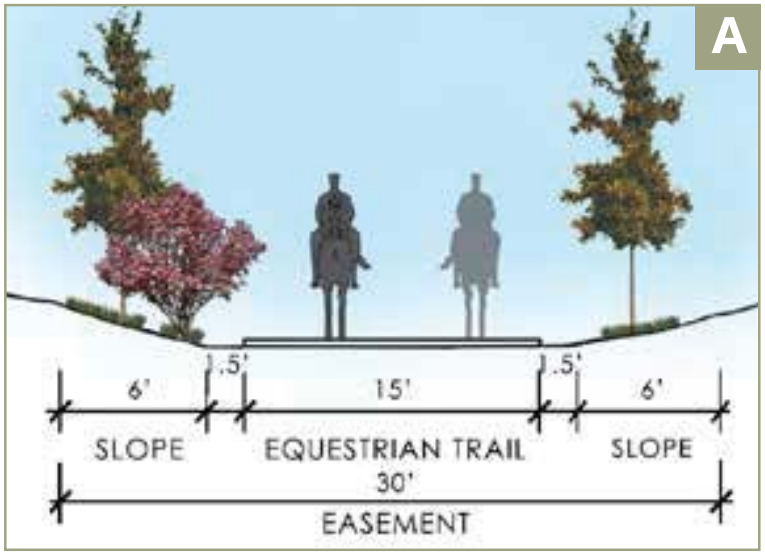
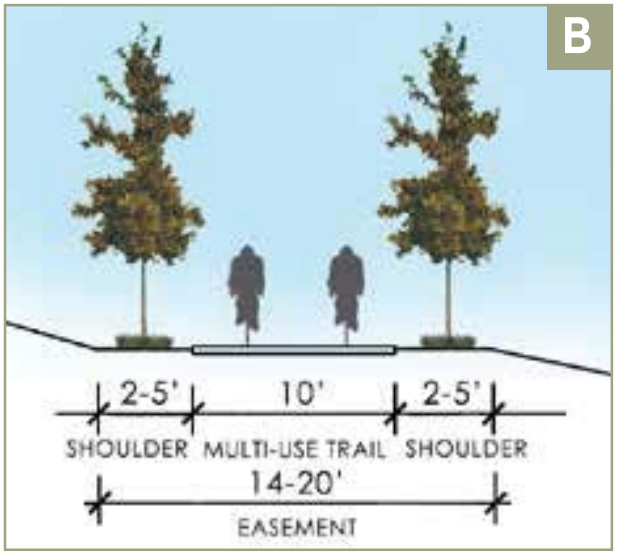
A REGIONAL EQUESTRIAN / BICYCLE TRAIL

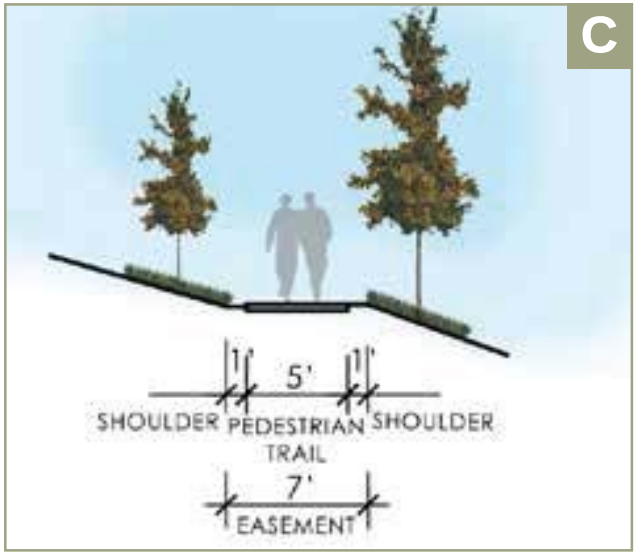
B MULTI-USE TRAIL

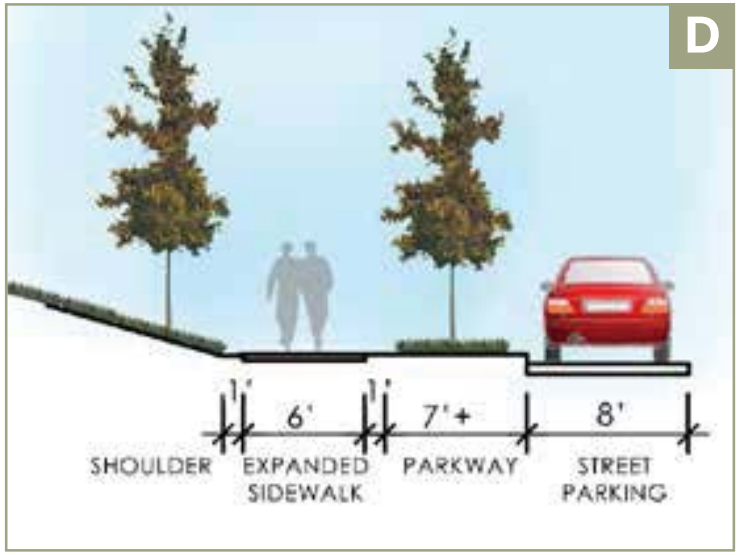
C 5' NEIGHBORHOOD TRAIL

D 6' Expanded Sidewalk









Source: PlaceWorks 2017

Pedestrian Circulation and Trails

Exhibit 4-6b

NorthLake Specific Plan Project

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space will be located along the edges of the Project site, including areas to the north, west, south, and east.

There will be approximately 327.6 acres of undeveloped landscaped open space (i.e., graded slopes) throughout the Project site. An additional 297.2 acres will be set aside as undisturbed open space areas within the Project site.

Access, Vehicular and Non-Vehicular Circulation

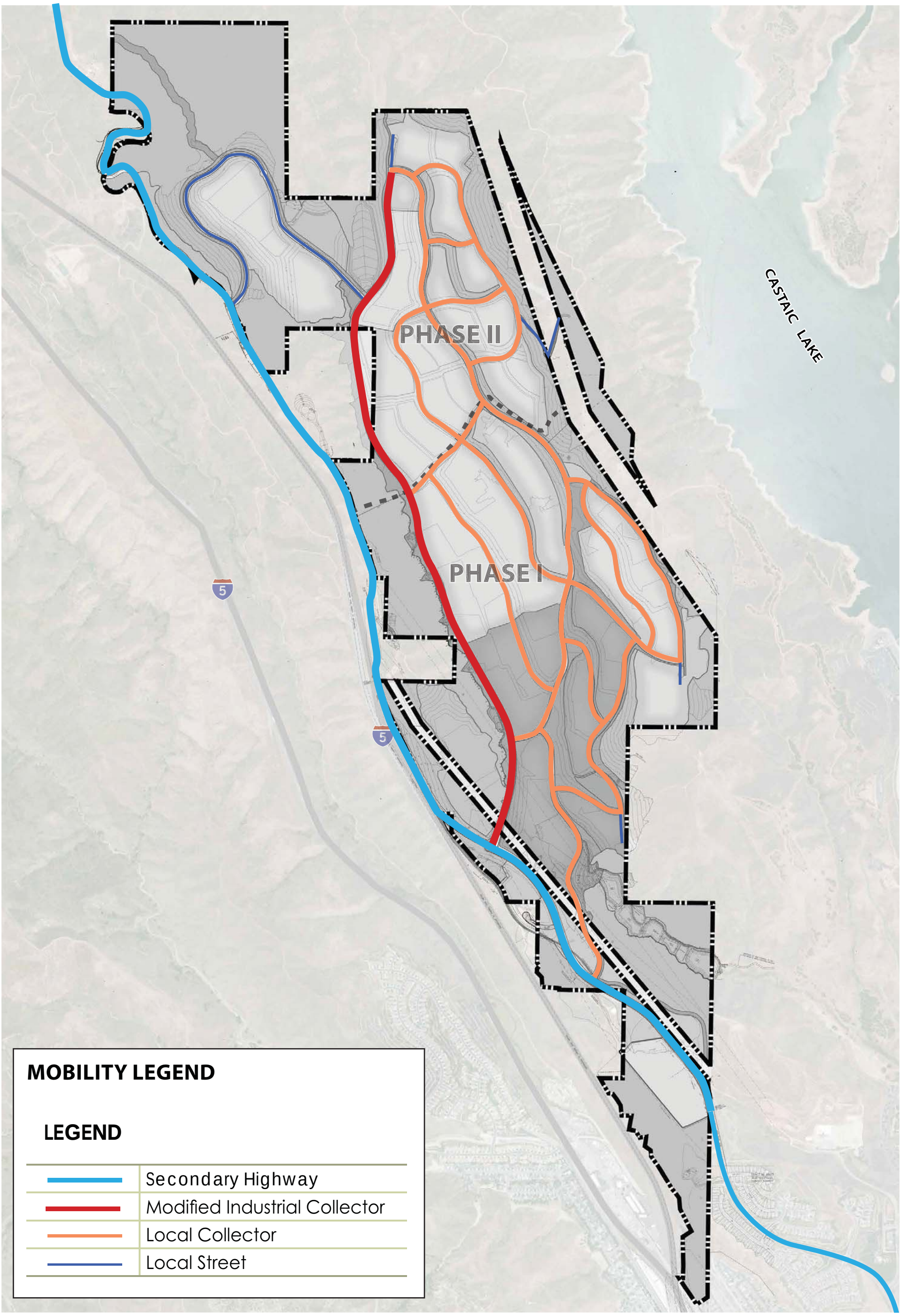
Access and Roads

Local access to the proposed Project (inclusive of Phases 1 and 2) will be provided by I-5 via the Lake Hughes Road, Parker Road, and Templin Highway exits. Based on coordination with the Los Angeles County Fire Department (LACFD), the proposed Project includes three separate access points. The first access point to the Project site would be from the northerly intersection of Ridge Route Road and NorthLake Boulevard. NorthLake Boulevard would form a loop road that travels the length of the Project site and loops back to a second, southerly intersection with Ridge Route Road. This southerly intersection would provide a secondary point of access to the Project site. A third access point would be from the northwest, entering the site near the proposed North Ridge Route Park.

Ridge Route Road generally follows the western border of the proposed Project site. The proposed Project provides for the establishment of an interconnecting internal roadway system. NorthLake Boulevard, a proposed north-south-trending arterial accessed from Ridge Route Road, will serve as the backbone road within the Project's proposed roadway system. From NorthLake Boulevard, a series of collector streets would branch off and lead into single-family and multi-family development clusters. Within the central portions of the Project site, numerous roadway connections are planned to provide multiple routes of access to all portions of the site. In addition to the collector streets, the circulation plan would include private driveways/fire lanes providing additional emergency vehicle access. In accordance with the California Manual on Uniform Traffic Control Devices requirements and upon construction of a future fire station along NorthLake Boulevard, Emergency Vehicle warning signs would be installed along NorthLake Boulevard at an adequate distance from the future fire station to allow for adequate stopping sight distance for vehicles approaching the station driveways based on the design speed of NorthLake Boulevard. The proposed road system is shown in Exhibit 4-7, Mobility Plan.

Bicycle Trails, Lanes, and Routes

As identified previously, the Project (inclusive of Phases 1 and 2) will include a total of 91,150 linear feet of multi-use and neighborhood and pedestrian trails linking proposed land uses and connecting to the off-site regional trail system. The project would include a network of bicycle facilities, trails and sidewalks to accommodate pedestrians and encourage non-motorized active transportation. Bicycle facilities are proposed along Ridge Route Road, Northlake Boulevard, A Street and B Street. Class I bike lanes will be provided along portions of NorthLake Boulevard and Ridge Route Road and Class III Shared Bike Lanes will be provided along Ridge Route Road North. Class II bike lanes are proposed along B Street and A Street. Additionally, the proposed mobility plan would minimize vehicular trips through the linkage of land use areas and site elements via a multi-modal system including bike lanes, bus routes, and pedestrian connections.



Source: PlaceWorks 2015

Mobility Plan

Exhibit 4-7

NorthLake Specific Plan Project

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Feet

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Utilities and Infrastructure

Relocation of Facilities

The Project site is largely unimproved and has limited utility service connections. However, a number of utility systems occur on site (including electricity, natural gas, communication, and water lines) and serve surrounding development and regional customers. Two crude oil pipelines also traverse the Project site easterly of Grasshopper Canyon. As part of the proposed Project, segments of these on-site utility easements will be relocated to allow for site grading and to conform utility easements and access to the main public rights-of-way, including the Southern California Edison (SCE) easement and electrical transmission lines; the Southern California Gas Company (SoCalGas) natural gas pipeline; and the SBC telecommunications easement and cable line. SoCalGas' existing 34-inch-diameter gas line located along the Ridge Route Road alignment will be relocated with the realignment of Ridge Route Road to lie within the new realignment. Existing SCE transmission lines along the western ridge of Grasshopper Canyon will be raised or lowered approximately 50 to 100 feet to match the new grades, and the alignment will be shifted westerly to facilitate the site-plan layout. The SBC telecommunication line will be relocated from the eastern ridge of Grasshopper Canyon to the western ridge along Ridge Route Road. One of the crude oil pipelines (the 14-inch Pacific Pipeline) would be relocated approximately 1,500 to 2,000 feet to the east within property owned by the LADWP and the Castaic Lake SRA.

Project Utilities

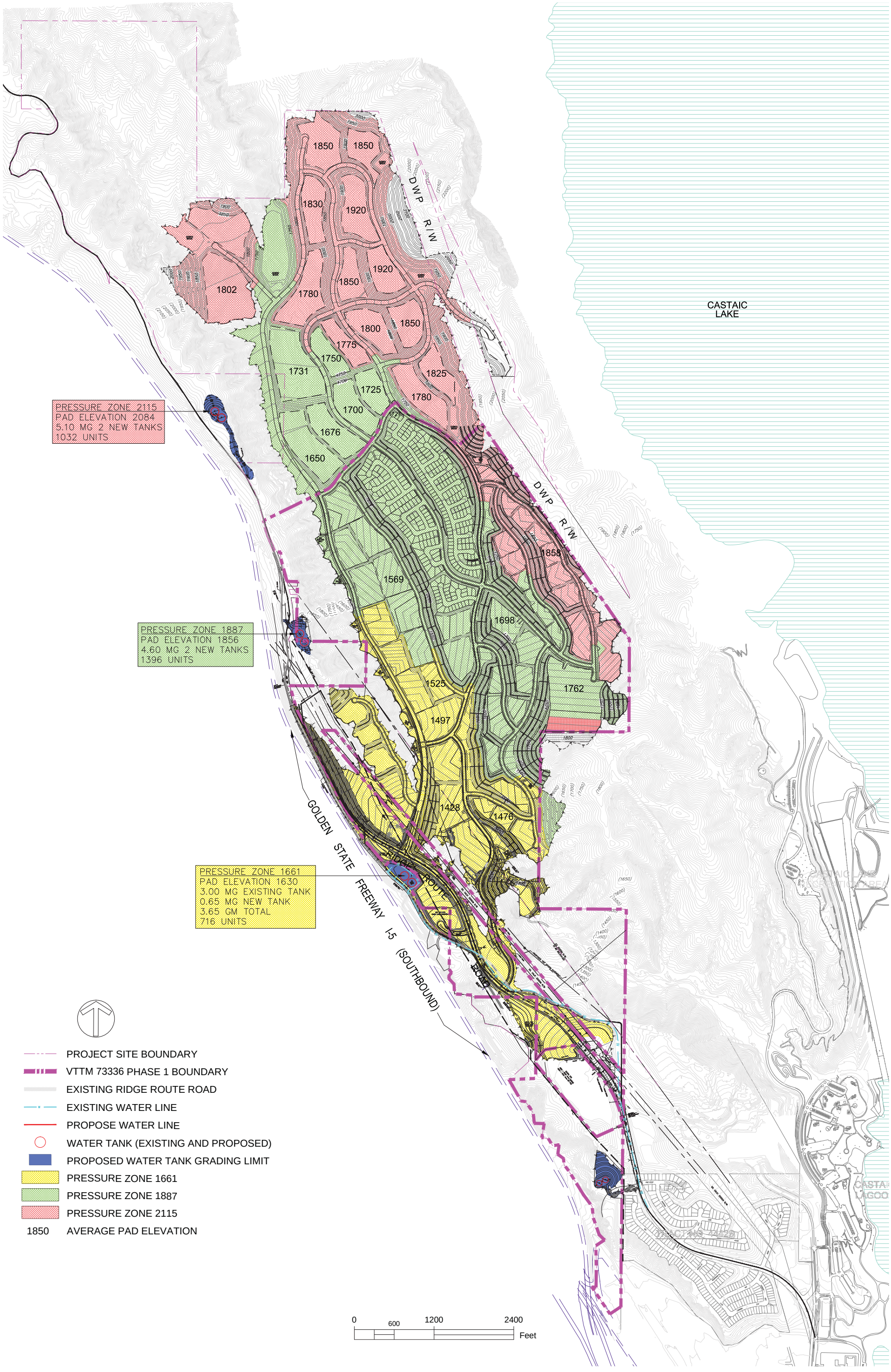
The Project will involve the establishment of the necessary trunk lines and connections to provide water, sewer, storm water, natural gas, electricity, communication, and solid waste service to the proposed development. Installation of utilities will be phased as necessary to accommodate development. It is anticipated that backbone facilities would be constructed prior to implementation of Phase 2 development in order to adequately serve all of the proposed Phase 1 development area.

Potable and Recycled Water

Several water tanks and their associated pump stations would serve the proposed Project and ensure the provision of adequate fire flows and potable water distribution. An overview of the proposed water system is shown in Exhibit 4-8, Water Service. A total of 6 water tanks (5 new and 1 existing) with a combined capacity of approximately 13.35 million gallons (MG), would be located on a total of 3 water tank sites to serve the proposed Project. Another existing water tank is located approximately 500 feet due north of the Northlake Hills Elementary School; this 1.5-MG tank has been abandoned and is not part of the water service plan for the proposed Project. As this tank is located on the proposed Project site, the Project Applicant would retain ownership and intends to use the tank for construction water storage. Ultimately following completion of development, the Project Applicant would demolish and remove this tank from the site.

In addition to the tanks mentioned above, the Project will construct a water tank site for the benefit of the Newhall County Water District (NCWD). This water tank site, together with future improvements by NCWD, will improve the efficiency and reliability of the overall water system.

The Project Applicant is coordinating with NCWD to develop a recycled water system to serve the proposed Project. Although recycled water is not available for use at this time, the Project will enter into an agreement with NCWD and other participating agencies to provide fair-share funding of a regional recycled water facility. The proposed Project will install recycled water pipelines throughout the Project site in anticipation of future recycled water availability. The Project will be



Source: SIKAND 2015

Water Service

Exhibit 4-8

NorthLake Specific Plan Project

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piped with a dual system of recycled and potable water lines and, until recycled water becomes available from NCWD to serve the area, the Project will be served by potable water.

Sewer and Wastewater

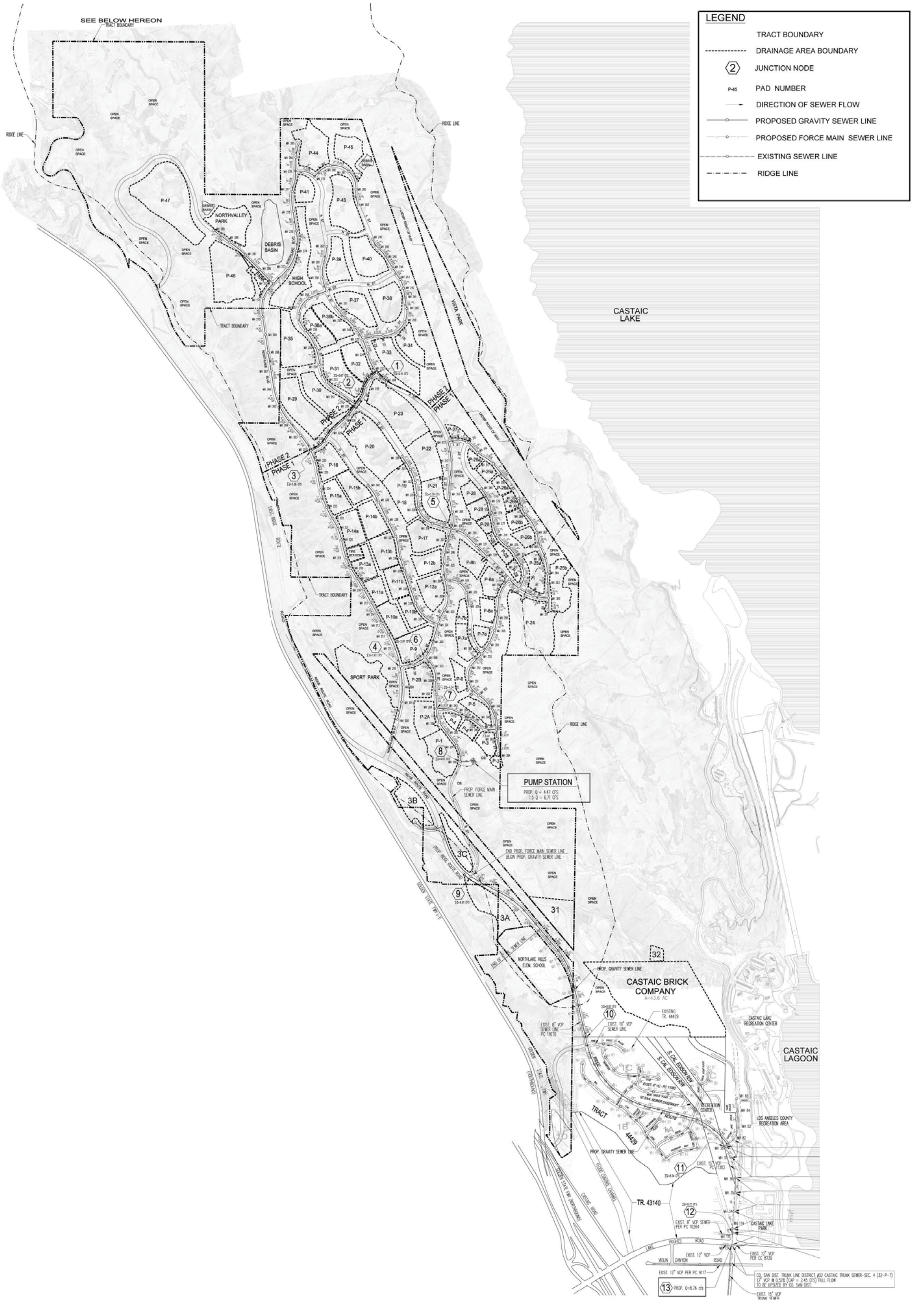
The increase in population as a result of the proposed Project will increase the need for sewer services. The proposed Project sewer facilities are shown in Exhibit 4-9, Wastewater Service. Existing sewer facilities include an eight-inch gravity sewer line that is located in Ridge Route Road and extends from south of the Project's southern boundary to just north of Northlake Hills Elementary School. South of the Project site's southern boundary, this sewer line transitions to a 15- and 18-inch line that serves the existing NorthLake Hills residential development. As part of the proposed Project, segments of this sewer line would be upgraded and upsized to accommodate anticipated Project-related flows. This is discussed in more detail under Off-Site Improvements later in this section.

As illustrated on Exhibit 4-9, the Project would require construction of a new sewer system to serve the proposed land uses. A gravity sewer line is proposed to be constructed within the proposed Ridge Route Road alignment. The proposed gravity sewer would extend from the southern edge of the Project site northward to the first intersection of Ridge Route Road and NorthLake Boulevard. North of this intersection, proposed force main sewer lines would be constructed within the proposed NorthLake Boulevard, secondary collector roads, and local streets. These lines would vary in capacity from 8 to 15 inches in diameter, based on the calculated flow rates. Sewer treatment services will occur at existing off-site facilities and will be coordinated in conjunction with the annexation to the Los Angeles County Sanitation Districts, which is discussed in more detail in Section 5.12, Utilities. No new off-site treatment facilities would be required to serve the Project. Additionally, a new pump station is proposed along the east leg of NorthLake Boulevard. The sewer lift station will be maintained by the County of Los Angeles Department of Public Works. The sizing of this facility will meet applicable County requirements.

Storm Water and Water Quality

Urban runoff generated by the proposed Project will be collected through a storm water collection system, as shown in Exhibit 4-10, Drainage and Storm Water System. Existing storm drain facilities in the vicinity of the proposed Project site include a 42-inch storm drain located in Ridge Route Road that terminates at the southern boundary of the Project site. The proposed storm drain system would connect to the existing 42-inch pipe in Ridge Route Road.

Drainage facilities for the proposed Project would include debris basins, storm drains, catch basins, benches, downdrains, swales, inlets/outlets, energy dissipators, and elevated inlets. As designed, the storm water system would generally collect flows and divide them into two systems, a clean water system and a dirty water system, prior to discharging into lower Grasshopper Canyon. The clean water system is proposed to convey runoff from the proposed development area and the dirty water system is proposed to convey runoff coming from the debris basins and areas with natural condition tributaries. The clean water system is designed to outlet into a proposed retarding basin located downstream of the proposed Project development, and a design spillway would be constructed south of this basin. The design spillway would direct the excess storm water flow to a point where it would join the dirty water system and discharge into lower Grasshopper Canyon. After passing through lower Grasshopper Canyon and within the Project Applicant's property (both within the proposed Project site and the adjacent 140-acre Not a Part [NAP] parcel), drainage would flow easterly onto the Castaic Lake SRA property. Please refer to Section 5.8, Hydrology and Water Quality, for a discussion of the proposed Project's drainage



Source: SIKAND 2016

Wastewater Service

Exhibit 4-9

NorthLake Specific Plan Project

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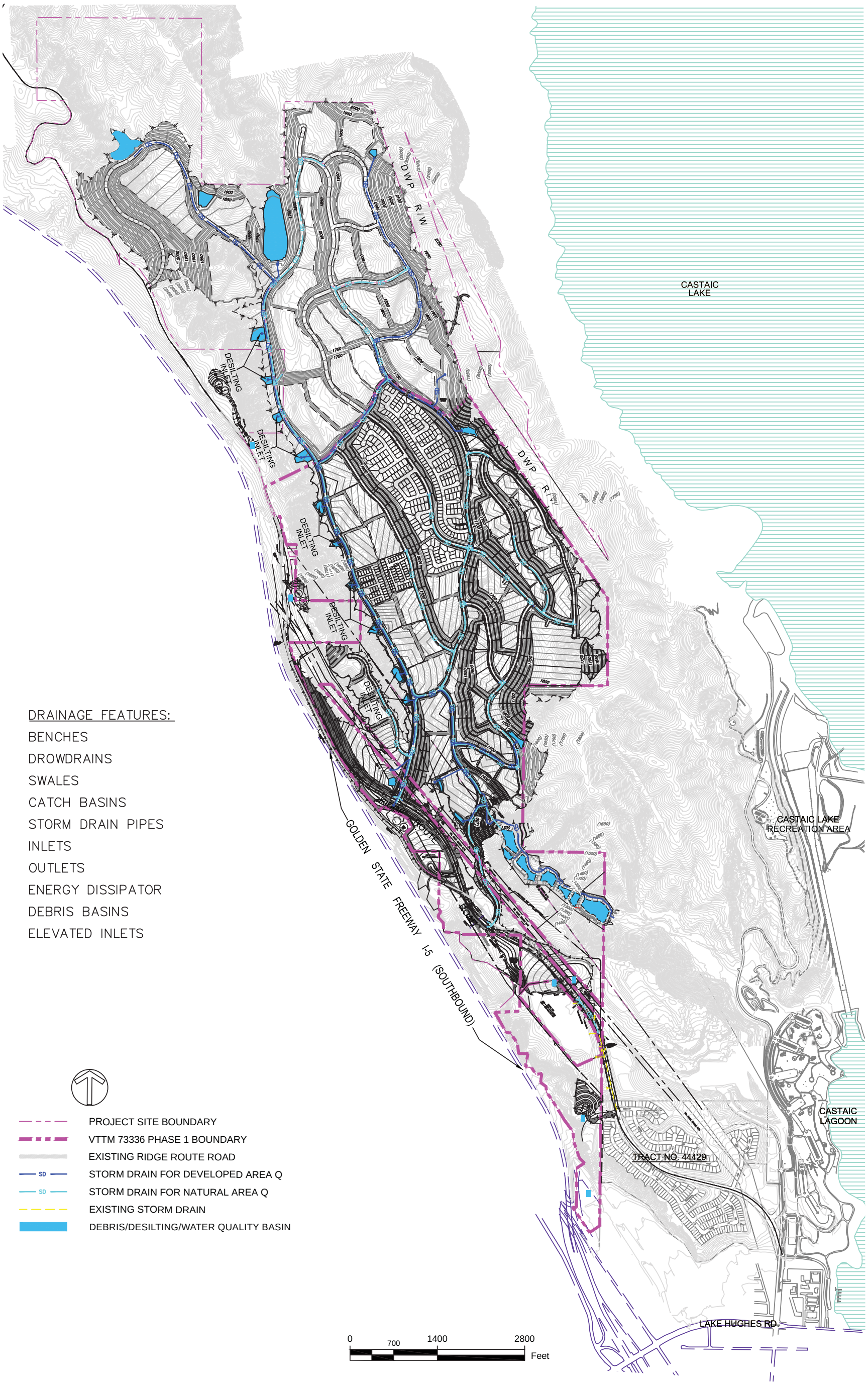

DRAINAGE FEATURES:

BENCHES
DROWDRAINS
SWALES
CATCH BASINS
STORM DRAIN PIPES
INLETS
OUTLETS
ENERGY DISSIPATOR
DEBRIS BASINS
ELEVATED INLETS

PROJECT SITE BOUNDARY
VTTM 73336 PHASE 1 BOUNDARY
EXISTING RIDGE ROUTE ROAD
STORM DRAIN FOR DEVELOPED AREA Q
STORM DRAIN FOR NATURAL AREA Q
EXISTING STORM DRAIN
DEBRIS/DESILTING/WATER QUALITY BASIN

Source: SIKAND 2017

Drainage and Storm Water System

Exhibit 4-10

NorthLake Specific Plan Project

BonTerra PSOMAS

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plan. Release of storm water flows will be regulated through the National Pollution Discharge Elimination System (NPDES) Permit.

The Project will implement a variety of water quality control technologies. The following best management practices (BMPs) will be incorporated into the proposed Project:

- All storm drain inlets and water quality inlets will be stenciled or labeled.
- Signs will be posted in areas where dumping could occur.
- The Los Angeles County Department of Public Works and/or Home Owners Associations will maintain stencils and signs.
- Pesticides, fertilizers, paints, and other high risk materials used for maintenance of common areas, and multifamily residential common areas will be kept in enclosed storage areas.
- All outdoor trash storage areas will be covered and isolated from stormwater runoff.
- Loading dock areas will be covered or designed to preclude run-on and runoff.
- Direct connections to storm drains from depressed loading docks (truck wells) will be prohibited.
- Drains or direct drainage from hydraulically-isolated loading dock areas will be connected to an approved sediment/oil/water separator system connected to a discharge location as determined by LACDPW. A manual emergency spill diversion valve will be provided upstream of the separator.
- Repair/maintenance bays will comply with design requirements.
- Areas for washing/steam cleaning or vehicles will be self-contained or covered with a roof or overhang; will be equipped with wash racks and with the prior approval of the sewering agency; will be equipped with a clarifier or other pretreatment facility; and will be properly connected to a sanitary sewer.
- Fueling areas will comply with design requirements.
- Native and/or non-native/non-invasive climate appropriate vegetation will be utilized within the development.
- The use of the parcel-based LID BMPs and regional infiltration facilities will prevent the discharge or dry weather urban runoff.
- Landscape and irrigation system design will comply with the design requirements or approved alternatives.
- Pressure treated wood that is treated with arsenate, copper, or chromium compounds may be replaced with alternative building materials.
- The use of copper and galvanized metals on buildings and in fencing will be minimized or avoided.
- The use of alternative barriers for termites will be considered.
- Animal care and handling facilities will be sited away from the storm drain system and receiving waters.
- No cattle grazing shall be permitted.

- Minimal horse access will be provided in a small portion of the open space. Horse waste will be managed to prevent pollutants from entering the storm drain or receiving waters.
- Wash water from horticultural areas will not drain directly to the storm drain system or to receiving waters.

Gas and Electricity

The Project will comply with all applicable energy conservation requirements which would reduce the anticipated demand for electricity, including (1) California's Title 24 Energy Efficiency Standards for Residential and Nonresidential Buildings; (2) the CALGreen Code; and (3) Title 31 of the County Code (the Los Angeles County Green Building Standards Code).

Natural gas service for the Project area is provided by SoCalGas. As noted in the 1992 Specific Plan EIR, SoCalGas agreed that it can provide natural gas service to the proposed development. Any new facilities will be constructed by SoCalGas according to the original agreements with SoCalGas. No new off-site facilities would be required to serve the Project.

SCE provides electricity to the Project area. Based on preliminary energy consumption estimates for the proposed Project, implementation of the *NorthLake Specific Plan* does not represent a new demand on SCE. SCE will complete all infrastructure upgrades, as necessary, to serve the proposed Project. No new off-site facilities would be required to serve the Project.

Communication

Telecommunications, cable television, and fiber optics systems will be installed throughout the Project site. These cables will be located within a primary underground conduit to minimize future disturbance related to maintenance and repair activities.

Solid Waste

Waste Management provides solid waste collection services to the Project area and solid waste is then transported to and disposed of at one of four landfills serving the Santa Clarita Valley area. Solid Waste during construction activities would be generated mostly in the form of unused pieces and scraps. Because of this, more than 50 percent will be recycled or reused so the impact could be minimized. Additionally, in response to California's 75 Percent Initiative, at least 75 percent of all solid waste will be recycled or reused by 2020.

Landscape Concept Plan

The proposed Project would implement the conceptual design guidelines of the *NorthLake Specific Plan* related to landscape and signage. The *NorthLake Specific Plan* includes a Landscape Concept Plan that provides planning criteria and guidelines for the establishment of a safe and aesthetically appealing environment. The intent of the Landscape Concept is to provide a positive pedestrian environment through the use of pedestrian-friendly trails and safe streetscapes; to create shared community spaces that address diverse community needs; and to establish recognizable design elements that uniquely identify the NorthLake community. The landscape concept includes guidance for implementing landscape features in the Project's transition/fuel modification areas, circulation system, open space and recreation areas, and residential and commercial development areas.

Transition/Fuel Modification Areas

Perimeter slopes adjacent to natural open space are classified as 'Fuel Modification' slopes. These perimeter edges require the implementation of a fuel modification program, as approved by the Los Angeles County Fire Department. Fuel modification slopes reduce wildland fire hazards through appropriate fuel management between structures and natural open space. All fuel-modification zones will be permanently maintained by a Landscape Maintenance District or a Homeowners Association. Whenever possible, overall plant material selection for a given area shall have compatible drought-tolerant and non-invasive characteristics, and irrigation programming should be designed to minimize water applications. The *NorthLake Specific Plan* includes a Fire Management Program with guidelines for three potential fire hazard zones: the physical separation between development and open space; slope embankments within development zones and open space; and residential development areas. Additionally, in accordance with the *California Public Resources Code* (Section 4219) and the Los Angeles County Fire Department Development Standards, existing native shrubbery shall be removed to a distance of 100 feet from the limits of development. The *NorthLake Specific Plan's* Fire Management Program includes a plant list containing low-combustible plant materials and identifying a plant list for fuel modification areas which would be updated as necessary according to Fire Department requirements.

Circulation Plan

The Circulation Plan is designed to unite residential, recreational, and commercial areas into a coherent system and is designed to enhance visual continuity while allowing for aesthetic diversity. The *NorthLake Specific Plan* specifies unique plant palettes for each identified streetscape: principal highways, major streets, and local streets. In addition to the streetscapes, approach and entry need to be effectively designed to announce entry into the proposed Project site and to delineate the transition into proposed residential zones. The *NorthLake Specific Plan* includes plant palettes for the main Project entry, the secondary entry, and other community entry areas which would be updated as necessary according to Department of Regional Planning and Fire Department requirements.

Open Space and Recreation Areas

Open space areas include interior and perimeter slopes. Much of the site's open space is comprised of slopes because of the hilly nature of the site. Although the slopes are not used for recreational purposes, they serve to create a sense of spaciousness within the community. Areas adjacent to natural open space will include native non-invasive species.

Residential and Commercial Development Areas

Landscaping in residential and commercial areas will be compatible with *NorthLake Specific Plan* streetscape improvements and indigenous growth conditions and will offer opportunities for informal landscape treatments. Single-family residential landscape concepts will be aesthetically compatible with the *NorthLake Specific Plan's* Landscape Concept in design and materials. Further, landscape design in higher density zones (including residential, commercial, and industrial areas) will be designed and structured for durability and easy maintenance while retaining aesthetic appeal.

To ensure a well-designed, high quality, and cohesive Project, the Project Applicant and homeowner should adhere to guidelines set forth in the *NorthLake Specific Plan* for selecting and installing essential landscape elements, including plant materials, walls/fences, hardscape, surfaces, irrigation equipment, lighting systems, and outdoor furniture.

Sustainable Features

Los Angeles County Green Building Standards Code

The Project would comply with the County's Green Building Standards Code (Title 31) through planning and design of Project elements, implementation of energy efficiency measures, implementation of water efficiency and conservation measures, material conservation and resource efficiency, and reduction of potential air quality impacts. The proposed project will implement sustainable concepts as required by Title 31. The following sustainable design features would be incorporated into the project.

- **Low-impact development (LID).** Project-related development will comply with Chapter 12.84 of Title 12 of the Los Angeles County Code. Site design principles outlined in the Los Angeles LID Manual include site planning, protection and restoration of natural areas, minimization of land disturbance, and minimization of impervious cover. The following site design principles will be incorporated into the proposed Project:
    - Impervious areas will be minimized by incorporating parks and open space areas into the Project. Approximately 61 percent of the proposed Project site will be parks, trails, or open space areas.
    - Project best management practices (BMPs), including parcel-base and regional LID BMPs, will disconnect impervious areas and reduce flows to natural channels through infiltration and evapotranspiration.
    - In areas not subject to mass grading, the smallest site disturbance area possible will be delineated and flagged and temporary storage of construction equipment will be restricted in these areas to minimize soil compaction on site. Site clearing and grading will be limited as necessary to allow development, allow access, and provide fire protection.
    - Streets, sidewalks, and parking lot aisles will be constructed to the minimum widths in compliance with regulations for the Americans with Disabilities Act and safety requirements for fire and emergency vehicle access.
    - Native and/or non-native/non-invasive vegetation that requires less watering and chemical application will be utilized in compliance with the Los Angeles County Drought-Tolerant Landscaping Ordinance.
    - Impervious surfaces will be minimized in comment landscape design.
- **Landscape Design.** Post-construction landscape designs will comply with the following:
    - Turf areas will not exceed 25 percent of the total landscaped area for residential uses.
    - Non-invasive drought-tolerant plant and tree species appropriate for the climate zone will be used in at least 75 percent of the total landscaped area. Landscape materials and design will be based on *The Drought Tolerant Garden Los Angeles County Handbook or equivalent to the satisfaction of Regional Planning*. Additionally, a copy of this guidebook or equivalent or the location where an electronic copy can be accessed will be provided to each property owner or tenant.
    - Hydrozoning irrigation techniques will be incorporated into the landscape design.

- **Water Conservation.** A water budget will be developed for landscape irrigation use installed in conjunction with any new building that conforms to the California Department of Water Resources Model Water Efficient Landscape Ordinance and the California Green Building Code. Additional water conservation techniques will include the following:
    - Use of Recycled Water.
    - SmartSense Appliances.
    - Tankless Water Heaters.
    - Low Flow Shower Heads.
    - High Efficiency Dishwashers.
    - Grey Water Systems.
    - Smart Showers.

- **Construction Waste Reduction, Disposal and Recycling.** The Project will recycle and/or salvage a minimum of 65 percent of the non-hazardous construction and demolition debris or meet a local construction and demolition waste management ordinance. Additionally, in response to California's 75 Percent Initiative, at least 75 percent of all solid waste will be recycled or reused by 2020.

- **South Coast Air Quality Management District.** The project will comply with South Coast Air Quality Management District Rule 445 and no "wood burning" fireplaces will be permitted.

- **Additional Project Design Features.** The project will also incorporate the following design features into the Project:
    - The Project will commit to the equivalent of installing 3-kilowatt (kW) solar panel systems on 50 percent of residential dwelling units;
    - The Project will install 135 electric vehicle (EV) chargers[2] at non-residential parking spaces within the community;
    - The Project will ensure that 100 percent of residences will be pre-wired for an EV charging station and that at least 10 percent of residences will have an EV charging station;
    - The Project will feature the following Transportation Demand Management (TDM) measures, including:
        - Expanding the local transit network by adding to the existing transit service to enhance the service near the Project site;
        - Providing shuttles to major employment centers;
        - Ensuring that pedestrian facilities, such as sidewalks, and community regional, and local trails are provided throughout the Project site;
        - Ensuring that roads with adjacent trails for pedestrian and bicycle use are provided throughout the Project site connecting the community;
        - Providing off-site pedestrian facility improvements connecting to existing elementary school;

2 Assumed to be Level 2 chargers that can provide enough electricity to provide a 25 mile driving range per hour spent charging.

- Including land for the provision of off-site bicycle trails linking the facility to designated bicycle commuting routes;
- At least two of the following:
    - Constructing off-site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on-site improvements, such as bicycle paths;
    - Including bicycle parking facilities, such as bicycle lockers and racks;
    - Including showers for bicycling employees' use;
- At least two of the following:
    - Constructing off-site pedestrian facility improvements, such as overpasses, wider sidewalks;
    - Constructing on-site pedestrian facility improvements, such as building access which is physically separated from street and parking lot traffic and walk paths;
    - Including showers for pedestrian employees' use;
    - Including traffic calming measures for on-site roadways and intersections.

Economic Development

The Project proposes development of up to 3,150 dwelling units and would not exceed the current entitlement for the Project site (i.e., development of up to 3,623 housing units is allowed), which are the primary means for population growth in an area. Based on an average household size of 3.09 persons per household, as identified in the SCVAP 2012 EIR, the *NorthLake Specific Plan* would generate approximately 9,734 new residents. The Southern California Association of Governments (SCAG) is the federally designated metropolitan planning organization for the Southern California region. The Project site is located within an unincorporated area of Los Angeles County, which is part of the six-county jurisdiction of SCAG. According to the Adopted 2012 RTP Growth Forecast, prepared to support the 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS): Towards a Sustainable Future, the population of Los Angeles County is projected to increase from 9,778,000 in 2008 to 11,353,000 in 2035. Additionally, the number of households in Los Angeles County is projected to increase from 3,228,000 in 2008 to 3,852,000 in 2035. Although the project would introduce new population to the area through project implementation, the increase in population has been anticipated and included in regional and local projections, including the recent SCVAP 2012 and its associated EIR, as well as regional planning efforts by SCAG.

SECTION 5.0 ENVIRONMENTAL ANALYSIS

Section 5.0 analyzes the potential environmental impacts associated with implementation of the *NorthLake Specific Plan* (proposed Project). The environmental analyses in this section of the Supplemental Environmental Impact Report (SEIR) focus on the impacts from short-term construction and long-term operation of the proposed Project. This section of the SEIR also addresses the Project's potential short-term, long-term, direct, indirect, and cumulative environmental impacts.

The following environmental issues will be analyzed:

Section 5.1: Air Quality

Section 5.2: Biological Resources

Section 5.3: Cultural Resources

Section 5.4: Energy

Section 5.5: Fire Hazards, Emergency Response, and Environmental Safety

Section 5.6: Geology and Soils

Section 5.7: Greenhouse Gas Emissions

Section 5.8: Hydrology and Water Quality

Section 5.9: Land Use and Planning

Section 5.10: Noise

Section 5.11: Transportation

Section 5.12: Utilities and Service Systems.

Each topical analysis section addresses the environmental issues in the following format:

Background Information. This section includes a brief summary of impacts and conditions from the 1992 NorthLake Specific Plan EIR (1992 SP EIR) and the 2012 Santa Clarita Valley Area Plan EIR (2012 SCVAP EIR) to provide a context for the proposed Project analysis. This summary reflects the existing conditions and information available at the time the 1992 SP EIR and the 2012 SCVAP EIR were prepared.

Existing Conditions. Section 15125 of the California Environmental Quality Act (CEQA) Guidelines states that "an EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the Notice of Preparation is published . . . from both a local and regional perspective". The existing conditions are used as the baseline physical conditions to which potential adverse impacts associated with the implementation of a project are compared. The Existing Conditions described in this Draft SEIR describe a baseline condition that is consistent with the status as of the Notice of Preparation (NOP) release date in March 2015.

Relevant Plans, Policies, and Regulations. Information is provided about policies, procedures, regulations, and requirements that were in place at the time the NOP was published and would be applicable to the proposed Project.

Threshold Criteria. This section identifies and explains the thresholds and criteria used in the Draft SEIR analyses to determine the significance of impacts related to the proposed project.

Relevant Project Characteristics. This section provides a description of Project details not previously summarized or not described in detail in Section 3.0, Project Description, and which are germane to the impact discussion under each topical issue. As appropriate for this particular topic, identification of Specific Plan requirements, policies, components, infrastructure plans, design features, and assumptions relevant to the analysis are discussed.

Environmental Impacts. This section provides an assessment of impacts associated with project implementation and appropriate mitigation measures. If an environmental impact associated with implementation of the project exceeds the threshold of significance, then mitigation measures are recommended to reduce the impact. The impact analysis takes into account the methods for quantifying and/or reducing the impact, including the applicability of Regulatory Requirements (RR) and Mitigation Measures (MM). These terms are explained below.

> *Regulatory Requirements.* RRs are based on federal, State, and/or local regulations or laws that are frequently required independent of CEQA review, yet also serve to offset or prevent specific impacts. Typical regulatory requirements include compliance with provisions of the Uniform Building Code, South Coast Air Quality Management District Rules, and payment of local agency fees, among others. Additional conditions may be imposed on the Project by the County during the approval process. RRs will be included in a Mitigation Monitoring and Reporting Program for monitoring purposes.
>
> *Mitigation Measures.* MMs are incorporated when a potentially significant environmental effect has been identified and is not reduced to a level considered less than significant through the application of RRs. Project-specific MMs are recommended to minimize the potentially significant impacts of a project.
>
> CEQA requires only that MMs reduce impacts to the extent that is reasonable and feasible, and recognizes that not all project impacts can be mitigated to a level which is considered less than significant.

Cumulative Impacts. Pursuant to Section 15130 of the State CEQA Guidelines, “an EIR shall discuss cumulative impacts of a project when the project’s incremental effect is cumulatively considerable”. As defined in Section 15065(c) of the State CEQA Guidelines, an effect may be cumulatively considerable if “the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects”.

Analyses in this section comply with Section 15130(b)(1) of the State CEQA Guidelines, which states that the analysis may consider either a list of past, present, and probable future projects; may use a summary of projections contained in an adopted general plan or related planning document; or may incorporate the analysis in a previously adopted EIR. This Draft SEIR uses all three methods for the cumulative analyses, depending on the environmental issue being analyzed.

Impact Conclusion. This section summarizes the collective significance level of impacts related to the section topics that are associated with development of the proposed Project and the net level of significance after implementation of mitigation measures. Section 15126.4(a) of the State CEQA Guidelines requires lead agencies to consider feasible mitigation measures

to avoid or substantially reduce a project's significant environmental impacts. MMs are required when a potentially significant environmental effect has been identified that cannot be reduced to a level considered less than significant through the implementation of the RRs.

A summary of the significance of environmental impacts after compliance with the RRs and implementation of the MMs are then stated for each environmental issue. References used in the section are listed at the end.

Mitigation Monitoring and Reporting Program (MMRP)

All numbered MMs will be included in the MMRP for monitoring accountability to ensure their implementation.

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5.1 AIR QUALITY

This section of the SEIR addresses potential short-term (construction-related) and long-term (operational) air quality impacts that would result from implementing the Project. The air quality impact analysis includes a discussion of existing air quality, including monitored criteria pollutants and attainment designations and potential air quality impacts that would occur with construction and operation of the Project. This section also provides mitigation measures, as determined necessary. The California Emissions Estimator Model (CalEEMod, Version 2016.3.1) inputs and data for the Project are included in Appendix C of this EIR.

5.1.1 METHODOLOGY

Air Pollutants

Criteria Air Pollutants and Potential Health Effects

Concentrations of the following air pollutants are used as indicators of ambient air quality conditions: nitrogen dioxide (NO_2); ozone (O_3); particulate matter, including both inhalable particulate matter equal to or less than 10 microns in diameter[1] (PM10) and fine particulate matter equal to or less than 2.5 microns in diameter (PM2.5); CO; sulfur dioxide (SO_2); and lead. These air pollutants are commonly referred to as "criteria air pollutants" since they are the principal air pollutants identified by the U.S. Environmental Protection Agency (USEPA) as being harmful to human health. A description of each criteria air pollutant, including source types and health effects, is provided below.

Nitrogen Dioxide

Nitrogen Dioxide (NO_2) is a brownish, highly reactive gas that is present in all urban environments. NO_2, nitric oxide (NO), and nitrous oxide (N_2O) are constituents of oxides of nitrogen (NOx). Motor vehicle emissions are the main source of NOx in urban areas. NO_2 is toxic to various animals and to humans because of its ability to combine with water in the eyes, lungs, mucus membranes, and skin to form nitric acid. Laboratory studies show that susceptible humans (such as asthmatics) who are exposed to high concentrations of NO_2 can suffer lung irritation and, potentially, lung damage. Epidemiological studies have also shown associations among NO_2 concentrations and (1) mortality from respiratory and cardiovascular causes and (2) hospital admissions for respiratory conditions.

Ozone

Ozone (O_3) is a secondary pollutant (i.e., it is not directly emitted) and is a gas that is formed when volatile organic compounds (VOCs) (also referred to as reactive organic gases or ROGs) and NOx undergo a photochemical reaction that occurs in the presence of sunlight. Thus, VOC and NOx are O_3 precursors. The primary sources of VOC emissions are gasoline-fueled motor vehicles and solvent evaporation from consumer products. Sunlight and hot weather cause ground-level O_3 to form; as a result, low wind speeds or stagnant air combined with warm temperatures and clear skies provide the optimum conditions for O_3 formation. As a result, O_3 is known as a summertime air pollutant.[2] Ground-level O_3 is the primary constituent of smog. Because O_3 formation occurs over extended periods of time, both O_3 and its precursors are transported by wind, and high O_3 concentrations can occur in areas well away from sources of its constituent pollutants. People with lung disease, children, older adults, and persons who spend

1 About $^1/_7$ of the diameter of a single human hair.

2 Ground-level O_3 is not to be confused with atmospheric O_3 or the "ozone layer", which occurs very high in the atmosphere and shields the planet from some ultraviolet rays.

more time outdoors participating in vigorous physical activities are at greater risk from the harmful health effects of O_3 exposure.

Particulate Matter

Particulate matter (PM) includes both aerosols and solid particles of a wide range of size and composition. Of particular concern are respirable PM particles smaller than or equal to 10 microns in diameter (PM10) and fine PM particles smaller than or equal to 2.5 microns in diameter (PM2.5). Small particles are of greater concern because they can penetrate deeper into the lungs than larger particles.

PM10 is generally emitted directly as a result of mechanical processes that crush or grind larger particles (most typically through construction activities and vehicular travel); these emissions are known as fugitive dust.[3] Fugitive dust is also generated during moderate to high wind episodes. The principal sources of dust in urban areas include grading, construction, disturbed areas of soil, and dust entrained by vehicles on roadways. PM10 generally settles out of the atmosphere rapidly and is not readily transported over large distances.

PM2.5, as well as being a result of the PM10 sources described above, is directly emitted in combustion exhaust from diesel engines in trucks, construction equipment, and trains. Unlike PM10, PM2.5 can remain suspended in the atmosphere for days and/or weeks and can be transported long distances by wind. The principal health effect of airborne particulate matter (i.e., PM10 and PM2.5) is on the respiratory system. People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worse illnesses and premature death, and people with bronchitis can expect aggravated symptoms from breathing in fine particles. Children may experience a decline in lung function due to inhaling PM10 and PM2.5. Other groups considered sensitive include smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive because many breathe through their mouths.

Carbon Monoxide

Carbon monoxide (CO) is a colorless and odorless gas which, in the urban environment, is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. CO combines with hemoglobin in the bloodstream and reduces the amount of oxygen that can be circulated through the body. High CO concentrations can cause headaches; can aggravate cardiovascular disease; and can impair central nervous system functions. CO concentrations can vary greatly over comparatively short distances. Relatively high concentrations are typically found near crowded intersections; along heavily used roadways carrying slow-moving traffic; and at or near ground level.

Sulfur Dioxide

The primary source of sulfur dioxide (SO_2) emissions is fossil fuel combustion for generating electric power and combustion of motor fuels. However, stricter standards have removed most of the sulfur from fuels, greatly reducing sulfur oxide (SOx) emissions from vehicles. SO_2 combines easily with water vapor, forming aerosols of sulfurous acid, a colorless, mildly corrosive liquid. This liquid may then combine with oxygen in the air, forming the even more irritating and corrosive sulfuric acid (H_2SO_4). SO_2 can cause temporary breathing difficulty for children, the elderly, and persons with asthma, especially asthmatics who are active outdoors. Longer-term exposures to

3 In an air pollution discussion, “fugitive” describes sources that are not confined to specific emission points such as power plant stacks or vehicle exhaust pipes.

high levels of SO_2 gas and particles cause respiratory illness and aggravate existing heart disease.

Lead

Lead is a metal found naturally in the environment and in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. Lead is a stable compound that persists and accumulates both in the environment and in animals. In humans, it affects the body's blood-forming, nervous, and renal systems. In addition, lead has been shown to affect the normal functions of the reproductive, endocrine, hepatic, cardiovascular, immunological and gastrointestinal systems, although there is significant individual variability in response to lead exposure.

Toxic Air Contaminants

Toxic air contaminants (TACs) are a diverse group of "non-criteria" air pollutants that may cause or contribute to an increase in deaths and serious illness or that may pose an existing or potential hazard to human health. TACs include both organic and inorganic chemical substances emitted from a variety of common sources, including motor vehicles, industrial operations, gasoline stations, dry cleaners, painting operations, and research and teaching facilities. TACs are different than the "criteria" pollutants previously discussed in that ambient air quality standards have not been established for them. TACs occurring at extremely low levels may still cause health effects, and it is typically difficult to identify levels of exposure that do not produce adverse health effects. Diesel engine emissions (known as diesel particulate matter or DPM) are responsible for the majority of California's known cancer risk from outdoor air pollutants. In addition, the visible emissions in diesel exhaust, diesel soot, cause visibility reduction and is a potent global warmer.

Exposure to DPM may be a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. DPM levels and resultant potential health effects may be higher in close proximity to heavily traveled roadways with substantial truck traffic or near industrial facilities. According to CARB, DPM exposure may lead to the following adverse health effects: (1) aggravated asthma; (2) chronic bronchitis; (3) increased respiratory and cardiovascular hospitalizations; (4) decreased lung function in children; (5) lung cancer; and (6) premature deaths for people with heart or lung disease.[4]

Construction and Operational Emissions

Construction and operational emissions for the Project were calculated by using the California Emissions Estimator Model (CalEEMod), Version 2016.3.1 (CAPCOA 2016). CalEEMod is a computer program prepared under the direction of the South Coast Air Quality Management District (SCAQMD) and used to estimate anticipated emissions associated with land development Projects in California. CalEEMod calculates emission rates for criteria pollutants utilizing the EMission FACtor model (EMFAC 2014) for on-road vehicles, OFFROAD 2014 for off-road vehicles, and USEPA formulas for non-vehicular emissions. The model calculates emissions of CO, SOx, PM10, PM2.5, and the O_3 precursors VOC and NOx. The Los Angeles County database was used for the proposed Project.

Specific inputs to CalEEMod for both construction and operations include land uses and acreages associated with the proposed Project. Construction input data include, but are not limited to, the start and finish dates of construction phases; inventories of construction equipment to be used

4 CARB, Diesel and Health Research, www.arb.ca.gov/research/diesel/diesel-health.htm; CARB, Fact Sheet: Diesel Particulate Matter Health Risk Assessment Study for the West Oakland Community: Preliminary Summary of Results, March 2008, www.arb.ca.gov/ch/communities/ra/westoakland/documents/factsheet0308.pdf.

during each phase; volumes of materials to be imported to and exported from the site; areas to be paved; and areas to be painted. Output emissions data are specified for off-road equipment, on-road vehicles, fugitive dust, and VOCs from painting and asphalt installation.

Operational inputs include the year of analysis, vehicle trip generation rates, and projected natural gas use. Output operational emissions include area, energy, and mobile sources. The area sources include use of consumer products, landscape maintenance equipment, and architectural coatings used for routine maintenance. Energy emissions refer to natural gas consumption. Mobile sources are the vehicles used by residents, retail and non-residential use employees, customers, and vendors traveling to and from the Project site. The mobile source emissions were derived from trip generation forecasts for the proposed Project provided in the Traffic Impact Analysis for the Project (Stantec 2015).

The CalEEMod model includes methods and data to calculate emissions reductions resulting from the implementation of State and SCAQMD rules, project design features, and mitigation measures. Please refer to Appendix C of this Draft EIR for detailed information on CalEEMod input assumptions and modeling output files. Determinations of significance for construction and operational emissions were calculated by comparing project-generated emissions and applicable SCAQMD mass emissions thresholds.

Local Impacts – Toxic Air Contaminants and Criteria Pollutants

The local impact analyses for toxic air contaminants (TAC) and criteria pollutants were performed by Vista Environmental and are included in *Health Risk Assessment, NorthLake Specific Plan, County of Los Angeles*, which is included in Appendix C to this EIR. The TAC and criteria pollutant dispersion modeling utilized in the analysis is based on SCAQMD-recommended methodology. Important issues that affect the dispersion modeling include (1) Model Selection, (2) Emission Sources, (3) Meteorological Data, and (4) Receptor Grid. Lakes Environmental's AERMOD View Version 9.0.0 Model running the AERMOD dispersion model was used for all dispersion modeling; Inhalable particulate matter (PM10) emissions for the TAC modeling were taken from the CalEEMod construction phase modeling described above. Similarly, oxides of nitrogen (NOx), carbon monoxide (CO), PM10, and fine particulate matter (PM2.5) emissions for the criteria pollutant modeling were taken from the CalEEMod construction phase modeling. Meteorological data from the SCAQMD's Santa Clarita monitoring site was selected for this modeling application. Model output receptor points were placed at the following sensitive receptor locations:

- Northlake Hills Elementary School, located on the southern portion of the Project site.
- Single family residences on Big Oak Lane west of Ridge Route Road, adjacent to the east boundary of the Project site and near the south end of the Project site;
- Single family residences on Pine Crest Place and Mariposa Lane, east of Ridge Route Road and east and northeast of the Big Oak Lane neighborhood;
- The Castaic Lake Senior Apartments complex, located adjacent to the southern tip of the Project site and on the east side of Castaic Road;
- Two single family residences on Ridge Route Road approximately 2 miles north of Lake Hughes Road and adjacent to the west boundary of the Project site; and
- One single family residence on Ridge Route Road and adjacent to the northwest corner of the Project site.

Details relative to the base maps used in AERMOD, the meteorological data, and the emissions data calculations are included in Appendix C.

Carbon Monoxide Hotspot

A CO hotspot is an area of localized CO pollution caused by severe vehicle congestion on major roadways, typically near intersections. For localized CO impacts from mobile sources at congested intersections, an appropriate screening procedure is provided in the procedures and guidelines contained in *Transportation Project-Level Carbon Monoxide Protocol* (the Protocol) to determine whether a project poses the potential for a CO hotspot (UCD ITS 1997). If it is determined that a quantitative analysis is required. Quantitative screening methods published with the Protocol are not used because of emission factors that are outdated. The 2003 SCAQMD AQMP analyzed the potential for CO hotspots as part of the revision to the federal CO Attainment Demonstration Plan. The analysis considered intersections with the combinations of high traffic volumes, severe congestion, and high background CO concentrations. Potential local CO impacts of the proposed Project were evaluated by comparing projected traffic conditions with the CO analysis of the 2003 SCAQMD AQMP. Ambient CO concentrations and vehicle CO emission rates have both declined considerably since the publication of the Protocol, making this analysis conservative. This method of analysis is accepted by the SCAQMD.

5.1.2 BACKGROUND INFORMATION

1992 NorthLake Specific Plan Environmental Impact Report

The following summary reflects conditions existing at the time of the 1992 NorthLake Specific Plan Environmental Impact Report (SP EIR), (which is incorporated by reference), was prepared and certified; and is included as background information to provide a context for the scope of this SEIR analysis. Adopted mitigation measures from the 1992 SP EIR relevant to air quality issues are included below in Section 5.1.7.

The following relevant air quality impacts were identified in the SP EIR:

- Construction emissions. Grading and construction activities would temporarily increase particulate emissions on and near the Project site. Construction vehicles/equipment and worker commute vehicle exhaust emissions would be relatively small and would not cause additional violations of air quality standards on a regional scale. Short-term local violations of State and federal carbon monoxide (CO) standards may occur in the vicinity of intensive equipment use. With proper mitigation measures, construction activities would not be expected to have a significant adverse impact on the environment.
- Project emissions from vehicles and residential energy use would exceed the SCAQMD-suggested levels of significance.
- Additionally, air emissions may result from onsite industrial uses that have not been identified; however, subsequent operations would be required to meet all applicable air emissions standards.
- Cumulative air pollutant emissions in the area would contribute to the degradation of local and regional air quality.

2012 Santa Clarita Valley Area Plan Environmental Impact Report

The following summary reflects conditions existing at the time the 2012 Santa Clarita Valley Area Plan Environmental Impact Report (SCVAP 2012 EIR), (which is incorporated by reference) was prepared and certified; it is included as background information to provide a context for the scope of this SEIR analysis. Adopted mitigation measures from the 2012 SCVAP relevant to air quality issues are included below in Section 5.1.7.

The following relevant air quality impacts were identified in the 2012 SCVAP EIR:

- Construction Impacts. Buildout of the proposed Area Plan and General Plan would result in potentially significant construction emission impacts. The proposed Area Plan policies and General Plan goals, objectives, and policies are designed to reduce air emissions during construction by reducing the amount of infrastructure that would be required, reducing volatile organic compounds (VOCs) emissions from pavement, reducing fugitive dust emissions, encouraging use of recycled content building materials, and by cooperating with other appropriate agencies to identify pollution sources and adopt strategies to reduce their emissions. Implementation of these goals, objectives, and policies would reduce potential Area Plan air quality impacts under this criterion. However, individual project emissions could potentially exceed the thresholds.
- Operational Impacts. Buildout of the proposed Area Plan and General Plan would result in potentially significant air quality impacts for pollutants that exceed State and/or federal standards. The proposed goals, objectives, and policies would reduce mobile and stationary source emissions of pollutants that currently exceed state and/or federal standards, and for which the Project region is nonattainment. However, individual project emissions could potentially exceed the thresholds.
- Exposure of Sensitive Receptors. There would be no potential for future increases in CO concentrations and CO hotspots, and CO impacts would be less than significant. Impacts would be potentially significant if sensitive uses were located in close proximity to Interstate 5 or State Route 14 without mitigation.

5.1.3 EXISTING CONDITIONS

Climate and Meteorology

The California Air Resources Board (CARB) divides the state into air basins that share similar meteorological and topographical features. The Project site is in the South Coast Air Basin (SoCAB), a 6,600 square mile area comprised of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The Basin's climate and topography are highly conducive to the formation and transport of air pollution. Both peak ozone concentrations and the number of days the standards were exceeded decreased everywhere in the SoCAB throughout the 1990s. Carbon monoxide (CO) concentrations have also dropped significantly throughout the air basin as a result of strict new emission controls and reformulated gasoline sold in winter months.

Air Quality Data for Criteria Air Pollutants

Air quality at any site is dependent upon regional air quality and local pollutant sources. Regional air quality is determined by the amount and type of pollutants released throughout the air basin.

The SCAQMD maintains air monitoring stations throughout the SoCAB to monitor air quality and determine air quality in each area, called a Source Receptor Area (SRA).[5] The Project site is located in SRA 13 - Santa Clarita Valley. Air quality data representative of the Project area is collected at the Santa Clarita Monitoring Station, which is the closest monitoring station to the Project site. It is located on 22224 Placerita Canyon Road, Santa Clarita, California 91321, approximately ten miles south of the Project site. Pollutants measured at the Santa Clarita Monitoring Station include O_3, PM10, PM2.5, and NOx. The monitoring data presented in

5 The SCAQMD has divided the SoCAB into 38 air-monitoring areas, called Source Receptor Areas.

Table 5.1-1, Air Quality Levels Measured at the Santa Clarita Monitoring Station, were obtained from CARB (CARB 2016). Federal and State air quality standards are also presented.

TABLE 5.1-1
AIR QUALITY LEVELS MEASURED AT THE SANTA CLARITA MONITORING STATION

Pollutant	California Standard	National Standard	Year	Max. Level[a]	Days State Standard Exceeded[b]	Days National Standard Exceeded[b, c]
O_3 (1 hour)	0.09 ppm	None	2015	0.126	23	N/A
			2014	0.137	32	N/A
			2013	0.134	30	N/A
O_3 (8 hour)	0.070 ppm	0.075 ppm	2015	0.109	55	37
			2014	0.111	65	45
			2013	0.104	58	40
PM10 (24 hour)	50 µg/m^3	150 µg/m^3	2015	39.0	0/–	0/–
			2014	45.0	0/0	0/0
			2013	41.0	0/0	0/0
PM10 (AAM)	20 µg/m^3	None	2015	–	–	N/A
			2014	22.1	Yes	N/A
			2013	20.6	Yes	N/A
NO_2 (1 Hour)	0.18 ppm	0.100 ppm	2015	0.064	0	0
			2014	0.057	0	0
			2013	0.065	0	0
NO_2 (AAM)	0.030 ppm	0.053 ppm	2015	0.011	No	No
			2014	0.012	No	No
			2013	0.014	No	No
PM2.5 (24 Hour)	None	35 µg/m^3	2015	34.4	N/A	–
			2014	28.9	N/A	–
			2013	29.5	N/A	–
PM2.5 (AAM)	12 µg/m^3	15 µg/m^3	2015	–	–	–
			2014	–	–	–
			2013	9.9	No	No

–: Data Not Reported or insufficient data available to determine the value; O_3: ozone; ppm: parts per million; PM10: respirable particulate matter with a diameter of 10 microns or less; µg/m^3: micrograms per cubic meter; AAM: Annual Arithmetic Mean; NO_2: nitrogen dioxide; CO: carbon monoxide; PM2.5: fine particulate matter with a diameter of 2.5 microns or less; SO_2: sulfur dioxide. N/A indicates that there is no applicable standard.

[a] California maximum levels were used.

[b] For annual averaging times, a "yes" or "no" response is given if the annual average concentration exceeded the applicable standard.

[c] PM is measured once every 6 days. Where two values are shown for PM10 and PM2.5, the first is for the measured value and the second is the estimated value if monitored every day.

Source: CARB 2016.

The air pollutants measured at the Santa Clarita Monitoring Station include O_3, PM10, PM2.5, and NO_2. The Santa Clarita monitoring data show that O_3 is the air pollutant of primary concern in the Project area. At the Santa Clarita Monitoring Station, the State 1-hour O_3 standard was exceeded 30 days in 2013, 32 days in 2014, and 23 days in 2015. The State 8-hour O_3 standard was exceeded 58 days in 2013, 65 days in 2014, and 55 days in 2015. The federal O_3 8-hour standard was exceeded 40 days in 2013, 45 days in 2014, and 37 days in 2015.

O_3 is a secondary pollutant and is not directly emitted from a source; it occurs as the result of chemical reactions between other pollutants, most importantly VOCs and NO_2, which occur only in the presence of bright sunlight. Pollutants emitted from upwind cities react during transport downwind to produce the oxidant concentrations experienced in the area. Because NO_2 is a primary constituent of O_3, the very low measured concentrations of NO_2 indicate that existing high O_3 levels are primarily the result of transport of O_3 that is formed outside the SoCAB.

Regional air quality is defined by whether the area has attained or not attained State and federal standards, as determined by monitoring. Areas that are in nonattainment are required to prepare plans and implement measures that will bring the region into attainment. When an area has been reclassified from nonattainment to attainment for a federal standard, the status is identified as "maintenance", and there must be a plan and measures established that will keep the region in attainment for the following ten years. Table 5.1-2 below lists the current attainment designations for the SoCAB.

TABLE 5.1-2
DESIGNATIONS OF CRITERIA POLLUTANTS IN THE SOUTH COAST AIR BASIN

Pollutant	State	Federal
O_3 (1-hour)	Nonattainment	No Standard
O_3 (8-hour)		Extreme Nonattainment
PM10	Nonattainment	Attainment/Maintenance
PM2.5	Nonattainment	Nonattainment
CO	Attainment	Attainment/Maintenance
NO_2	Attainment	Attainment/Maintenance
SO_2	Attainment	Attainment
Lead	Attainment	Nonattainment/Attainment[a]
Visibility Reducing Particles	Unclassified[b]	No Standards
Sulfates	Attainment	
Hydrogen Sulfide	Unclassified	

O_3: ozone; PM10: inhalable particulate matter with a diameter of 10 microns or less; PM2.5: fine particulate matter with a diameter of 2.5 microns or less; CO: carbon monoxide; NO_2: nitrogen dioxide; SO_2: sulfur dioxide; CARB: California Air Resources Board; SoCAB: South Coast Air Basin.

[a] Los Angeles County is classified as nonattainment for lead; the remainder of the SoCAB is in attainment of the State and federal standards.

[b] "Unclassified" designation indicates that the air quality data for the area are incomplete and do not support a designation of attainment or nonattainment

Source: CARB 2015b; USEPA 2015.

Valley Fever

Valley Fever is the common name (formally known as *Coccidioidomycosis*) for a fungal disease caused by inhalation of *Coccidioides immitis* spores that are carried in dust; it is found in parts of the southwestern United States, Mexico, and South America (LADPH 2016). In California, the highest incidence of Valley Fever occurs in the San Joaquin (Central) Valley, with over 75 percent of reported cases (CDPH 2014). In Los Angeles County, the fungus is found in areas of San Fernando (West) Valley and Antelope Valley (LADPH 2016).

The fungus can become airborne when soil that contains *C. immitis* spores is disturbed, either by natural or anthropogenic (man-made) means, including wind, farming, and construction. Valley Fever is diagnosed by a blood test, a chest x-ray, and other tests, and it is treatable with anti-

fungal medications. Approximately 60 percent of people exposed to Valley Fever spores develop no symptoms. If symptoms develop, those individuals generally develop a mild respiratory illness with flu-like symptoms that can last a month or more. Rarely, individuals develop a severe illness such as pneumonia, meningitis, or dissemination when the fungus spreads to other parts of the body. At highest risk for exposure to Valley Fever are farmers, construction workers, military personnel, archaeologists, and others who are likely to engage in activities that actively disturb soils in areas where Valley Fever may be present. Persons at the highest risk of developing severe Valley Fever include the very young (under 5 years old); older adults (over 60 years old); immunocompromised individuals and those with diabetes; pregnant women; and certain ethnic groups, including African-Americans, Latinos, Native Americans, and Filipinos (LADPH 2016; CDPH 2014).

Between 2008 and 2013 (the most recent available data for the County), the annual incidence of Valley Fever in Los Angeles County has ranged from 1.9 (2009) to 3.3 (2013) cases per 100,000 persons, or 193 cases and 349 cases, respectively. In all years, the majority of reported cases were identified as occurring in the City of Los Angeles (CDPH 2015). In California, the annual number of Valley Fever cases has been on the rise since 2000. It is believed that contributing factors may include changes in climate and rainfall patterns; construction activities that disturb soil; an increase in susceptible persons moving to endemic areas; and heightened awareness and diagnoses (Sondermeyer et al. 2013).

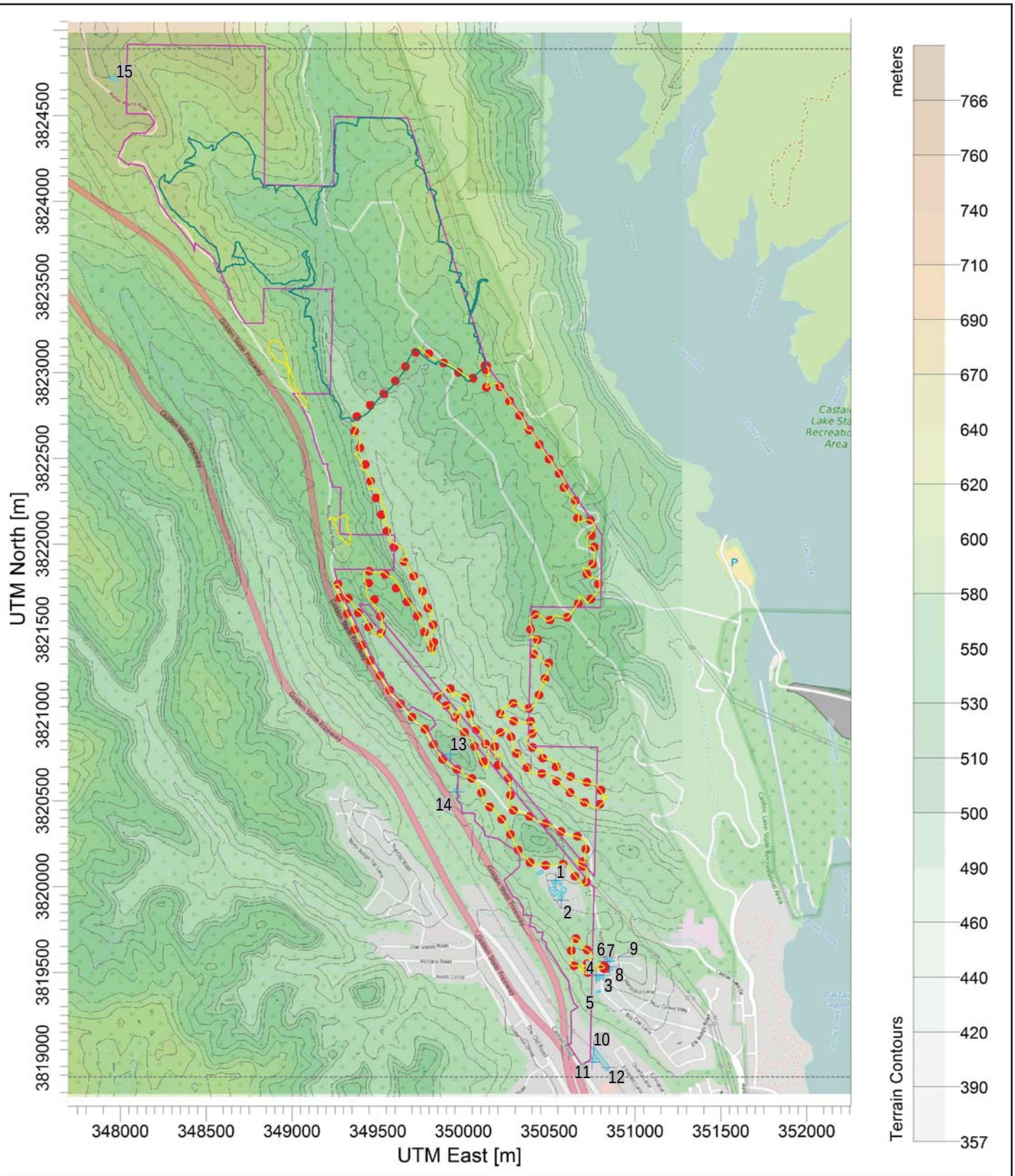
Sensitive Receptors

Sensitive receptors are uses which, due to the nature of their occupants, are more sensitive to air pollutants than other uses. The following uses are listed in the SCVAP EIR as identified by the SCAQMD as sensitive air quality land uses: schools; playgrounds; childcare centers; long-term health care facilities; rehabilitation centers; convalescent centers; hospitals; retirement homes; and residences.

There is one sensitive receptor on the Project site, the Northlake Hills Elementary School. The closest off-site sensitive receptors include the following and are shown on Exhibits 5.1-1 and 5.1-2.

- Single family residences on Big Oak Lane west of Ridge Route Road, adjacent to the east boundary of the Project site and near the south end of the Project site
- Single family residences on Pine Crest Place and Mariposa Lane, east of Ridge Route Road and east and northeast of the Big Oak Lane neighborhood
- The Castaic Lake Senior Apartments complex, located adjacent to the southern tip of the Project site and on the east side of Castaic Road
- Two single family residences on Ridge Route Road approximately 2 miles north of Lake Hughes Road and adjacent to the west boundary of the Project site
- One single family residence on Ridge Route Road and adjacent to the northwest corner of the Project site

The residences and school that would be built as part of the proposed project would be sensitive noise and vibration receptors.



Source: Vista Environmental 2015

Air Dispersion Model Phase 1 Source and Receptor Locations Exhibit 5.1-1

NorthLake Specific Plan SEIR

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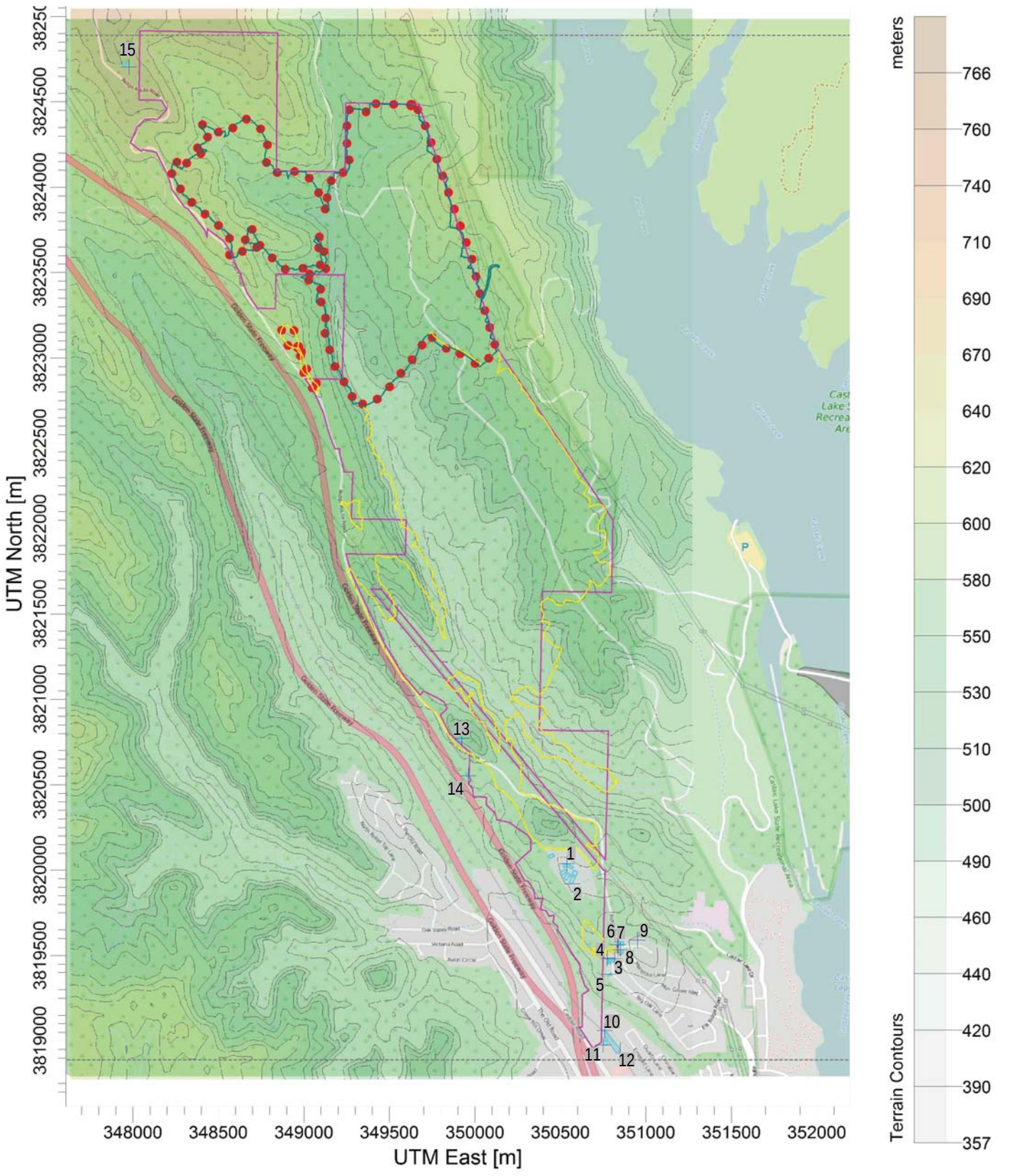

Source: Vista Environmental 2015

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Air Dispersion Model Phase 2 Source and Receptor Locations

Exhibit 5.1-2

NorthLake Specific Plan SEIR

BonTerra PSOMAS

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Existing On-Site Emissions

The Project site is currently undeveloped except for the NorthLake Elementary School, some sections of Ridge Route Road, and a water tank. Naturally vegetated land and cattle grazing occurs throughout the Project site. Existing emissions from the NorthLake Elementary School are not quantified because the school is not included in the analysis of total project emissions.

5.1.4 RELEVANT PLANS, POLICIES, AND REGULATIONS

The Project site is located in the South Coast Air Basin (SoCAB). The SoCAB is comprised of parts of Los Angeles, Riverside, and San Bernardino counties and all of Orange County. Air quality in the SoCAB is regulated by U.S. Environmental Protection Agency (USEPA), the CARB, and the South Coast Air Quality Management District (SCAQMD). Each of these agencies develops rules, regulations, policies, and/or goals to comply with applicable legislation. Although USEPA regulations may not be superseded, both State and local regulations may be more stringent. The Southern California Association of Governments (SCAG) is an important partner to the SCAQMD and produces estimates of anticipated future growth and vehicular travel in the basin which are used for air quality planning. The Federal, State, regional, and local regulations for criteria air pollutants and toxic air contaminants (TACs) are discussed below.

Federal

U.S. Environmental Protection Agency

The USEPA regulates emissions sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. The USEPA's air quality mandates are drawn primarily from the Clean Air Act (CAA), which was enacted in 1970. The most recent major amendments made by Congress were in 1990. As part of its enforcement responsibilities, the USEPA requires each State with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain and maintain the federal standards. The SIP must integrate federal, State, and local plan components and regulations to identify specific measures to reduce pollution by using a combination of performance standards and market-based programs within the SIP-identified timeframe. The USEPA is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for criteria pollutants, which are discussed further below under Section 5.1.3, Existing Conditions, Table 5.1-3, California and National Ambient Air Quality Standards, provides additional information.

State

California Air Resources Board

The California Air Resources Board (CARB), a part of the California Environmental Protection Agency (CalEPA), is responsible for coordinating and administering both the federal and State air pollution control programs in California. In this capacity, CARB conducts research; sets the California Ambient Air Quality Standards (CAAQS), as shown in Table 5.1-3; compiles emission inventories; develops suggested control measures; oversees local programs; and prepares the State Implementation Plan (SIP). The CAAQS are generally stricter than the NAAQS. For regions that do not attain the CAAQS, CARB requires the air districts to prepare plans for attaining the standards. These plans are then integrated into the State SIP. CARB establishes emissions standards for: (1) motor vehicles sold in California; (2) consumer products (e.g., hair spray, aerosol paints, and barbecue lighter fluid); and (3) various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

TABLE 5.1-3
CALIFORNIA AND NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards	Federal Standards	
			Primary[a]	Secondary[b]
O_3	1 Hour	0.09 ppm (180 µg/m^3)	–	–
	8 Hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	Same as Primary
PM10	24 Hour	50 µg/m^3	150 µg/m^3	Same as Primary
	AAM	20 µg/m^3	–	Same as Primary
PM2.5	24 Hour	–	35 µg/m^3	Same as Primary
	AAM	12 µg/m^3	12.0 µg/m^3	15.0 µg/m^3
CO	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	–
	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	–
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)	–	–
NO_2	AAM	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary
	1 Hour	0.18 ppm (339 µg/m^3)	0.100 ppm (188 µg/m^3)	–
SO_2	24 Hour	0.04 ppm (105 µg/m^3)	–	–
	3 Hour	–	–	0.5 ppm (1,300 µg/m^3)
	1 Hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)	–
Lead	30-day Avg.	1.5 µg/m^3	–	–
	Calendar Quarter	–	1.5 µg/m^3	Same as Primary
	Rolling 3-month Avg.	–	0.15 µg/m^3	
Visibility Reducing Particles	8 hour	Extinction coefficient of 0.23 per km – visibility ≥ 10 miles (0.07 per km – ≥30 miles for Lake Tahoe)	**No Federal Standards**	
Sulfates	24 Hour	25 µg/m^3		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m^3)		

O_3: ozone; ppm: parts per million; µg/m^3: micrograms per cubic meter; PM10: respirable particulate matter; AAM: Annual Arithmetic Mean; –: No Standard; PM2.5: fine particulate matter; CO: carbon monoxide; mg/m^3: milligrams per cubic meter; NO_2: nitrogen dioxide; SO_2: sulfur dioxide; km: kilometer.

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

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

Note: More detailed information in the data presented in this table can be found at the CARB website (www.arb.ca.gov).

Source: CARB 2015c

In the 1980's, CARB established one of the nation's first comprehensive state air toxics programs. The Toxic Air Contaminant Identification and Control Act (AB 1807-1983) created California's program to reduce the health risks from air toxics. This law expanded CARB's authority to evaluate and control air toxics. An additional state law, the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588-1987), supplements the original legislation by requiring a statewide air toxics inventory and notification of local residents of significant risk from near-by sources of air toxics. A 1992 amendment to the law (SB 1731) requires that the risk be reduced from these significant sources.

Title 24 Energy Efficiency Standards

The Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24, Part 6 of the *California Code of Regulations* [CCR]) were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The current applicable standards are the 2013 Standards, effective July 1, 2014. The 2016 Code was published on July 1, 2016, and will be effective on January 1, 2017 (CBSC 2016). The California Energy Commission (CEC) adopted the 2008 changes to the Building Energy Efficiency Standards in order to (1) Provide California with an adequate, reasonably-priced, and environmentally-sound supply of energy" and (2) "Respond to Assembly Bill 32, the Global Warming Solutions Act of 2006, which mandates that California must reduce its greenhouse gas emissions to 1990 levels by 2020. The requirements of the energy efficiency standards result in the reduction of natural gas and electricity consumption. Since natural gas use and electricity generation produce criteria pollutant emissions, a reduction in natural gas and electricity consumption results in a related reduction in air quality emissions.

Title 24 Green Building Standards

The 2013 California Green Building Standards Code (24 CCR, Part 11), also known as the CALGreen code, contains mandatory requirements for new residential and nonresidential buildings (including buildings for retail, office, public schools and hospitals) throughout California (CBSC 2014). The development of the CALGreen Code is intended to (1) cause a reduction in greenhouse gas (GHG) emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. In short, the code is established to reduce construction waste; make buildings more efficient in the use of materials and energy; and reduce environmental impact during and after construction.

The CALGreen Code contains requirements for construction site selection, storm water control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for the verification that all building systems, such as heating and cooling equipment and lighting systems, are functioning at their maximum efficiency.

The CALGreen Code requires the development of Storm Water Pollution Prevention Plans (SWPPPs) and implementation of construction Best Management Practices (BMPs) on construction sites less than one acre and provides standards for bicycle parking, carpool/vanpool/electric vehicle spaces, light and glare reduction, grading and paving, energy efficient appliances, renewable energy, graywater systems, water efficient plumbing fixtures, recycling and recycled materials, pollutant controls (including moisture control and indoor air quality), acoustical controls, storm water management, building design, insulation, flooring, and framing, among others. Beyond the mandatory standards, optional Tier 1 status can be achieved

by complying with voluntary measures for energy and water efficiency, material conservation, and other design features. Examples of Tier 1 requirements are 15 percent less energy use in residential construction than required by existing regulations and 30 percent less indoor water use in non-residential construction. Tier 2 status can be achieved by complying with additional voluntary measures; example requirements are 30 percent less energy use in residential construction and 35 percent less indoor water use in non-residential construction.

South Coast Air Quality Management District

The Project is located in Los Angeles County, in the SoCAB, where the SCAQMD is the agency principally responsible for comprehensive air pollution control. As a regional agency, the SCAQMD works directly with SCAG, County transportation commissions, and local governments and cooperates actively with all federal and State government agencies. The SCAQMD develops rules and regulations; establishes permitting requirements for stationary sources; inspects emissions sources; and enforces such measures through educational programs or fines when necessary.

South Coast Air Quality Management District Air Quality Management Plan

In response to federal and State requirements to implement measures to achieve the NAAQS and CAAQS, the SCAQMD is responsible for reducing emissions from stationary (area and point), mobile, and indirect sources. It has responded to this requirement by preparing a sequence of AQMPs. An AQMP establishes a program of rules and regulations directed at attaining the NAAQS and CAAQS.

On December 7, 2012, the SCAQMD adopted the 2012 AQMP, which is a regional and multi-agency effort (SCAQMD, CARB, SCAG, and USEPA). The 2012 AQMP incorporates the latest scientific and technical information and planning assumptions including SCAG's 2012 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS); updated emission inventory methods for various source categories; and SCAG's latest growth forecasts. The primary purposes of the 2012 AQMP are to demonstrate attainment of the federal 24-hour PM2.5 standard by 2014 and to update the USEPA-approved 8-hour Ozone Control Plan. On December 20, 2012, the 2012 AQMP was submitted to CARB and the USEPA for concurrent review and approval for inclusion in the SIP (SCAQMD 2013). The 2012 AQMP was approved by the CARB on January 25, 2013 (CARB 2014).

The SCAQMD is currently developing the 2016 AQMP. Adoption by the SCAQMD Governing Board is scheduled for December 2016 (SCAQMD 2016). The 2016 AQMP will incorporate data from SCAG's 2016-2040 RTP/SCS that was adopted in April 2016.

South Coast Air Quality Management District Rules

The Project will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions. SCAQMD Rule 403 establishes these procedures. They include applying water or chemical stabilizers to disturbed soils; managing haul road dust by applying water; covering all haul vehicles before transporting materials; restricting vehicle speeds on unpaved roads to 15 miles per hour (mph); and sweeping loose dirt from paved site access roadways used by construction vehicles. In addition, Rule 403 requires that vegetative ground cover be established on disturbance areas that are inactive within 30 days after active operations have ceased. Alternatively, an application of dust suppressants can be applied in sufficient quantity and frequency to maintain a stable surface. Rule 403 also requires grading and excavation activities to cease when winds exceed 25 mph.

SCAQMD Rule 402, Nuisance, states that a project 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.

SCAQMD Rule 445 has been adopted to reduce the emissions of particulate matter from wood-burning devices, and prohibits the installation of such devices in any new development.

SCAQMD Rule 1113 governs the sale of architectural coatings and limits the VOC content in paints and paint solvents. Although this rule does not directly apply to the Project, it does dictate the VOC content of paints available for use during building construction.

SCAQMD Rule 201 requires a "Permit to Construct" prior to the installation of any equipment "the use of which may cause the issuance of air contaminants . . ." and Regulation II provides the requirements for the application for a Permit to Construct. Rule 203 similarly requires a Permit to Operate. Rule 219, Equipment not Requiring a Written Permit Pursuant to Regulation II, identifies "equipment, processes, or operations that emit small amounts of contaminants that shall not require written permits . . . ."

Southern California Association of Governments

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. SCAG serves as the federally designated Metropolitan Planning Organization (MPO) for the Southern California region. On April 4, 2012, SCAG adopted the 2012–2035 Regional Transportation Plan/Sustainable Communities Strategies (RTP/SCS), which includes a strong commitment to reduce emissions from transportation sources in order to improve public health; to meet the NAAQS as set forth by the FCAA; and to comply with Senate Bill (SB) 375 (SCAG 2012). New to this RTP, SB 375 states that RTPs must include an SCS that reduces GHG emissions from passenger vehicles by 8 percent per capita by 2020 and 13 percent per capita by 2035 compared to 2005 emissions levels.

The SCAG 2016-2040 RTP/SCS is in the planning process. The draft 2016-2040 RTP/SCS and accompanying Program EIR (PEIR) are planned for release in Fall 2015. Approval of the 2016-2040 RTP/SCS and PEIR are planned for Spring 2016 (SCAG 2015).

Local

Los Angeles County Green Building Standards Code (Title 31)

As described above, California Buildings Standards Code (CCR Title 24) includes Part 11, known as the California Green Building Standards Code (i.e. CALGreen Code). In November 2013, the County of Los Angeles Board of Supervisors adopted the CALGreen Code by reference as the Los Angeles County Green Building Standards Code (Title 31). The purpose of this 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 energy efficiency and environmental air quality. Additionally, on June 23, 2015, the Board of Supervisors indicated their intent to adopt a tree planting ordinance to amend Title 21 (Subdivisions) and Title 22 (Planning and Zoning) of the Los Angeles County Code to repeal drought tolerant landscaping and green building requirements that are found in Title 31, to establish tree planting requirements

for new projects. The consent date for adoption of the tree planting ordinance is pending (DRP 2015). Additional information about the Green Building Standards Code is included in Section 5.7, Greenhouse Gas Emissions.

County of Los Angeles General Plan

The *County of Los Angeles 2035 General Plan* was adopted on October 6, 2015. The Air Quality Element includes the following goals and policies that are applicable to the proposed Project. The Project's consistency with the following policies is presented in Section 5.9, Land Use.

Goal AQ 1: Protection from exposure to harmful air pollutants.

- **Policy AQ 1.1:** Minimize health risks to people from industrial toxic or hazardous air pollutant emissions, with an emphasis on local hot spots, such as existing point sources affecting immediate sensitive receptors.
- **Policy AQ 1.2:** Encourage the use of low or no volatile organic compound (VOC) emitting materials
- **Policy AQ 1.3:** Reduce particulate inorganic and biological emissions from construction, grading, excavation, and demolition to the maximum extent feasible.
- **Policy AQ 2.1:** Encourage the application of design and other appropriate measures when siting sensitive uses, such as residences, schools, senior centers, daycare centers, medical facilities, or parks with active recreational facilities within proximity to major sources of air pollution, such as freeways.

Goal AQ 2: The reduction of air pollution and mobile source emissions through coordinated land use, transportation and air quality planning.

- **Policy AQ 2.1:** Encourage the application of design and other appropriate measures when siting sensitive uses, such as residences, schools, senior centers, daycare centers, medical facilities, or parks with active recreational facilities within proximity to major sources of air pollution, such as freeways.
- **Policy AQ 2.3:** Support the conservation of natural resources and vegetation to reduce and mitigate air pollution impacts.

Santa Clarita Valley Area Plan 2012

The 2012 SCVAP requires the *NorthLake Specific Plan* to address the following policies from its Conservation and Open Space Element. The Project's consistency with the following policies is presented in Section 5.9, Land Use.

<u>Conservation and Open Space Element</u>

- **Policy CO-7.1.1:** Through the mixed land use patterns and multi-modal circulation policies set forth in the Land Use and Circulation Elements, limit air pollution from transportation sources.
- **Policy CO-7.1.2:** Support the use of alternative fuel vehicles.
- **Policy CO-7.1.3:** Support alternative travel modes and new technologies, including infrastructure to support alternative fuel vehicles, as they become commercially available.

- **Policy CO-7.2.1:** Ensure adequate spacing of sensitive land uses from the following sources of air pollution: high traffic freeways and roads; distribution centers; truck stops; chrome plating facilities; dry cleaners using perchloroethylene; and large gas stations, as recommended by CARB.

5.1.5 THRESHOLD CRITERIA

Thresholds Addressed in the Initial Study

The Initial Study prepared for the proposed Project (included in Appendix A) and circulated with the Notice of Preparation (NOP) concludes that Project implementation would not result in significant impacts for the thresholds of significance listed below. Further analysis of these thresholds in this Draft SEIR is not required (a summary of the analysis presented in the Initial Study is provided in Section 7.1, Effects Determined Not to be Significant, of this Draft SEIR):

- Would the project create objectionable odors affecting a substantial number of people?

Thresholds Addressed in this Draft Supplemental Environmental Impact Report

The County of Los Angeles utilizes an Initial Study Questionnaire with Thresholds of Significance specific to the County. The Initial Study for the proposed Project concludes that additional analysis of the following thresholds of significance is required in this Draft SEIR. The Project will be considered to have a significant effect related to air quality if the Project would:

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

The SCAQMD has established significance thresholds to assess the regional and localized impacts of project-related air pollutant emissions. These significance thresholds are updated as needed to appropriately represent the most current technical information and attainment status in the SoCAB. The County uses the current SCAQMD thresholds to determine whether a proposed project would have a significant impact.

Table 5.1-4 presents the current SCAQMD significance thresholds, including regional daily thresholds for short-term construction and long-term operational emissions, maximum incremental cancer risk and hazard indices for TACs, and maximum ambient concentrations for exposure of sensitive receptors to localized pollutants. A project with daily emission rates, risk values, or concentrations below these thresholds is generally considered to have a less than significant effect on air quality.

TABLE 5.1-4
SCAQMD CRITERIA POLLUTANT
SIGNIFICANT EMISSIONS THRESHOLDS

Mass Daily Thresholds[a]		
Pollutant	**Construction**	**Operation**
NOx	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
PM2.5	55 lbs/day	55 lbs/day
SOx	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs), Odor, and GHG Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
GHG	10,000 MT/yr CO_2eq for industrial facilities where the SCAQMD is the lead agency	
Ambient Air Quality Standards for Criteria Pollutants[b, c]		
NO_2 1-hour average annual arithmetic mean	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.03 ppm (state) and 0.0534 ppm (federal)	
PM10 24-hour average annual average	 10.4 µg/m^3 (construction)[c] & 2.5 µg/m^3 (operation) 1.0 µg/m^3	
PM2.5 24-hour average	 10.4 µg/m^3 (construction)[c] & 2.5 µg/m^3 (operation)	
SO_2 1-hour average 24-hour average	 0.25 ppm (state) & 0.075 ppm (federal – 99th percentile) 0.04 ppm (state)	
Sulfate 24-hour average	 25 µg/m^3 (state)	
CO 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20.0 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal)	
Lead 30-day average Rolling 3-month average	 1.5 µg/m^3 (state) 0.15 µg/m^3 (federal)	

NOx: nitrogen oxides, lbs/day: pounds per day, VOC: volatile organic compound, PM10: respirable particulate matter with a diameter of 10 microns or less, PM2.5: fine particulate matter with a diameter of 2.5 microns or less, SOx: sulfur oxides, CO: carbon monoxide, TACs: toxic air contaminants, GHG: greenhouse gases, MT/yr CO_2eq: metric tons per year of CO_2 equivalents, NO_2: nitrogen dioxide, ppm: parts per million, µg/m^3: micrograms per cubic meter.

[a] Source: SCAQMD CEQA Handbook (SCAQMD 1993)
[b] Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.
[c] Ambient air quality threshold is based on SCAQMD Rule 403.

Source: SCAQMD 2015.

5.1.6 RELEVANT PROJECT CHARACTERISTICS

The proposed Project site is a mixed-use area that contains residential, recreational, retail, commercial, and industrial uses. As reflected in Section 5.7, Greenhouse Gas Emissions, the following project design features are proposed to be implemented as part of the Project:

- The Project will commit to the equivalent of installing 3-kilowatt (kW) solar panel systems on 50 percent of residential dwelling units;
- The Project will install 135 electric vehicle (EV) chargers[6] at non-residential parking spaces within the community;
- The Project will ensure that 100 percent of residences will be pre-wired for an EV charging station and that at least 10 percent of residences will have an EV charging station;
- The Project will feature the following Transportation Demand Management (TDM) measures, including:
    - Expanding the local transit network by adding existing transit service to enhance the service near the Project site;
    - Providing shuttles to major employment center;
    - Ensuring that pedestrian facilities, such as sidewalks, and community regional, and local trails are provided throughout the Project site;
    - Ensuring that roads with adjacent trails for pedestrian and bicycle use are provided throughout the Project site connecting the community;
    - Providing off-site pedestrian facility improvements connecting to existing elementary school;
    - Including land for the provision of off-site bicycle trails linking the facility to designated bicycle commuting routes;
    - At least two of the following:
        - Constructing off-site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on-site improvements, such as bicycle paths;
        - Including bicycle parking facilities, such as bicycle lockers and racks;
        - Including showers for bicycling employees' use;
    - At least two of the following:
        - Constructing off-site pedestrian facility improvements, such as overpasses, wider sidewalks;
        - Constructing on-site pedestrian facility improvements, such as building access which is physically separated from street and parking lot traffic and walk paths;
        - Including showers for pedestrian employees' use;
    - Including traffic calming measures for on-site roadways and intersections.

6 Assumed to be Level 2 chargers that can provide enough electricity to provide a 25 mile driving range per hour spent charging.

Regulatory Requirements

The following Regulatory Requirements (RRs) are incorporated as part of the proposed Project and are assumed in the analysis presented in this section.

RR 5.1-1 During construction of future development in the NorthLake Specific Plan area, the Contractor shall comply with South Coast Air Quality Management District (SCAQMD) Rules 402 and 403, in order to minimize short-term emissions of dust and particulates. SCAQMD Rule 402 requires that air pollutant emissions not be a nuisance off site. SCAQMD Rule 403 requires that fugitive dust be controlled with the best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. This requirement shall be included as notes on the contractor specifications. Table 1 of Rule 403 prescribes the Best Available Control Measures that are applicable to all construction projects and is included in Appendix C. The developer of each project in the NorthLake Specific Plan shall provide the County Department of Public Works with a SCAQMD-approved Dust Control Plan or other sufficient proof of compliance with Rule 403, prior to grading permit issuance. This RR is consistent with and implements SP EIR MM 4.7.2 and SCVAP MM 3.3-2.

RR 5.1-2 Architectural coatings shall be selected so that the volatile organic compound (VOC) content of the coatings is compliant with SCAQMD Rule 1113. This requirement shall be included as notes on the contractor specifications. The specifications for each project in the NorthLake Specific Plan shall be reviewed by the County Department of Public Works, Building and Safety Division for compliance with this requirement prior to issuance of a building permit.

RR 5.1-3 Industrial, commercial, medical office, school, or similar uses developed in the NorthLake Specific Plan area shall comply with SCAQMD Rule 201 and Regulation II (requiring a Permit to Construct prior to the installation of any equipment that may cause air contaminants) as well as Rule 203 (requiring a Permit to Operate prior to the use of any equipment that may cause air contaminants). These rules and regulation are required unless the equipment or aspects of the project are exempt under Rule 219, which identifies those equipment, processes, or operations that do not require permits. The developer of each building or group of buildings shall provide the County with the SCAQMD-approved Permit to Construct and Permit to Operate or other sufficient proof of compliance with Rules 201 and 203, prior to occupancy permit issuance.

RR 5.1-4 Future development in the NorthLake Specific Plan area shall comply with SCAQMD Rule 445, Wood Burning Devices. Rule 445 was adopted to reduce emissions of fine particulate matter with a diameter of 2.5 microns or less (PM2.5) and precludes the installation of indoor or outdoor wood burning devices (i.e., fireplaces/hearths) in new development on or after March 9, 2009. This RR is consistent with and implements SCVAP MM 3.3-7.

5.1.7 ENVIRONMENTAL IMPACTS

Impact Analysis

Threshold 5.1-1 Would the project conflict with or obstruct implementation of an applicable air quality management plan?

The purpose of the AQMP consistency discussion is to set forth the issues regarding consistency with the assumptions and objectives of the AQMP and to discuss whether the proposed project would interfere with the region's ability to comply with federal and State air quality standards. The SCAQMD's CEQA Handbook states that "New or amended General Plan Chapters (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP" (SCAQMD 1993). Strict consistency with all aspects of the plan is not required. A proposed project should be considered to be consistent with the plan if it furthers one or more policies and does not obstruct other policies. As identified in the Handbook, the two principal criteria for conformance to an AQMP are (1) whether the project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of air quality standards and (2) whether the project would exceed the assumptions in the AQMP (SCAQMD 1993).

With respect to the first criterion, the analysis in Threshold 5.1-2 below demonstrates that the Project would result in long-term emissions of PM10, PM2.5, and O_3 precursors, which could potentially cause an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of air quality standards. However, as described below, the Project emissions have been anticipated in air quality planning documents.

With respect to the second criterion, the proposed project would implement the currently approved NorthLake Specific Plan, and no amendments to this specific plan are proposed. Additionally, the NorthLake Specific Plan was included as an approved development in the 2012 SCVAP. The 2012 SCAQMD AQMP is designed to accommodate expected future population, housing, and employment growth and is based on the 2012-2035 SCAG RTP/SCS, which was developed from City and County General Plans as well as regional population, housing, and employment projections. Because the approved NorthLake Specific Plan predates the 2012 AQMP and the 2012 RTP/SCS by many years, these plans anticipate the emissions that would result from the implementation of the proposed Project. Therefore, implementation of the proposed Project would not conflict with the 2012 SCAQMD AQMP, which is the applicable air quality management plan.

Level of Significance without Mitigation: Less than significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None.

Level of Significance with SCVAP 2012 EIR Mitigation: Less than significant.

Recommended 1992 EIR Mitigation Measures: None.

Level of Significance with 1992 EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant. The proposed Project would result in less than significant impact because the Project and the emissions that would be generated by Project-related sources have been anticipated in the 2012 SCAQMD AQMP and related planning documents.

Threshold 5.1-2 Would the project violate any air quality standards or contribute substantially to an existing or projected air quality violation?

Construction Activities

Earthmoving equipment and activity associated with the grading and construction of infrastructure and buildings to support the proposed land uses will generate temporary construction-related emissions over an approximate 11-year timeframe as the NorthLake Specific Plan is implemented.

Project construction emissions were estimated using the CalEEMod program described above. Project-specific input was based on general information provided in Section 4.0, Project Description, and construction estimates provided by the Project Applicant; input was supplemented with default model settings and engineering judgment to estimate reasonable worst-case conditions.

For the emissions analysis, it was assumed that site preparation and mass grading for the entire site would occur over a 30-month period from January 2018 through June 2020. Approximately 33 million cubic yards of soil would be moved. Cut and fill would be balanced on the Project site and no off-site export or import is anticipated. Soil movement within the site would be by scraper. Equipment used for the grading analysis is shown in Table 5.1-5.

TABLE 5.1-5
GRADING EQUIPMENT FOR EMISSIONS ESTIMATES

Equipment type	Quantity
657 Scrapers	25
D10T Dozers	3
D9T Dozers	2
D8T Dozers	2
D5M Dozers	2
834 Rubber Tired Dozers	3
16G Grader	1

Construction of the proposed improvements would occur in two phases. Phase 1 would develop the southern part of the Project site starting in the July of 2019 (while mass grading continues to the north) and continuing through 2025. Phase 2 would develop the northern part of the Project site, overlapping with Phase 1, starting in the summer of 2025 and continuing to the end of 2028. Each phase would include site fine grading, utilities installation, building, paving, and painting activities.

For site preparation, 1,000 hauling trips were assumed. Additional haul trips were assumed for the fine grading phases. Watering of the active grading areas, as required by SCAQMD Rule 403 regarding Fugitive Dust (RR 5.1-1), is an input to the emissions calculation.[7]

Output emissions include off-road equipment exhaust; on-road vehicle exhaust; fugitive dust from grading and vehicle travel on paved and unpaved roads; and VOCs from asphalt and architectural

7 The model format requires some project elements (e.g., Tier 3 engines and dust control) to be input as mitigation measures, and these measures are included in the data shown on Table 5.2-6.

coatings. Details of CalEEMod schedule inputs, including utilities and paving activities, are included in the CalEEMod data sheets in Appendix C.

Mass Emissions Thresholds – Maximum Daily Regional Emissions

Table 5.1-6 presents the estimated maximum daily emissions during construction of the proposed project and compares the estimated emissions with the SCAQMD daily mass emission thresholds. Data are shown for each year of construction corresponding to CalEEMod output, and the analysis assumes implementation of PDFs and RRs for this Project including dust control (Rule 403). The SCAQMD thresholds are based on a daily emission rate (pounds per day) and not total emissions. Therefore, the data in Table 5.1-6 is not additive.

TABLE 5.1-6
ESTIMATED MAXIMUM DAILY CONSTRUCTION EMISSIONS
(LBS/DAY)

Year	VOC	NOx	CO	SOx	PM10	PM2.5
2018	49	584	363	1	64	43
2019	45	525	334	1	52	34
2020	48	513	357	1	58	35
2021	23	55	71	<1	20	8
2022	22	49	69	<1	20	8
2023	22	43	66	<1	19	8
2024	21	41	63	<1	19	7
2025	21	41	67	<1	19	7
2026	20	37	57	<1	16	6
2027	20	32	50	<1	15	6
2028	18	17	28	<1	6	2
Maximum daily emissions	50	584	363	1	64	43
SCAQMD Thresholds (Table 5.2-5)	***75***	***100***	***550***	***150***	***150***	***55***
Exceeds SCAQMD Thresholds?	**No**	**Yes**	**No**	**No**	**No**	**No**

lbs/day: pounds per day, VOC: volatile organic compound, NOx: nitrogen oxides, CO: carbon monoxide, SOx: sulfur oxides, PM10: respirable particulate matter with a diameter of 10 microns or less, PM2.5: fine particulate matter with a diameter of 2.5 microns or less, SCAQMD: South Coast Air Quality Management District, CalEEMod: California Emissions Estimator Model.

Sources: SCAQMD 2015 (thresholds). Emissions calculations can be found in Appendix C.

As shown in Table 5.1-6, NOx emissions for the first three years of construction would substantially exceed the SCAQMD CEQA significance threshold. The maximum daily construction emissions for all other analyzed pollutants for all years would be less than the SCAQMD thresholds and would be less than significant.

Mitigation

MM 5.1-3 requires, that all off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 3 off-road emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB or equivalent. Further, all off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, where available. Currently, it is unlikely that all, or even a majority of the mass grading equipment would be available with Tier 4 engines. To demonstrate the effectiveness of Tier 3 and Tier 4

engines in NOx reduction, Project construction emissions were calculated in CalEEMod (1) with all equipment with Tier 3 engines, (2) with all equipment with Tier 4 interim engines and (3) with all equipment with Tier 4 final engines. NOx emissions for the Tier 3, Tier 4 interim, and Tier 4 final scenarios are shown in Table 5.1-7.

TABLE 5.1-7
ESTIMATED MAXIMUM CONSTRUCTION NOX EMISSIONS
FOR VARIOUS ENGINE SCENARIOS
(LBS/DAY)

Year	NOx emissions			
	Unmitigated (Table 5.1-6)	**Tier 3**	**Tier 4 interim**	**Tier 4 final**
2018	584	290	165	35
2019	525	291	169	35
2020	513	318	192	50
2021	55	43	37	16
2022	49	43	36	16
2023	43	40	33	13
2024	41	40	33	13
2025	41	46	38	15
2026	37	41	33	10
2027	32	35	28	8
2028	17	19	15	6
Maximum daily emissions	584	318	192	50
SCAQMD Thresholds (Table 5.2-5)	***100***	***100***	***100***	***100***
Exceeds SCAQMD Thresholds?	**Yes**	**Yes**	**Yes**	**No**

lbs/day: pounds per day, NOx: nitrogen oxides, SCAQMD: South Coast Air Quality Management District, CalEEMod: California Emissions Estimator Model.

Sources: SCAQMD 2015 (thresholds). Emissions calculations can be found in Appendix C.

As shown in Table 5.1-7, for the all-Tier 3 and all-Tier 4 interim engine scenarios, NOx emissions would be substantially reduced but would exceed the CEQA significance threshold. For the all-Tier 4 final scenario, NOx emissions would be less than the threshold. The maximum NOx emissions would occur in the first half of 2020 when mass grading in the Phase 2 area would occur concurrently with fine grading and building in the Phase 1 area. In order for construction NOx emissions to be less than the CEQA significance threshold, a sizeable fraction of the equipment would need to be equipped with Tier 4 final engines. Because it cannot be assured that this amount of Tier 4 final equipment would be available in the 2018 to 2020 time frame, the impact is conservatively considered to be significant.

Level of Significance without Mitigation: Significant for NOx; less than significant for all other pollutants.

Recommended SCVAP 2012 EIR Mitigation Measures:

MM 5.1-1 Prior to implementing project approval, applicants shall develop a Construction Traffic Emission Management Plan to minimize emissions from vehicles including, but not limited to, scheduling truck deliveries to avoid peak hour traffic conditions, consolidating truck deliveries, and prohibiting truck idling in excess of 5 minutes. (SCVAP MM 3.3-1)

MM 5.1-2 Prior to grading permit issuance, applicants shall develop a Construction Dust Emission Management Plan to minimize construction-related dust and particulate emissions. The Construction Emission Management Plan shall require the use of Best Available Control Measures, as specified in Table 1 of SCAQMD's Rule 403. If potentially significant impacts are identified after the implementation of the SCAQMD recommended Best Available Control Measures, the Construction Emission Management Plan shall include the following additional elements: (SCVAP MM 3.3-2 dust measures)

- Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. When wind speeds exceed 15 miles per hour the operators shall increase watering frequency.
- Active sites shall be watered at least three times daily during dry weather.
- Increase watering frequency during construction or use non-toxic chemical stabilizers if it would provide higher control efficiencies.
- Suspend grading and excavation activities during windy periods (i.e., surface winds in excess of 25 miles per hour).
- Suspend the use of all construction equipment during first-stage smog alerts.
- Application of non-toxic chemical soil stabilizers or apply water to form and maintain a crust on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days).
- Application of non-toxic binders to exposed areas after cut and fill operations and hydroseeded areas.
- Cover or application of water or non-toxic chemical suppressants to form and maintain a crust on inactive storage piles.
- Planting of vegetative ground cover in disturbed areas as soon as possible and where feasible.
- Operate street sweepers that comply with SCAQMD Rules 1186 and 1186.1 on roads adjacent to the construction site so as to minimize dust emissions. Paved parking and staging areas shall be swept daily.
- Reduce traffic speeds on all unpaved roads to 15 miles per hour or less.
- Pave or apply gravel on roads used to access the construction sites when possible.
- Designate personnel to monitor dust control measures to ensure effectiveness in minimizing fugitive dust emissions.
- An information sign shall be posted at the entrance to each construction site that identifies the permitted construction hours and provides a telephone number to call and receive information about the construction project or to report complaints regarding excessive fugitive dust generation. Any reasonable complaints shall be rectified within 24 hours of their receipt.

MM 5.1-3 Prior to grading permit issuance, applicants shall develop a Construction Equipment Exhaust Emission Management Plan to minimize construction-related exhaust emissions. The Construction Equipment Exhaust Emission Management Plan shall require the following elements: (SCVAP MM 3.3-2 exhaust emission measures)

- Scheduling truck deliveries to avoid peak hour traffic conditions, consolidating truck deliveries, and prohibiting truck idling in excess of 5 minutes.
- Schedule construction activities that affect traffic flow to off-peak hours (e.g., between 7:00 PM and 6:00 AM, and between 10:00 AM and 3:00 PM).
- Use of diesel-powered construction equipment shall use ultra-low sulfur diesel fuel.
- Use electric welders to avoid emissions from gas or diesel welders when such equipment is commercially available.
- Use electricity or alternate fuels for on-site mobile equipment instead of diesel equipment when such equipment is commercially available.
- Use on-site electricity or alternative fuels rather than diesel-powered or gasoline powered generators when such equipment is commercially available.
- Maintain construction equipment by conducting regular tune-ups according to the manufacturers' recommendations.
- Minimize idling time either by shutting equipment when not in use or reducing the time of idling to 5 minutes as a maximum.
- Limit, to the extent feasible, the hours of operation of heavy duty equipment and/or the amount of equipment in use.
- Retrofit large off-road construction equipment that will be operating for significant periods. Retrofit technologies such as particulate traps, selective catalytic reduction, oxidation catalysts, air enhancement technologies, etc., shall be evaluated. These technologies will be required if they are certified by CARB and/or the US EPA, and are commercially available and can feasibly be retrofitted onto construction equipment.
- The project applicant shall require all on-site construction equipment to meet US EPA Tier 4 or higher emissions standards according to the following:
    - April 2010 through December 31, 2011: All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 2 off-road emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 2 or Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.
    - January 1, 2012 through December 31, 2014: All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 3 off-road emissions standards. In addition, all

construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.

  - Post-January 1, 2015: All off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. A copy of each unit's certified tier specification, BACT documentations, and CARB, SCAQMD, or ICAPCD operating permit shall be provided at the time of mobilization of each applicable unit of equipment.

- The contractor shall utilize low-VOC content coatings and solvents that are consistent with applicable SCAQMD and ICAPCD rules and regulations.
- Consideration shall be given to use of other transportation methods to deliver materials to the construction sites (for example, trains or conveyors) if it would result in a reduction of criteria pollutant emissions.

Level of Significance with SCVAP 2012 EIR Mitigation: Significant.

Recommended 1992 EIR Mitigation Measures:

MM 5.1-4 The Project Applicant or Construction Manager shall ensure that, during all grading activities, construction grading shall be discontinued on days forecasted for first-stage alerts.

Level of Significance with 1992 EIR Mitigation: Significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Significant and unavoidable.

Blasting

Results of limited seismic refraction surveys indicated that some mass grading may require heavy ripping or possibly blasting owing to the existence of hard cemented beds within the bedrock section. The primary air quality concern from blasting is particulate emissions. PM10 and PM2.5 emissions from blasting would be additive to the data shown in Table 5.1-6. The amount of PM10 and PM2.5 is related to the surface area blasted. Blasting an area of 1,000 sf would result in less than ½ pound of PM10 or PM2.5 emissions. Blasting of ¼ acre in one day would result in approximately 8 pounds per day of PM10 and PM2.5. It is not anticipated that more than ¼ acre of area would be blasted in one day. The impact on emissions would be less than significant.

Level of Significance without Mitigation: Less than significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None.

Level of Significance with SCVAP 2012 EIR Mitigation: Less than significant.

Recommended 1992 EIR Mitigation Measures: None.

Level of Significance with 1992 EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant.

Localized Significance Thresholds/Ambient Air Quality

As part of the SCAQMD's environmental justice program, attention has focused on localized effects of air quality (SCAQMD 2003a). In addition to the mass daily emissions for regional thresholds, the SCAQMD established CEQA significance thresholds for ambient air quality to address localized impacts. The localized impact analysis is based on the concentration of a pollutant at a receptor site. The concentration standard is either the same as the NAAQS or CAAQS or is based upon a health-based standard. It is possible for a pollutant to have a significant impact regionally and a less than significant impact locally or vice versa. It is also possible for both impacts (i.e., regional and local) to be significant or less than significant.

The localized effects from the on-site portion of daily emissions were evaluated at sensitive receptor locations potentially impacted by the Project. The sensitive receptors are shown in Exhibits 5.1-1 and 5.1-2. The analysis of LSTs is applicable to NO_2, CO, PM10, and PM2.5. The impact calculations are based on the CalEEMod modeling of the maximum daily emission rates using Tier 3 construction equipment, as required by MM 5.1-3. It is likely that some Tier 4 equipment would be used during the grading; therefore this is a conservative analysis. The results of the analysis are shown in Table 5.1-8 for NO_2, in Table 5.1-9 for CO, and in Table 5.1-10 for PM10 and PM2.5.

TABLE 5.1-8
LOCALIZED NO_2 CONCENTRATIONS

Sensitive Receptor	1-Hour NO_2			Annual NO_2		
	Project Only ($\mu g/m^3$)	Project Only (ppb)	Project + Ambient (ppb)[a]	Project Only ($\mu g/m^3$)	Project Only (ppb)	Project + Ambient (ppb)[a]
1	83	46	**112**	<1	<1	14
2	71	40	**106**	<1	<1	14
3	61	34	100	<1	<1	14
4	69	38	**104**	<1	<1	14
5	61	34	100	<1	<1	14
6	53	29	95	<1	<1	14
7	53	29	95	<1	<1	14
8	52	29	95	<1	<1	14
9	47	26	92	<1	<1	14
10	41	23	89	<1	<1	14
11	38	21	87	<1	<1	14
12	40	22	88	<1	<1	14
13	118	65	**131**	2	1	15
14	85	47	**113**	1	<1	14
15	27	15	81	<1	<1	14
SCAQMD CEQA threshold (State standard)			180	SCAQMD CEQA threshold (State standard)		30
Exceed threshold?			No	Exceed threshold?		No
Federal standard (not a SCAQMD threshold)			100	SCAQMD CEQA threshold (Federal standard)		53
Exceed standard?			Yes	Exceed threshold?		No

$\mu g/m^3$: micrograms per cubic meter; ppb: parts per billion

Bolded values exceed federal standard of 100 ppb.

[a] The ambient NO_2 concentrations were obtained from the maximum concentrations over the last three years at the Santa Clarita Station; additional details in Appendix C.

Source: Vista Environmental 2017 (Appendix C)

TABLE 5.1-9
LOCALIZED CO CONCENTRATIONS

Sensitive Receptor	1-Hour CO			8-Hour CO		
	Project Only ($\mu g/m^3$)	Project Only (ppm)	Project + Ambient (ppm)[a]	Project Only ($\mu g/m^3$)	Project Only (ppm)	Project + Ambient (ppm)[a]
1	100	<1	1	12	<1	1
2	85	<1	1	11	<1	1
3	73	<1	1	9	<1	1
4	83	<1	1	10	<1	1
5	73	<1	1	9	<1	1
6	63	<1	1	8	<1	1
7	63	<1	1	8	<1	1
8	62	<1	1	8	<1	1
9	56	<1	1	7	<1	1
10	49	<1	1	6	<1	1
11	46	<1	1	6	<1	1
12	48	<1	1	6	<1	1
13	141	<1	1	21	<1	1
14	101	<1	1	14	<1	1
15	32	<1	1	4	<1	1
SCAQMD CEQA threshold (State standard)			20	SCAQMD CEQA threshold (State standard)		9
Exceed threshold?			No	Exceed threshold?		No
State Standard SCAQMD CEQA threshold (Federal standard)			35	SCAQMD CEQA threshold (Federal standard)		9
Exceed threshold?			No	Exceed threshold?		No

$\mu g/m^3$: micrograms per cubic meter; ppm: parts per million

[a] The ambient CO concentrations were obtained from the maximum concentrations over the last three years at the Santa Clarita Station; additional details in Appendix C.

Source: Vista Environmental 2017 (Appendix C)

TABLE 5.1-10
LOCALIZED PM10 AND PM2.5 CONCENTRATIONS

Sensitive Receptor	PM10		PM2.5
	Project Only 24-Hour (µg/m^3)	Project Only Annual (µg/m^3)	Project Only 24-Hour (µg/m^3)
1	0.3	<0.1	0.1
2	0.2	<0.1	0.1
3	0.2	<0.1	0.1
4	0.2	<0.1	0.1
5	0.2	<0.1	0.1
6	0.2	<0.1	0.1
7	0.2	<0.1	0.1
8	0.2	<0.1	0.1
9	0.1	<0.1	0.1
10	0.1	<0.1	0.1
11	0.1	<0.1	0.1
12	0.1	<0.1	0.1
13	0.6	0.2	0.3
14	0.3	<0.1	0.1
15	0.1	<0.1	0.0
SCAQMD CEQA Threshold	10.4	1.0	10.4
Exceed threshold?	No	No	No

µg/m^3: micrograms per cubic meter.
Source: Vista Environmental 2017 (Appendix C)

As shown in Tables 5.1-8, 5.1-9, and 5.1-10, no local pollutant concentrations would exceed the applicable SCAQMD CEQA thresholds. However, as shown in Table 5.1-8, local NOx concentrations are forecasted to exceed the federal 1-hour standard of 100 parts per billion (ppb) (which is not a SCAQMD CEQA threshold). The exceedance of the federal standard would be a significant impact.

The highest forecasted 1-hour NO_2 concentration is 131 ppb at receptor 13 (Table 5.1-8). To reduce the NO_2 concentration to the federal standard of 100 ppb would require a reduction of approximately 48 percent of the 65 ppb project-generated portion of NO_2 (which is added to the background 66.1 ppb concentration-). As shown in Table 5.1-7, to reduce emissions to this level would require some equipment with Tier 4 final engines and the remainder, or most of the remainder, with Tier 4 interim engines. Because it cannot be assured that this amount of Tier 4 interim and Tier 4 final equipment would be available in the 2018 to 2020 time frame, the impact is conservatively considered to be significant.

Level of Significance without Mitigation: Significant for NO_2 1-hour concentrations; less than significant for NO_2 annual, CO, PM10, and PM2.5 concentrations.

Recommended SCVAP 2012 EIR Mitigation Measures:

MM 5.1-3, listed in detail above, consists of measures to reduce construction equipment exhaust emissions.

MM 5.1-5 Prior to implementing Project approval, applicants shall be required to conduct an LST analysis (SCVAP MM 3.3-3).

Level of Significance with SCVAP 2012 EIR Mitigation: Significant.

Recommended 1992 EIR Mitigation Measures: None.

Level of Significance with 1992 EIR Mitigation: Significant.

Recommended Project Specific Mitigation Measures:

MM 5.1-6 The Project Applicant or Construction Manager shall ensure that, during mass grading activities, mass grading shall not occur within 1,600 feet of the Northlake Hills Elementary School when school is not in session to the maximum extent feasible.

The following project specific MMs from Section 5.7, Greenhouse Gas Emissions, are relevant to this analysis:

MM 5.7-21 Prior to the issuance of each grading and building permit, the applicant/developer shall require in contract specifications, that contractors set goals to limit unnecessary construction equipment idling to 3 minutes and include methods to encourage equipment operators to achieve the 3-minute goal.

MM 5.7-22 Prior to the issue of the first occupancy permit for commercial or industrial facilities, the master developer shall establish at Transportation Management Association to establish and coordinate the following programs that would reduce single-vehicle commuting and the associated criteria pollutant and GHG emissions:

- Ride share program – The program will establish a system for coordinating ride sharing among employees of on-site commercial and industrial businesses. The program will also work with employers to support vanpools.
- Commuter bus program – The program will coordinate with Santa Clarita Valley Transit to (1) extend the existing bus routes into the NorthLake Project area and (2) determine employee demand for express commuter buses to the Project Site and establish commuter bus service in response to demand.

Net Level of Significance: Significant and unavoidable.

Operational Activities

Operational emissions are calculated with CalEEMod. Although the Project is assumed to be operational in 2028, the CalEEMod input operation year input is 2025, because the CalEEMod data base does not have 2028 data; the choices are 2025 and 2030, and 2025 is more conservative. Operational emissions are comprised of area, energy, and mobile source emissions. Area source emissions would result from the use of consumer products, natural gas fireplaces, landscaping equipment, and periodic repainting of buildings. Energy emissions come from the use of natural gas for heating and hot water. All fireplaces would be gas-fueled; in accordance with SCAQMD Rule 445, there would be no wood-burning fireplaces (refer to RR 5.1-4). Mobile source emissions are based on project-related trip generation and VMT forecasts, as contained in the Project Traffic Impact Analysis (refer to Section 5.11, Traffic,

Access and Circulation); the proposed project would generate an estimated 25,184 weekday ADT and 376,545 weekday VMT (Stantec 2015, Zerfass 2015). Project design would be required to comply with California Building Code requirements for energy efficiency, as described in RR 5.7-1, which would reduce natural gas emissions; the reduction from RR 5.7-1 is conservative because the Project would be built using the 2016 energy efficiency standards or subsequent revisions of the standards, and the 2016 code and subsequent energy efficiency codes would provide greater reductions than the 2013 code used for this analysis. Because the Project would comply with these standards and requirements, MMs 3.3-4 and 3.3-5 from the SCVAP are no longer applicable to the Project. It should be noted that reductions from the Relevant Project Characteristics, identified in Section 5.1.5, are incorporated in the traffic analysis, which includes project-specific trip generation and trip lengths that account for mixed-use development. VMT reductions are included in the emissions analysis as a "mitigation" input for on-site improved walkability. Estimated peak daily operational emissions are shown in Table 5.1-11 and are compared with SCAQMD CEQA thresholds for operations. Table 5.1-11 includes the emission reductions from applicable project design features from Section 5.7, Greenhouse Gas Emissions, and detailed in Section 5.1.6, Relevant Project Characteristics. It also details the operational emissions without project design feature reductions, and the estimated maximum daily operational emissions.

TABLE 5.1-11
ESTIMATED MAXIMUM DAILY OPERATIONAL EMISSIONS (LBS/DAY)

Source		VOC	NOx	CO	SOx	PM10	PM2.5
Without PDF Reductions	Area Sources[a]	117	16	265	<1	2	2
	Energy Sources[a]	2	18	8	<1	1	1
	Mobile Sources[a]	63	295	825	4	347	95
PDF Emission Reductions	TDM Strategy Reductions	-2	-7	-21	-0.1	-9	-2
	Residential EV Charger	-2	-8	-38	-0.2	0	0
	Non-residential EV Charger	-2	-11	-51	-0.2	0	0
With PDF Reductions (for Mobile Sources only)	Mobile Sources[a]	57	268	716	3	338	92
Total Operational Emissions (with PDF Reductions)[b]		**176**	**302**	**989**	**3**	**342**	**96**
SCAQMD Thresholds (Table 5.1-5)		***55***	***55***	***550***	***150***	***150***	***55***
Exceeds SCAQMD Thresholds?		**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**

lbs/day: pounds per day, PDF: project design features, VOC: volatile organic compounds, NOx: nitrogen oxides, CO: carbon monoxide, SOx: sulfur oxides, PM10: respirable particulate matter with a diameter of 10 microns or less, PM2.5: fine particulate matter with a diameter of 2.5 microns or less, SCAQMD: South Coast Air Quality Management District, TDM: Transportation Demand Management, EV: electric vehicle.

[a] Values shown are higher of either summer or winter emissions.
[b] Totals may not add due to rounding.

Sources: SCAQMD 2015 (thresholds). Emissions calculations can be found in Appendix C.

As shown in Table 5.1-11, the estimated maximum daily operational emissions of SOx would be less than the SCAQMD thresholds and less than significant. The project design features would only reduce operational emissions from mobile sources. Estimated operational emissions of VOCs, NOx, CO, PM10, and PM2.5 would exceed the SCAQMD CEQA significance project thresholds. The primary sources of VOC would be consumer products whereas the primary source of NOx, CO, PM10 and PM2.5 emissions would be from vehicle emissions.

There are no feasible Project-level mitigation measures for consumer product VOC emission reductions. Implementation of MM 5.1-10 through MM 5.1-13 would reduce project-related VMT and long-term emissions of mobile source pollutants. These measures provide incentives to reduce the number of vehicle trips with fossil-fuel-only vehicles, but do not guarantee any reductions. However, it is estimated that the provision of bicycle facilities and EV charging facilities would reduce mobile VMT and emissions by approximately 1.5 percent. Even with incorporation of MM 5.1-10 through MM 5.1-13, long-term regional emissions of O_3 precursors (VOC and NOx), CO, PM10, and PM2.5 due to mobile and consumer product sources would exceed SCAQMD CEQA thresholds and would be significant.

Combined Construction and Operational Emissions During Development

During Project development, Phase 1 (VTTM 073336) of the Project would be occupied while construction continues on Phase 2. In accordance with recent SCAQMD recommendations, a calculation of mid-Project development combined construction and operational emissions is provided for information. It is assumed that Phase 1 would be built out in 2025; the estimated 2025 combined daily emissions are shown in Table 5.1-12. As shown in Table 5.1-12, 2025 combined construction and Phase 1 operational emissions would not exceed the estimated buildout operational emissions shown in Table 5.1-11.

TABLE 5.1-12
ESTIMATED 2025 COMBINED EMISSIONS (LBS/DAY)

Source			VOC	NOx	CO	SOx	PM10	PM2.5
Phase 1 Operations	Without PDF Reductions	Area Sources[a]	67	10	166	0.1	2	2
		Energy Sources[a]	1	10	5	0.1	1	1
		Mobile Sources[a]	50	220	657	2.7	237	65
	PDF Emission Reductions	TDM Strategy Reductions	-1	-5	-16	-0.1	-6	-2
		Residential EV Charger	-1	-6	-25	-0.1	0	0
		Non-residential EV Charger	-2	-13	-58	-0.3	0	0
	With PDF Reductions	Mobile Sources[a]	45	195	557	2.2	231	63
	Total Operational Emissions (with Design Feature Reductions)[b]		114	216	728	2.3	234	65
2025 Construction	Tier 3 Equipment		20	46	73	0.2	13	4
	Tier 4 Interim Equipment		19	38	73	0.2	13	4
	Tier 4 Final Equipment		19	15	72	0.2	13	4
Total Combined Emissions (With PDF Reductions)[b]	**Operational and Tier 3 Equipment**		**133**	**262**	**801**	**2.5**	**247**	**70**
	Operational and Tier 4 Interim Equipment		**133**	**254**	**801**	**2.5**	**247**	**69**
	Operational and Tier 4 Final Equipment		**132**	**231**	**800**	**2.5**	**247**	**69**
Total Operational Emissions (with Design Feature Reductions) (From Table 5.1-11)			**176**	**302**	**989**	**3**	**342**	**96**
Combined Emissions Higher than Total Operational Emissions (Table 5.1-11)?			**No**	**No**	**No**	**No**	**No**	**No**

lbs/day: pounds per day, PDF: project design features, VOC: volatile organic compounds, NOx: nitrogen oxides, CO: carbon monoxide, SOx: sulfur oxides, PM10: respirable particulate matter with a diameter of 10 microns or less, PM2.5: fine particulate matter with a diameter of 2.5 microns or less, SCAQMD: South Coast Air Quality Management District, TDM: Transportation Demand Management, EV: electric vehicle.

[a] Values shown are higher of either summer or winter emissions.
[b] Totals may not add due to rounding.

Sources: SCAQMD 2015 (thresholds). Emissions calculations can be found in Appendix C.

Level of Significance without Mitigation: Significant for VOC, NOx, CO, PM10, and PM2.5; less than significant for SO_2.

Recommended SCVAP 2012 EIR Mitigation Measures:

MM 5.1-7 Prior to final building inspection, the applicant shall provide preferential parking spaces for carpools and vanpools at major commercial and office locations. The spaces shall be clearly identified on plot plans and may not be pooled in one location (SCVAP MM 3.3-6).

MM 5.1-8 New residential developments shall allow only natural gas-fired hearths and shall prohibit the installation of wood-burning hearths and wood-burning stoves (SCVAP MM 3.3-7).

Level of Significance with SCVAP 2012 EIR Mitigation: Significant for VOC, NOx, CO, PM10, and PM2.5; less than significant for SO_2.

Recommended 1992 EIR Mitigation Measures:

MM 5.1-9 A commuter computer program shall be developed for the NorthLake residents in an attempt to reduce commuter vehicle trips generated by the proposed projects.

Level of Significance with 1992 EIR Mitigation: Significant for VOC, NOx, CO, PM10, and PM2.5; less than significant for SO_2. MM 5.1-8 is anticipated to provide reductions in mobile emissions but these reductions would be small compared to the total mobile emissions and would not reduce emissions to a less than significant level.

Recommended Project Specific Mitigation Measures:

MM 5.1-10 Prior to the issuance of each non-residential building permit, the Applicant and its contractors shall provide plans and specifications to the County demonstrating that the following features have been incorporated into the building designs. Proof of compliance shall be provided to the County prior to the issuance of occupancy permits.

- For buildings with more than ten tenant-occupants, changing/shower facilities shall be provided as specified in Section A5.106.4.3, Nonresidential Voluntary Measures, of the California Green Building Standards (CALGreen) Code.[8]
- Facilities shall be installed to support future electric vehicle charging at each non-residential building with 30 or more parking spaces. Installation shall be consistent with Section A5.106.5.3, Nonresidential Voluntary Measures (Tier 1), of the CALGreen Code.
- The Project shall install 135 electric vehicle (EV) chargers[9] at non-residential parking spaces within the community

MM 5.1-11 Prior to the issuance of each residential building permit, the Applicant and its contractors shall provide plans and specifications to the County demonstrating that the following features have been incorporated into the building designs or specifications. Proof of compliance shall be provided to the County prior to the issuance of occupancy permits.

- Visitor parking shall include preferentially located parking spaces for alternative-fueled vehicles.
- Bicycle parking shall be provided as specified in Section A4.106.9, Residential Voluntary Measures, of the CALGreen Code, or, provide required long-term and short-term bicycle parking for buildings as specified in Section 22.52.1225 of the County Zoning Ordinance, whichever is more stringent.
- 100 percent of residences shall be pre-wired for an EV charging station and at least 10 percent of residences shall have an EV charging station.

8 Bicycle parking requirements are included in the CALGreen Code mandatory measures.
9 Assumed to be Level 2 chargers that can provide enough electricity to provide a 25 mile driving range per hour spent charging.

MM 5.1-12 Prior to issuance of each building permit for parking structures and parking lots with 20 or more parking spaces, the Applicant and its contractors shall provide plans and specifications to the County demonstrating that the following features have been incorporated into the parking facility. Proof of compliance shall be provided to the County prior to the issuance of occupancy permits.

- The parking facility shall include a minimum of five percent preferentially located parking spaces for alternative-fueled (electric, natural gas, or similar low-emitting technology) vehicles.
- The parking facility shall include at least one electric vehicle charging station. Electrical lines shall be designed and sized to add additional charging stations for up to three percent of the total parking spaces when a demand is demonstrated. The design and installation shall be consistent with Section A4.106.8.2, Residential Voluntary Measures, of the CALGreen Code.
- For residential parking facilities, bicycle parking shall be provided as specified in Section A4.106.9, Residential Voluntary Measures, of the CALGreen code.

MM 5.1-13 Once constructed, the Applicant shall ensure that the tenants/operators of non-residential uses include the following features and procedures. Proof of compliance shall be provided to the County within one month following the issuance of each occupancy permit.

- Post signs requiring that trucks shall not be left idling for prolonged periods (i.e., in excess of 5 minutes, as required by State law).
- Post both bus and Metrolink schedules in conspicuous areas.
- Configure the employee work schedules around the local bus schedule and provide said schedules as evidence of compliance to Regional Planning upon request.

Net Level of Significance: Significant and unavoidable.

Threshold 5.1-3 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standards (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

As previously identified in Table 5.1-2, the region is in nonattainment for PM10, PM2.5, and O_3. The proposed project would contribute criteria pollutants to the area during short-term construction and long-term operational activities.

Construction Activities

SCAQMD considers the thresholds for Project-specific impacts and cumulative impacts to be the same (SCAQMD 2003b).[10] As described for Threshold 4.1-2, construction phase NOx emissions would exceed the applicable SCAQMD threshold in the 2018 to 2020 time frame. NOx is an ozone precursor. Therefore, construction NOx emissions would be cumulatively considerable. Regional

10 The only exception is the hazard index significance threshold for toxic air contaminants.

and local emissions of PM10, PM2.5, and ozone precursor VOC would not exceed SCAQMD thresholds and would not be cumulatively considerable.

Operational Activities

As described for Threshold 5.1-2, even with implementation of MM 5.1-7 through MM 5.1-13, operational VOC, NOx, PM10, and PM2.5 emissions would exceed the significance thresholds and would be cumulatively considerable.

Level of Significance without Mitigation: Significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None in addition to those measures recommended under Threshold 5.1-2.

Level of Significance with 2012 SCVAP 2012 EIR Mitigation: Significant.

Recommended 1992 EIR Mitigation Measures: None in addition to those measures recommended under Threshold 5.1-2.

Recommended Project Specific Mitigation Measures: None in addition to those measures recommended under Threshold 5.1-2.

Net Level of Significance: Significant and unavoidable, as described under Threshold 5.1-2.

Threshold 5.1-4 Would the Project expose sensitive receptors to substantial pollutant concentrations?

Carbon Monoxide Hotspot

A CO hotspot is an area of localized CO pollution caused by severe vehicle congestion on major roadways, typically near intersections. If a project increases average delay at signalized intersections operating at Level of Service (LOS) E or F or causes an intersection that would operate at LOS D or better without the Project to operate at LOS E or F with the Project, further screening is required (UCD ITS 1997). The Project's Traffic Impact Analysis, summarized in Section 4.11 of this SEIR, Traffic, Access, and Circulation, for the 2028 Cumulative Conditions with and without Project traffic analysis scenario lists one signalized intersection, Ridge Route and Lake Hughes Road, that would operate at LOS E in the AM or F in the PM peak hour.[11]

The analysis prepared for CO attainment in the SoCAB by SCAQMD can be used to evaluate the potential for CO exceedances in the SoCAB. CO attainment was thoroughly analyzed as part of the SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan) (SCAQMD 2003c).[12] As discussed in the 1992 CO Plan, peak CO concentrations in the SoCAB are due to unusual meteorological and topographical conditions, and not due to the impact of particular intersections. Considering the region's unique meteorological conditions and the increasingly stringent CO emissions standards, CO modeling was performed as part of 1992 CO Plan and subsequent plan updates and AQMPs. In the 1992 CO Plan, a CO hot spot analysis was conducted for four busy intersections in the SoCAB at the peak morning and afternoon time periods. The intersections evaluated included: Long Beach Boulevard and Imperial Highway (Lynwood); Wilshire Boulevard and Veteran Avenue (Westwood); Sunset Boulevard and Highland

11 It is assumed that the intersection of Ridge Route Road and Lake Hughes Road would be signalized prior to 2028.

12 The SoCAB was redesignated from nonattainment to maintenance for CO in 2007. CO concentrations and strategies are not addressed in the 2012 AQMP. Use of the 2003 AQMP analysis is an accepted screening method for assessing CO impacts.

Avenue (Hollywood); and La Cienega Boulevard and Century Boulevard (Inglewood). These analyses did not predict a violation of CO standards. The busiest intersection evaluated in the 1992 CO Plan and subsequent 2003 AQMP was that at Wilshire Boulevard and Veteran Avenue, which had a daily traffic volume of approximately 100,000 vehicles per day. The 2003 AQMP estimated that the 1-hour concentration for this intersection was 4.6 ppm, which indicates that the most stringent 1-hour CO standard (20.0 ppm) would likely not be exceeded until the daily traffic at the intersection exceeded more than 400,000 vehicles per day. The Los Angeles County Metropolitan Transportation Authority evaluated the LOS in the vicinity of the Wilshire Boulevard/Veteran Avenue intersection and found it to be LOS E at peak morning traffic and LOS F at peak afternoon traffic.

Under 2028 Cumulative with project conditions, the average daily trips at the Ridge Route Road/Lake Hughes Road intersection is estimated at approximately 92,000, which is below the daily traffic volumes that would be expected to generate CO exceedances as evaluated in the 2003 AQMP. There is no reason unique to the local meteorology or topography to conclude that the CO concentrations at the Inland Ridge Route Road/Lake Hughes Road intersection would exceed the 1-hour CO standard if modeled in detail, as based on the studies undertaken for the 2003 AQMP. Moreover, vehicle standards have become increasingly more stringent since 1992 and background CO concentrations are less than in 1992; thus, this analysis is very conservative.

It is also noted that the SCVAP EIR analysis for CO hotspots states, ". . .future levels of service at principal intersections at buildout under both the existing Area Plan and General Plan and under the proposed Area Plan and General Plan will either remain the same or improve. As a result, there would be no potential for future increases in CO concentrations and CO hotspots in the OVOV Planning Area and CO impacts under this criterion would be less than significant." (LACDRP 2012)

Therefore, the proposed Project would not result in the creation of a CO hot spot in the Project area and the impact would be less than significant.

Criteria Pollutants

Exposure of off-site and future on-site receptors to criteria pollutant emissions during construction is analyzed under Threshold 5.1-2, Localized Significance Thresholds. As identified, impacts would be less than significant.

Residential land uses are not sources of substantial amounts of criteria pollutants; there would be no potential for impact from these uses. Up to 281,000 sf of commercial and industrial uses and a school would be developed. Emissions from commercial and industrial uses cannot be characterized without knowledge of the nature of the use. RR 5.1-3, which is based on SCAQMD Rules 201 and 203, requires that any facility with the potential to emit substantial amounts of air pollutants must receive permits to construct and operate the facility. Depending on the nature of the business and the associated emissions sources and pollutants, the permitting processes may require an emissions analysis and/or a health risk analysis to demonstrate that emissions would not exceed SCAQMD specific rules requirements and there would not be unacceptable health risks to on-site and off-site receptors (refer to RR 5.1-3). Prior to the determination of the specific commercial and industrial uses, the impact is potentially significant.

Toxic Air Contaminants

Exposure of Receptors to Project-Generated Construction TAC Emissions

The greatest potential for TAC emissions during construction would be related to diesel PM associated with heavy equipment operations during earth-moving activities. The TAC impacts from anticipated construction activities were evaluated at sensitive receptor locations potentially impacted by the Project using dispersion modeling as described in Section 5.1.1 and Appendix C. The sensitive receptors are shown in Exhibits 5.1-1 and 5.1-2. The impact calculations are based on the CalEEMod modeling of the annual emission rates using Tier 3 construction equipment, as required by MM 5.1-3. Impacts were calculated for cancer risk and chronic health impacts. According to the OEHHA, no acute risk has been found to be directly created from DPM; therefore the proposed project is not anticipated to expose new sensitive receptors to unacceptable non-cancer acute risk levels from TAC emissions. The results of the analysis for cancer risk are shown in Table 5.1-13.

TABLE 5.1-13
CONSTRUCTION-RELATED CANCER RISK

Receptor	Location	Annual PM10 Concentration (µg/m^3)		Cancer Risk Per Million People
		Phase 1	Phase 2	
1	Elementary School	0.0007	0.00003	0.2
2	Elementary School	0.0005	0.00003	0.2
3	SFR on Big Oak Ln	0.0004	0.00003	0.1
4	SFR on Big Oak Ln	0.0005	0.00003	0.2
5	SFR on Big Oak Ln	0.0003	0.00003	0.1
6	SFR on Pine Crest Pl	0.0003	0.00003	0.1
7	SFR on Pine Crest Pl	0.0003	0.00003	0.1
8	SFR on Pine Crest Pl	0.0003	0.00003	0.1
9	SFR on Pine Crest Pl	0.0002	0.00003	0.1
10	Senior on Castaic Rd	0.0001	0.00002	0.0
11	Senior on Castaic Rd	0.0001	0.00002	0.0
12	Senior on Castaic Rd	0.0001	0.00002	0.0
13	SFR on Ridge Route Rd	0.0036	0.00004	1.1
14	SFR on Ridge Route Rd	0.0007	0.00004	0.2
15	SFR on Ridge Route Rd	0.0001	0.00012	0.0
SCAQMD CEQA significance threshold (Table 5.1-3)				10
Exceed threshold?				No

µg/m^3: micrograms per cubic meter.
Source: Vista Environmental 2017 (Appendix C)

As shown in Table 5.1-13, the cancer risk would be substantially less than the CEQA significance threshold.

Chronic health effects are characterized by prolonged or repeated exposure to a TAC over many days, months, or years. Symptoms from chronic health impacts may not be immediately apparent and are often irreversible. The chronic hazard index is based on the most impacted sensitive receptor from the proposed project and is calculated from the annual average concentrations of PM10. The SCAQMD criterion for significance is a Chronic Hazard Index (HIC) of 1.0. The maximum calculated HIC at the sensitive receptors is 0.0008.

Exposure of Receptors to Project-Generated Operational Criteria Pollutant and TAC Emissions

As described above, the industrial or commercial land uses may have the potential to emit air pollutants, and these pollutant could include TACs. Although emissions from commercial and industrial uses cannot be characterized without knowledge of the nature of the use, the controls on pollutant emissions provided by SCAQMD Rules 201 and 203, and requires that any facility with the potential to emit substantial amounts of air pollutants must receive permits to construct and operate the facility (RR 5.1-3). Depending on the nature of the business and the associated emissions sources and pollutants, the SCAQMD permitting processes may require an emissions analysis and/or a health risk analysis to demonstrate that emissions would not exceed SCAQMD specific rules requirements and there would not be unacceptable health risks to on-site and off-site receptors. Prior to the determination of the specific commercial and industrial uses, the impact is potentially significant.

Exposure of On-Site Receptors from Off-Site Sources

The SCAQMD recommends that a HRA be performed for any proposed land use that would locate sensitive receptors closer than the source-receptor separation distances recommended in CARB's 2005 *Air Quality and Land Use Handbook*. One case is when sensitive uses would be located within 500 feet of a freeway. The NorthLake SP includes land that is within 500 feet of the southbound lanes of I-5. However, as noted in Section 5.1.6, there are no residences or other sensitive land uses proposed within 500 feet of I-5. Other TAC sources addressed in the CARB handbook include land uses including but not limited to distribution centers with substantial truck traffic, rail yards, and large gas stations (CARB 2005). None of the uses specified in the CARB handbook have been identified near the NorthLake SP area. Therefore, an HRA for TAC impacts from these uses is not required.

The County Department of Public Health (DPH) recommends addressing health risks for sensitive land uses and parks up to a distance of 1,500 feet from I-5. The DPH recommendations are based on the DPH document *Air Quality Recommendations for Local Jurisdictions* (DPH 2013). I-5 is divided at the project site. There are no "schools, housing and other sensitive land uses" within 500 feet of the southbound (closer) lanes. A portion of the multi-family area is 900-1,500 feet from the southbound lanes and approximately 1,800 feet from the northbound lanes. Some single family areas are 1,200-1,500 feet from the southbound lanes and more than 3,000 feet from the northbound lanes. There is a topographical barrier of hills between the southbound lanes and all of the residential land use areas. It is also noted that the CARB, SCAQMD, and DPH recommendations for siting near freeways were all appropriately conservative when established and based on studies from the early 2000s. Since then, diesel particulate emissions from heavy trucks have substantially declined and therefore, the siting guidelines are even more conservative. Based on the distance and topographical location of proposed residential areas relative to I-5, it is considered that the health risks to these receptors would be less than significant and no mitigation is required,

One small area of public park is proposed approximately 300 feet from the I-5 southbound lanes and 1,700 feet from the I-5 northbound lanes. While health risk to this area is considered minimal, MM 5.1-15 would be incorporated into the Project. MM 5.1-15 would prohibit the building of playgrounds or other active recreation areas in the public park area west of the SCE easement. Other park areas are in the 500 to 1,500 foot range from the I-5 southbound lanes and a much greater distance from the northbound lanes. Based on the distance and topographical location of proposed residential areas relative to I-5, it is considered that the health risks to these receptors would be less than significant and no mitigation is required,

Valley Fever

As discussed above, Valley Fever spores have the potential to be found in soils of the Project site. The site is currently a large expanse of undeveloped land, which experiences periodic high winds and supports widespread grazing. These conditions would result in (1) disturbance of existing soils on the site, (2) dust formation associated with this disturbance, and (3) a resultant risk of Valley Fever for residents in the Project area. However, grading required for site development would have a more intensive surface disturbance and, as such, would increase the risk of Valley Fever exposure if spores are present on the Project site and become airborne in fugitive dust.

The control of fugitive dust is the key to preventing exposure to Valley Fever spores during ground-disturbing construction activities. Even if Valley Fever spores are present on site and are disturbed during grading, if they do not become airborne, they do not have the potential to be inhaled and result in illness. Fugitive dust control measures would be required and implemented on the Project pursuant to the SCAQMD Rule 403, Fugitive Dust, and as required by RR 5.1-1. This rule requires that dust be controlled so as not to be visible beyond the property line, and is enforced by the SCAQMD. SCAQMD Rule 403 control measures include watering exposed surfaces and haul roads three times daily, replacing ground cover in disturbed areas quickly, covering stock piles with tarps, and limiting speeds on unpaved roads to 15 miles per hour. The rule includes comprehensive sets of best available control measures that reduce fugitive dust generation and are required for all projects within the SCAQMD's jurisdictions.

SCAQMD Rule 403 also requires that each large project identify a Dust-Control Supervisor that is employed by or contracted with the Property Owner/Developer and is on the site or within 30 minutes of the site during working hours, has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements, and has both completed the SCAQMD Fugitive Dust Control Class and been issued a valid Certificate of Completion for the class. MM 5.1-16 ensures that the requirement for a trained Dust-Control Supervisor is implemented during all phases of Project construction.

The Project's construction workers would be at the highest risk for Valley Fever exposure, and there would be an increased risk to the existing population in the immediate Project area. However, because of the large size of the Project site, the potential generation of dust from grading and construction would primarily be localized within the site and would not affect neighboring populations due to distance. This is because fugitive dust must be entrained in wind and, just like sediment in water, particles in the wind drop out during transport. Therefore, due to the great distance between the majority of on-site grading areas and the existing residences in the area, fugitive dust generated after implementation of dust-control measures required by SCAQMD Rule 403 would tend to settle out of the wind transporting the dust before they could reach off-site areas. Rule 403 requirements stipulate that dust be controlled so as not to be visible beyond the property line. Therefore, the majority of dust generated during grading would remain within the Project site itself, and, as mentioned above, would be most likely to affect construction workers. To help prevent construction workers from contracting Valley Fever on the Project site, MM 5.1-17 describes measures such as requiring that respirators or masks be worn, controlling weeds with mowing instead of disking, and other means of reducing the spread and/or inhalation of Valley Fever spores, if present.

While construction workers would be at highest risk, on-site populations would also be at risk for exposure during interim phases of development, depending on the proximity to on site construction activities. Implementation of MM 5.1-18 would require that, prior to sale, lease, or rental of any property, all residents would be provided with a notice disclosing this potential risk

and describing strategies to avoid potential exposure to Valley Fever spores during construction or other earth-moving activities.

Additionally, development of the Project would reduce the existing risk of Valley Fever on and adjacent to the Project site by replacing the undeveloped land with urban development, irrigated landscaping, or other vegetated areas that would eliminate or substantially reduce existing disturbed land with the potential for dust generation from wind or human activity, thereby reducing fugitive dust generation and the associated risk of Valley Fever. Therefore, once the Project is completed, residents and visitors on the Project site would not be exposed to an inordinate risk from Valley Fever.

Therefore, with implementation of SCAQMD Rule 403 requirements, MM 5.1-16 through MM 5.1-18, the potential for exposure to Valley Fever spores from construction of the Project would be reduced to the maximum extent feasible and would be considered a less than significant impact.

Level of Significance without Mitigation: Potentially significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None.

Level of Significance with SCVAP 2012 EIR Mitigation: Potentially significant.

Recommended 1992 EIR Mitigation Measures: None.

Level of Significance with 1992 EIR Mitigation Measures: Potentially significant.

Recommended Project Specific Mitigation Measures:

MM 5.1-14 Prior to the issue of occupancy permits for each industrial building, the Permit Applicant/Developer shall demonstrate that ambient air quality concentrations of criteria pollutants at sensitive receptors resulting from the proposed use(s) shall not exceed the following:

- Nitrogen dioxide (NO_2) – 0.10 parts per million (ppm), 1 hour average; 0.03 ppm, annual arithmetic mean
- Inhalable particulate matter (PM10) – 2.5 micrograms per cubic meter ($\mu g/m^3$), 24-hour average; 1.0 $\mu g/m^3$-annual average
- Fine particulate matter (PM2.5) – 2.5 $\mu g/m^3$, 24-hour average

The Permit Applicant/Developer shall also demonstrate that the incremental health risks from toxic air pollutants at sensitive receptors resulting from the proposed use(s) shall not exceed the following:

- Maximum incremental cancer risk – 10 in 1 million
- Cancer burden – 0.5 excess cancer cases in areas where the cancer risk exceeds 1 in 1 million
- Chronic hazard index – 1.0
- Acute hazard index – 1.0

MM 5.1-15 No playgrounds, ball fields, or other facilities that encourage active recreation shall be built west of the Southern California Edison (SCE) easement.

MM 5.1-16 Prior to the commencement of brush clearing, grading, or other activity that would generate fugitive dust, the Property Owner/Developer shall employ a Dust-Control Supervisor who will be on the site within 30 minutes of the start of work taking place each morning; will have the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all South Coast Air Quality Management District (SCAQMD) Rule 403 requirements; and will have completed the SCAQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class.

MM 5.1-17 To aid in the prevention of Valley Fever among construction crews on the Project site, the following measures shall be implemented by the Construction Contractor during all construction activities:

- Hire crews from local populations where possible, since it is more likely that they have been previously exposed to the fungus and are therefore immune.
- Require crews to use masks or respirators that are adequate to restrict inhalation of particulates during Project clearing, grading, and excavation operations in accordance with California Division of Occupational Safety and Health regulations.
- Where acceptable to the County of Los Angeles Fire Department, control weed growth by mowing instead of disking, thereby leaving the ground undisturbed and with a mulch covering.
- During rough grading and construction, the access way into the Project site from adjoining paved roadways shall be paved or treated with environmentally safe dust-control agents.

MM 5.1-18 Prior to sale, lease, or rental of any residential structure or portion thereof on the NorthLake Project site, the Property Owner/Developer shall provide to each prospective purchaser or tenant a notice and statement of acknowledgment that shall be executed (i.e., read and signed) by the prospective purchaser, lessee, or tenant that the property within NorthLake may present a temporary risk of exposure to Valley Fever spores during construction or other earth-moving activities. The form shall include strategies to reduce potential exposure to Valley Fever spores. The form and method of distribution of said notice and statement of acknowledgment shall be as approved by the County of Los Angeles Department of Regional Planning.

Net Level of Significance: Less than significant.

5.1.8 CUMULATIVE IMPACT

Air quality is generally a regional issue, determined by geography and meteorology. The geographic context for air quality impacts is the SoCAB. The USEPA and CARB use the SoCAB as the basis for attainment designations. As discussed in Threshold 5.1-3, SCAQMD considers the thresholds for project-specific impacts and cumulative impacts to be the same. Therefore, if a project has a direct significant impact, it would also have a cumulative significant impact. Threshold 5.1-2 includes an analysis of the Project's impact on regional nonattainment pollutants. The Project's construction NOx emissions would exceed the SCAQMD CEQA significance

threshold. Therefore, regional NOx construction emissions would also be significant on a cumulative basis The Project's operational emissions would exceed the SCAQMD's thresholds for VOC, NOx, CO, PM10, and PM2.5. Therefore, regional operational emissions of VOC, NOX, CO, PM10, and PM2.5 would also be significant on a cumulative basis.

With respect to local concentrations of CO, the hotspot analysis of Threshold 5.1-4 is a cumulative analysis because it considers traffic from existing and all future sources as well as traffic from the Project. The impact would be less than significant.

The Project's contribution to both regional and local TAC concentrations would be negligible. There would be no cumulative impact.

5.1.9 IMPACT CONCLUSION

Construction NOx emissions, both regional and local, would be significant and unavoidable with implementation of mitigation measures. With respect to operational emissions, the proposed NorthLake development long-term emissions would remain significant and unavoidable for CO, VOC, NO_X, PM10, and PM2.5 on a regional level, after implementation of mitigation measures. The proposed Project would not have a significant impact on exposure of persons to substantial operation criteria pollutant concentrations or to TACs. The Project's contribution toward long-term cumulative impacts would be significant. A Statement of Overriding Considerations should be prepared and adopted as necessary to accept these significant effects.

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5.2 BIOLOGICAL RESOURCES

5.2.1 METHODOLOGY

This section of the SEIR describes potential biological resource impacts relative to the proposed project. The study area covered in this section addresses the entire approximately 1,430.47-acre Specific Plan Development Project site. The analysis of this section is based on information from the *Biological Technical Assessment Report, NorthLake Specific Plan Development Project* (BonTerra Psomas 2015).

5.2.2 BACKGROUND INFORMATION

1992 NorthLake Specific Plan Environmental Impact Report

The following summary reflects conditions existing at the time of preparation and certification of the 1992 NorthLake Specific Plan Environmental Impact Report (1992 SP EIR), which is incorporated by reference, included as Appendix B to this SEIR, and is included as background information to provide a context for the scope of this SEIR analysis. Adopted mitigation measures from the 1992 SP EIR relevant to biological resources issues are included below in Section 5.2.6.

The following relevant biological resources impacts were identified in the 1992 SP EIR:

- Grading would result in the removal of approximately 65 percent of the existing vegetation on the Specific Plan site.
- The vegetation losses as a result of grading for the project would result in loss of some faunal individuals and species.
- The development of the *NorthLake Specific Plan* would result in the loss of approximately 13 acres of riparian habitat.

Implementation of the recommended mitigation measures, including restricting vehicle access outside grading limits; implementing a revegetation program; implementing a fuel modification/transition zone; implementing drainage features including debris basins, energy dissipators, and other facilities to prevent flooding; and coordinate with the California Department of Fish and Game (CDFG)[1] and the U.S. Army Corps of Engineers (USACE) to identify final mitigation requirements for the loss of riparian habitat.

2012 Santa Clarita Valley Area Plan Environmental Impact Report

The following summary reflects conditions existing at the time of preparation of the Santa Clarita Valley Area Plan (SCVAP) EIR in 2012 (which is incorporated by reference) and is included as further background information to provide a context for the scope of this SEIR analysis.

The SCVAP 2012 EIR concluded that potentially significant impacts associated with the proposed Area Plan relate to special status species, sensitive communities, federally protected wetlands, wildlife movement, and nursery sites. As stated in the SCVAP 2012 EIR, the SCVAP 2012 policies address avoidance and minimization of impacts on habitats; provisions for the acquisition of habitats in cooperation with conservation groups, provisions for no net loss of jurisdictional wetlands in the Planning Area; and provisions for the identification and protection of at least one

1 California Department of Fish and Wildlife is previously known, and referred to in 1992 SP EIR, as the California Department of Fish and Game.

designated wildlife corridor linking the two units of the Angeles National Forest through the Santa Clarita Valley.

The policies identified in the SCVAP 2012 EIR do not provide a mechanism for the compensation of lost habitats when avoidance of impacts—or minimization of impacts to a level that is less than significant—is considered to be infeasible; the policies also do not mitigate for the direct mortality of individuals of listed, proposed, or candidate species. In conjunction with the SCVAP 2012 policies, mitigation measures were recommended to reduce potential impacts. It was determined that, although the loss of sensitive habitats may be compensated for through land acquisition, the loss of special status species and wildlife movement opportunities would remain significant. The SCVAP 2012 EIR found that the conversion of all types of currently undeveloped wildlife habitat to residential, commercial and industrial uses permitted under the SCVAP 2012 would result in impacts on special status species that would remain significant at the plan level. It was also determined that impacts on wildlife movement opportunities would also be significant and unmitigable because of the loss of connectivity for wildlife movement through the SCVAP 2012 Planning Area; this connectivity would not be recoverable once the area has been developed.

5.2.3 EXISTING CONDITIONS

Mountain peaks located northeast of the Project site range from approximately 3,000 to 5,400 feet (ft) above mean sea level (msl). Project site elevations generally trend from highest in the north (approximately 2,400 ft above msl) to lowest in the south (about 1,200 ft above msl). Topography consists of moderate to steep slopes, with some mesa formations in the central-eastern portion of the Project site. The Project site is bisected on the north-south axis by Grasshopper Canyon, which drains into Castaic Lagoon. Generally, throughout the Project site, small tributaries flow into Grasshopper Canyon in an east-to-west (east of Grasshopper Canyon) and west-to-east (west of Grasshopper Canyon) direction. West of Grasshopper Canyon, these tributaries create steep slopes where the elevation rises sharply. East of Grasshopper Canyon, the tributaries are more meandering and the topography generally consists of undulating hills. A mix of sage scrub and grassland vegetation types dominate the Project site. Cattle grazing generally occurs east of Grasshopper Canyon and, as a result, this part of the Project site is dominated by non-native grassland. Additionally, much of the southern portion of the Project site burned in 2013. Violin Canyon at the south end of the Project site conveys nuisance water from irrigation run-off most of the year, which dissipates within approximately 250 feet from entering the site. During storm events this drainage is expected to convey flows continuing off site to the south. This section describes the biological resources that are known to occur or potentially occur in the study area. Survey methods for documenting vegetation types, wildlife populations, and special status species are included below, and survey findings are also summarized.

The SEIR focuses on the impacts of implementing the *NorthLake Specific Plan* based on existing conditions at the time the Notice of Preparation (NOP) for this document was distributed in 2015. The SEIR updates the existing conditions baseline information from the 1992 SP EIR where conditions in 2015 are new or different from the previous EIR.

Survey Methods

General biological surveys of the Project site were conducted by BonTerra from 1997 to 2004. Additional focused surveys were also conducted in spring and summer of 2005 and 2006. In addition, other pertinent information was obtained from studies and documentation prepared by biologists who have previously conducted research in the immediate vicinity. General and focused surveys were also conducted in 2014 and 2015. The findings of these surveys and review of related studies are compiled in the *Biological Technical Assessment Report, NorthLake Specific Plan Development Project* (Biological Technical Report), which is included as Appendix D to this

SEIR. The 1,430.47-acre Project study area covered in the Biological Technical Report includes the entire NorthLake Specific Plan area, as defined in Section 3.0, Project Description.

This section summarizes the biological resource characteristics of the entire Project site described in the updated Biological Technical Report.

Vegetation Mapping and Plant Surveys

A literature search was conducted to identify special status plants, wildlife, and habitats known to occur in the vicinity of the Project site. The California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California, the California Department of Fish and Wildlife's (CDFW's) California Natural Diversity Database (CNDDB), and compendia of special status species published by the U.S. Fish and Wildlife Service (USFWS) and CDFW were reviewed.

Vegetation mapping and general plant surveys were originally conducted on March 23 and April 3 and 5, 2000. In response to a fire that occurred in the Project vicinity in May 2002, the vegetation mapping and plant surveys were updated on December 9, 2003, and March 16, 2004. In addition, the study area required expansion due to project design changes to incorporate additional water tank sites and a small additional area along the east edge of Ridge Route Road was mapped on January 19, 2006. Vegetation mapping was again updated on April 9, 10, and 11, 2014, to capture current conditions on the Project site. The update was necessary due to the substantial amount of time elapsed since the previous mapping was conducted, as well as disturbances such the Castaic Fire which occurred in the southern portion of the study area in 2013. The purpose of the surveys was to describe the vegetation present on the Project site and to evaluate the potential of the habitats to support special status species. All plant species observed were recorded in field notes and are listed in Table A-1 in Appendix A of the Biological Technical Report located in Appendix D of this SEIR.

Focused spring botanical surveys were conducted in the Project site from 1998 to 2003 to evaluate the presence or absence of special status species. Surveys included all special status plant surveys in 1998 and 2001, and focused specifically on the San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*) in 2000 and 2003. This species, thought to be extinct when the first botanical surveys were conducted in 1998 on the Project site, was rediscovered in 1999 in Ventura County on Ahmanson Ranch, and subsequently in Los Angeles County on Newhall Ranch. During botanical surveys, all native habitats on the Project site potentially suitable for special status species, as determined in previous biological surveys and by assessing soil maps, were surveyed. The focused surveys were conducted using meandering transects. Field notes were taken during the surveys.

Spring botanical surveys, including focused surveys for San Fernando Valley spineflower, were conducted on the Project site in 2014. All portions of the Project site containing native habitats potentially suitable for special status plant species, as determined in previous biological surveys, were surveyed using meandering transects. Field notes were taken during the survey. The location of each population of special status plant species detected was mapped and any voucher specimens collected were deposited at herbariums at either the Rancho Santa Ana Botanic Garden in Claremont or the University of California, Riverside.

All focused surveys were conducted in conformance with CDFW guidelines (2000, 2009). Results of all plant surveys are included in Appendix B of the Biological Technical Report (BonTerra Psomas 2015)

Wildlife Surveys

The most recent general surveys for amphibians, reptiles, birds, and mammals were conducted simultaneously with vegetation mapping on April 9, 10, and 11, 2014. During the surveys, each habitat type was evaluated for its potential to support special status species that are known to occur or that are expected to occur in the region. Active searches for reptiles and amphibians included lifting, overturning, and carefully replacing rocks and debris. Birds were identified by visual and auditory recognition. Surveys for mammals were conducted during the day and included searching for and identifying diagnostic sign, including scat, footprints, scratch-outs, dust bowls, burrows, and trails. No mammal trapping was conducted because it was not considered warranted (i.e., there are no Threatened or Endangered mammals expected to occur in the study area). All wildlife species observed (including all survey efforts) were recorded in field notes and are listed in Table A-2 of Appendix A of the Biological Technical Report (BonTerra Psomas 2015).

In addition to the general wildlife surveys, focused surveys were conducted on the Project site for the arroyo toad (*Bufo californicus*) in 2000 and 2014; the western spadefoot (*Spea hammondii*) concurrent with arroyo toad surveys in 2014; the California red-legged frog (*Rana aurora draytonii*) in 2003; the burrowing owl (*Athene cunicularia*in) in 2007 and 2014-2015; the southwestern willow flycatcher (*Empidonax traillii extimus*) and least Bell's vireo (*Vireo bellii pusillus*) in 1997, annually from 2000 to 2006, and in 2014; the coastal California gnatcatcher (*Polioptila californica*) in 2014 and 2015; and for nesting raptors in 1997, 2000, and 2003. Results of the surveys are included in Appendices D, E, F, G, and H of the Biological Technical Report located in Appendix D of this SEIR. Wet season surveys for federally listed fairy shrimp species: conservancy fairy shrimp *(Branchinecta conservation),* vernal pool fairy shrimp *(Branchinecta lynchi),* San Diego fairy shrimp *(Branchinecta sandiegonensis),* and Riverside fairy shrimp *(Streptocephalus woottoni)* were conducted in winter 2004–2005, and dry season surveys were conducted in summer 2005. Additionally, wet season surveys for the federally listed fairy shrimp species mentioned above, and the longhorn fairy shrimp (*Branchinecta longiantenna),* were conducted in 2014. Dry season surveys are currently underway and results will be available in mid-summer 2015. Results of the completed surveys are included in Appendix C of the Biological Technical Report.

Survey Findings

Vegetation Types

Twenty-six vegetation types occur on the Project. A general description of each of the vegetation types is included below and a plant compendium is included in Table A-1 of Appendix A of the Biological Technical Report. Exhibit 5.2-1, Vegetation Types and Other Areas, presents the vegetation map of the study area. The total acreage of each vegetation type is summarized in Table 5.2-1, Existing Vegetation Types and Acreage within the Project Site.

See Inset

CASTAIC LAKE

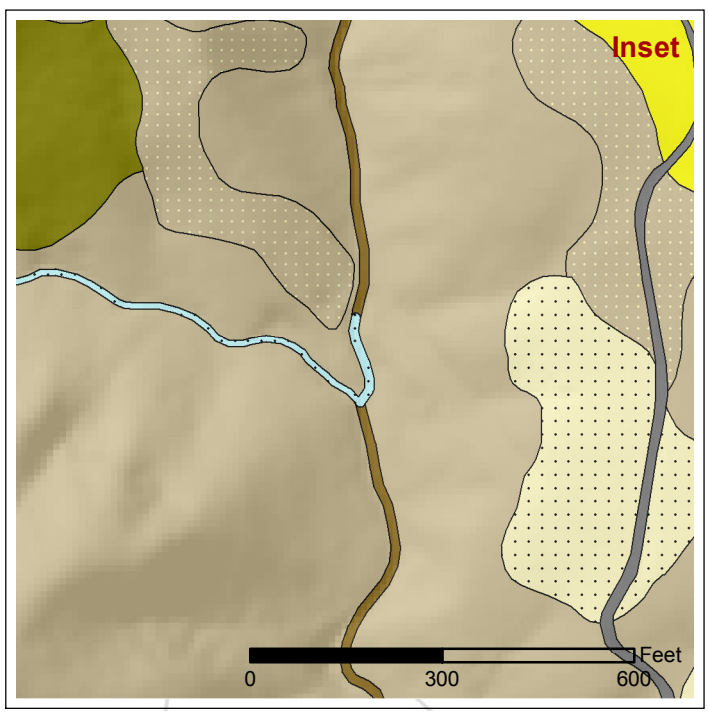
5

Project Boundary

Burned Area

Vegetation Types and Other Areas

- Purple sage scrub
- Black sage scrub
- California annual grassland
- California annual grassland/Wildflower fields
- California sagebrush - California buckwheat scrub
- California sagebrush - California buckwheat scrub/California annual grassland
- California sagebrush - California buckwheat scrub/Foothill needlegrass grassland
- Foothill needlegrass grassland
- Fremont cottonwood riparian forest
- Mulefat thickets
- Willow thickets
- Willow thicktes/Mulefat thickets
- Baltic and Mexican rush marsh
- Open water
- Ornamental
- Ornamental/Disturbed
- Disturbed



Vegetation Types and Other Areas

Exhibit 5.2-1

NorthLake Specific Plan SEIR

N W E S

1,500 750 0 1,500 Feet

PSOMAS

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TABLE 5.2-1
EXISTING VEGETATION TYPES AND ACREAGE WITHIN THE PROJECT SITE

Vegetation Type	Acreage
Sage Scrub Communities	
Purple sage scrub	7.93
California sagebrush – California buckwheat scrub	667.44
Black sage scrub	12.25
California sagebrush - California buckwheat scrub/foothill needlegrass grassland	19.79
California sagebrush-California buckwheat scrub/California annual grassland	40.98
burned purple sage scrub	107.67
burned mixed sage scrub	14.93
burned black sage scrub	12.35
burned mixed sage scrub/California annual grassland	12.84
Sage Scrub Subtotal	**896.18**
Native Grassland Communities	
Foothill needlegrass grassland	23.46
burned Foothill needlegrass grassland	1.74
Native Grassland Subtotal	**25.20**
Annual Grassland Communities	
California annual grassland	74.44
California annual grassland/Wildflower fields	343.79
burned California annual grassland	18.10
Annual Grassland Subtotal	**436.33**
Riparian/Open Water Communities	
Willow thickets	1.03
Willow thickets/Mulefat thickets	0.81
Mulefat thickets	6.82
Rush marsh	0.04
Open water	0.92
burned Fremont cottonwood riparian forest	0.40
burned southern willow scrub	0.26
burned mule fat scrub	4.26
Riparian/Open Water Subtotal	**14.54**
Disturbed/Ornamental	
ornamental	1.17
ornamental/disturbed	18.84
disturbed	38.21
Disturbed/Ornamental Subtotal	**58.22**
Total	**1,430.47**

Note: Totals may not add up due to rounding and mapping discrepancies.
Source: BonTerra Psomas 2015.

Sage Scrub Communities

Purple Sage Scrub

Purple sage scrub on the Project site that is relatively undisturbed occurs in one small area in the southwestern portion of the Project site on a southeast facing slope. The majority of the purple sage scrub previously mapped on the Project site was burned during the 2013 Castaic Fire and was grubbed in 2007 for the previously approved NorthLake Development Project[2]. The burned purple sage scrub occurs along the slopes and ridges in the southern portion of the Project site and is recovering.

The dominant species in this vegetation type is purple sage (*Salvia leucophylla*). Other species that are present in lower densities include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), California giant wild rye (*Elymus condensatus*), black sage (*Salvia mellifera*), deerweed (*Acmispon glaber*), bush mallows (*Malacothamnus fremontii* and *M. marrubioides*), toyon (*Heteromeles arbutifolia*), and western blue elderberry (*Sambucus nigra* ssp. *caerulea*). The burned/grubbed area is recovering with purple sage resprouts and abundant succulent arroyo lupine (*Lupinus succulentus*), blue dicks (*Dichelostemma capitatum*), strigose lotus (*Acmispon strigosus*), California mustard evening-primrose (*Eulobus californicus*), whispering bells (*Emmenanthe penduliflora*), slender-mariposa lily (*Calochortus clavatus* var. *gracilis*), and club haired mariposa lily (*Calochortus clavatus* var. *clavatus*).

California Sagebrush–California Buckwheat Scrub

California sagebrush-California buckwheat scrub occurs in abundance in the northern and western portion of the Project site with pockets in the southern portion of the Project site. The areas in the western portion of the Project site are very steep with patches of native and non-native grass species. There are also burned/grubbed areas of this vegetation type in the southern portion of the Project site. This vegetation type is dominated by a mix of native sage scrub species. The species present in this mixed vegetation type include California sagebrush, California buckwheat, purple sage, thick leaved yerba santa (*Eriodictyon crassifolium*), our Lord's candle (*Hesperoyucca whipplei*), bush mallow, black sage, deerweed, and pine goldenbush (*Ericameria pinifolia*). These species occur in small, monotypic patches in some areas, but are not large enough to map at the scale used for the Biological Technical Report; a mix of sage scrub species California sagebrush-California buckwheat scrub is the closest alliance in the CDFW classification system. Annual species present include blue dicks, goldfields (*Lasthenia californica)*, whispering bells, and California chicory (*Rafinesquia californica*).

Black Sage Scrub

Black sage scrub occurs in patches in the northern portion of the Project site on relatively flat areas and in the burned/grubbed areas of the southern portion of the Project site. This vegetation type is dominated by almost a monoculture of black sage in the mixed sage scrub with small rock outcroppings. Other species present in lower densities in this vegetation type include California sagebrush, thick leaved yerba santa, our Lord's candle, and butterfly mariposa lily (*Calochortus venustus*).

2 The NorthLake Development Project was a previously approved project that had boundaries approximately overlapping the current NorthLake Specific Plan Project. Vegetation clearing for the previously approved project commenced onsite in 2007, but was soon thereafter put on hold. The vegetation clearing occurred within the current Project boundaries.

California Sagebrush–California Buckwheat Scrub/Foothill Needlegrass Grassland

California sagebrush-California buckwheat scrub/foothill needlegrass grassland on the Project site is a mosaic of mixed sage scrub species and native grassland species. This vegetation type occurs in pockets within the mixed sage scrub in the northern portion of the Project site and on the east facing slopes in the western portion of the Project site. The openings contain many annual native species with very few non-native species. The mixed sage scrub species present in this area include California buckwheat, California sagebrush, pine goldenbush, deerweed, thick leaved yerba santa, and bush mallows. The native grassland species present in this area include foothill needlegrass (*Stipa lepida*), nodding needlegrass (*Stipa cernua*), blue dicks, goldfields, tidy-tips (*Layia playtglossa*), butterfly mariposa lily, slender mariposa lily, club-haired mariposa lily, and comb bur (*Pectocarya linearis*).

California Sagebrush–California Buckwheat Scrub/California Annual Grassland

California sagebrush-California buckwheat scrub/California annual grassland occur in the central portion of the Project site. This portion of the Project site has historically been, and is currently being, grazed. This area is characterized by scattered mixed sage scrub species and annual grassland species without patches of native grasses. Wild oat grassland is the closest vegetation type in the CDFW classification system, but California annual grassland more accurately represents this area because it contains a mix of non-native grasses and native perennial species, and scattered native grasses. The dominant mixed sage scrub species present in this area include California sagebrush, purple sage, California buckwheat, pine goldenbush, and thick leaved yerba santa. The annual grassland species present include common wild oat (*Avena fatua*), slender wild oats (*Avena barbata*), short-pod mustard (*Hirschfeldia incana*), tocalote (*Centaurea melitensis*), mouse barley (*Hordeum murinum* var. *leporinum*), foxtail chess (*Bromus madritensis* ssp. *rubens*) and ripgut grass (*Bromus diandrus*). Also present is redstem filaree (*Erodium cicutarium*).

Native Grassland Communities

Foothill Needlegrass Grassland

Foothill needlegrass grassland occurs in pockets on the Project site. Foothill needlegrass grassland is mapped in areas where cover by native grasses equals or exceeds ten percent. The needlegrass grassland on the Project site is dominated by foothill needlegrass and nodding needlegrass with other native species of grass occurring on the project site or scattered in the grassland areas including California melic (*Melica imperfecta*), California giant wild rye, secund blue grass (*Poa secunda*), and fescue (*Festuca microstachys*). Other species present in the foothill needlegrass grassland include blue dicks, California goldfields, tidy-tips, comb bur, dwarf plantain (*Plantago erecta*), chaparral gilia (*Gilia angelensis*), strigose lotus, and fascicled tarweed (*Deinandra fasciculata*).

Annual Grassland Communities

California Annual Grassland

California annual grassland is found throughout the Project site in heavily grazed and other disturbed areas. Wild oat grassland is the closest vegetation type in the CDFW classification system, but California annual grassland more accurately represents this area because it contains a mix of non-native grasses, native perennial species, and scattered native grasses. The dominant species in this vegetation type include non-native grasses and non-native and native forbs. The dominant species present include wild oats (*Avena* spp.), slender wild oats, short-pod mustard, tocalote, mouse barley, ripgut grass, telegraph weed (*Heterotheca grandiflora*), Russian

thistle (*Salsola tragus*), California dove weed (*Croton setiger*), blue dicks, and rancher's fiddleneck (*Amsinckia menziesii*).

California Annual Grassland/Wildflower Fields

California annual grassland/wildflower fields represents the majority of the grasslands on the Project site. These grasslands are very diverse with current and past grazing, and burn disturbances. These areas contain a mixture of non-native grasses and native perennial species, with scattered native grasses. Wildflower fields are considered a subset of this vegetation type and occur in patchy locations throughout the mapped area, and in various patch sizes from small to relatively large swaths of wildflowers. These areas contain a relatively high diversity of wildflower species. The species present in these areas include common wild oat, slender wild oats, mouse barley, foxtail chess, foothill needlegrass, nodding needlegrass, redstem filaree, goldfields, ranchers's fiddleneck, blue dicks, shooting stars (*Dodecatheon clevelandii ssp. clevelandii*), miniature lupine (*Lupinus bicolor*), arroyo lupine (*Lupinus succulentus*), and strigose lotus. Some species such as California goldfields and arroyo lupine occur in very high densities in certain patches. Numerous mariposa lilies were also detected in this vegetation type.

This vegetation type could also be called wild oat grassland and California goldfields–dwarf plantain–six-weeks fescue flower fields per the CDFW classification system, but California annual grassland more accurately represents this area due to the mixture of non-native grasses, native perennial species, and scattered native grasses. Wildflower fields is also more accurate because of the relatively high diversity of wildflower species. This vegetation type could also accurately be described as California Prairie.

Riparian/Open Water Communities

Willow Thickets

Willow thickets occur in Grasshopper Canyon and the tributaries that drain into the Canyon on the Project site. The majority of the willow thickets are dominated by sandbar willow (*Salix exigua*), but the dominant species varies with each patch. The dominant species present include sandbar willow, arroyo willow (*Salix lasiolepis*), red willow (*Salix laevigata*), and mule fat (*Baccharis salicifolia*). Other species present include western sycamore (*Platanus racemosa*), chaparral nightshade (*Solanum xanti*), coyote brush (*Baccharis pilularis*), blue elderberry, horehound (*Marrubium vulgare*), and foxtail chess.

Willow Thickets/Mule Fat Thickets

Willow thickets/mulefat thickets occur in the northwestern portion of the Project site within a tributary to Grasshopper Canyon. It consists of a mixture of the two vegetation types described above: willow thickets and mule fat thickets.

Mulefat Thickets

Mulefat thickets occur throughout the bottom of Grasshopper Canyon and in small patches throughout the Project site. The strip of mule fat scrub in Grasshopper Canyon is approximately ten feet wide throughout the drainage area and has been impacted by cattle grazing but is recovering. Dominant species present in this area include mule fat, coyote brush, and southwestern spiny rush. Other species present at lower densities include blue elderberry, Baltic rush (*Juncus balticus*), toad rush (*Juncus bufonius*), and sandbar willow.

Baltic and Mexican Rush Marsh

Baltic and Mexican rush marsh occurs in one location near the center of the study area within a small tributary to Grasshopper Canyon. It is dominated by southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*), and includes other species such as Baltic rush, toad rush, and mule fat.

Open Water

Open water occurs in the northern portion of the Project site and in two small ephemeral ponds in the central portion of the Project site. The largest area of open water is a perennial cattle pond that occurs slightly north of the middle of the Project site. The banks surrounding the cattle pond consist of vegetation such as short-pod mustard, tree tobacco (*Nicotiana glauca*), mulefat California goldfields, and pine goldenbush. Additionally, one black willow (*Salix gooddingii*) occurs within the body of water. The water is murky and the margins of the banks are highly disturbed due to a population of cattle in the area.

Two small ephemeral ponds are located in the central portion of the Project site. The ponds have scattered vegetation over the course of a year including species such as California goldfields, short-pod mustard, long beak filaree, tidy-tips, and red brome (*Bromus madritensis* ssp. *rubens*). When holding water, these ponds are mostly bare with very little vegetation. Species such as short-pod mustard, fascicled tarweed, pine goldenbush, and annual grassland species surround the ephemeral ponds. These areas are also accessible to the cattle and have been disturbed by their use.

Disturbed/Ornamental Communities

Ornamental

Ornamental vegetation occurs in a few distinct spots on the Project site; in the three locations in the eastern portion, and in one area in the northwestern portion. The three locations in the east consist of Peruvian pepper trees (*Schinus molle*), while the area in the northwest consists of a few ornamental pine trees (*Pinus* spp.).

The ornamental/disturbed areas are scattered ornamental areas that are not maintained or large ornamental trees with a disturbed understory.

Disturbed

Disturbed vegetation occurs in the northwestern, and southern portion of the Project site. These areas consist of access roads, pull-outs, and in the south, a materials yard. These areas are largely, or completely, lacking in vegetation. A few scattered red-stemmed filaree, foxtail chess, slender wild oats, and ripgut grass may be present in these areas.

Burned Areas

Burned purple sage scrub, mixed sage scrub, black sage scrub, mixed sage scrub/California annual grassland, foothill needlegrass grassland, California annual grassland, Fremont cottonwood riparian forest, southern willow scrub, mule fat scrub, and disturbed, occur in the southern portion of the Project site. These areas were burned during the 2013 Castaic Fire. These areas are expected to return to the same or similar type of vegetation if the disturbance does not continue. At the time of the mapping, these areas were in various stages of recovery with many native species present.

The only vegetation type not described above that is included in the burned areas is the small patch of Fremont cottonwood riparian forest, which occurs along the un-named easterly tributary and the lower reaches of Grasshopper Canyon, which drain into Castaic Lagoon. The portion of this vegetation type that was in the study area was sparse riparian area dominated by Fremont cottonwood and mule fat, but was more dense downstream outside the current study area. Currently, this area does not appear to support any live Fremont cottonwood trees. Recovery to mature Fremont cottonwood riparian forest would not be expected in less than a 5-10 years.

Wildlife

Wildlife species observed or expected to occur in each general vegetation type are discussed below. Any special status species mentioned below are discussed in greater detail in the "Special Status Wildlife" section. Species observed during all general and focused surveys are listed in Table A-2 of Appendix A of the Biological Technical Report.

Fish

Most perennial creeks and waterways in southern California are subject to periods of high water flow in winter and spring; and have little to no flow in late summer and fall. The study area contains two drainages: Violin and Grasshopper Canyons. A short earthen-bottom segment of Violin Canyon in the southwest corner of the study area adjacent to I-5 contained surface water during surveys in 2014 and 2015 due to irrigation runoff; however, surface water was observed to be stagnant and would not be expected to sustain native fish. Non-native western mosquitofish (*Gambusia affinis*) that is widely introduced in the region as a biological control for mosquito populations may be periodically introduced by vector control. The drainage in Grasshopper Canyon generally contained discontinuous segments of shallow water during the 2014 rainy season; however, it rapidly dried following the rainy season. The highly seasonal nature of the Grasshopper Canyon drainage and the presence of a concrete swale as it enters Castaic Lagoon downstream of the study area limit the potential for fish species to occur. No fish have been observed in the study area and native species are not expected to occur.

Amphibians

Amphibians require moisture for at least a portion of their life cycle and many require standing or flowing water for reproduction. Terrestrial species may or may not require standing water for reproduction. These species are able to survive in dry areas by aestivating (i.e., remaining beneath the soil in burrows or under logs and leaf litter, and emerging only when temperatures are low and humidity is high). Many of these species' habitats are associated with water and they emerge to breed once the rainy season begins. Soil moisture conditions can remain high throughout the year in some habitat types depending on factors such as the amount of vegetation cover, elevation, and slope aspect.

The riparian vegetation types (willow thickets, willow thickets/mule fat thickets, mule fat thickets, Baltic and Mexican rush marsh, and open water) and habitats adjacent to them in Grasshopper Canyon provide suitable habitat for several amphibian species on the Project site. Species observed during surveys included western toad (*Anaxyrus boreas*), Baja California tree frog (*Pseudacris hypochondriaca*), and western spadefoot. Tadpoles in various stages of development have been observed during focused amphibian surveys in the cattle pond, in the ephemeral pond, and in pools along Grasshopper Canyon.

Black-bellied salamander (*Batrachoseps nigriventris*) and western toad could also occur in the moist areas of grasslands, scrub, and woodland vegetation types, such as north-facing slopes

and at the bottom of ravines. However, the western toad requires standing or flowing fresh water for reproduction.

The introduced American bullfrog (*Lithobates catesbeianus*) is frequently found in water reservoirs, ponds, and drainages throughout California. This bullfrog, which is often released into reservoirs by human, is a predator of native fish and amphibian species. The American bullfrog was detected in Castaic Lagoon, but not on the Project site.

Reptiles

Reptilian diversity and abundance typically vary with vegetation type and character. Many species prefer only one or two vegetation types; however, most species will forage in a variety of habitats. Most species that occur in open areas use rodent burrows for cover, protection from predators, and refuge during extreme weather conditions.

Reptile species observed or expected to occur throughout most of the Project site include the side-blotched lizard (*Uta stansburiana*), western fence lizard (*Sceloporus occidentalis*), red coachwhip (*Coluber flagellum*), gopher snake (*Pituophis catenifer*), common kingsnake (*Lampropeltis getula*), and western rattlesnake (*Crotalus oreganus*).

Sage scrub vegetation types on the Project site support a high diversity of reptile species that use the area during most seasons. These vegetation types provide suitable soils for burrowing and suitable vegetation for cover. Typical species observed or expected in the sage scrub include the Blainville's horned lizard *(Phrynosoma blainvillii*), side-blotched lizard, western fence lizard, western whiptail (*Aspidoscelis tigris*), southern alligator lizard (*Elgaria multicarinata*), striped racer (*Coluber lateralis*), western patch-nose snake (*Salvadora hexalepis*), and western rattlesnake.

Reptile use of the grassland vegetation types is expected to vary during the year. In addition to normal seasonal fluctuations in activity levels, the presence of most reptile species in these areas is likely to be determined by the growth stages of the grasses; more species are present when the grasses are mature, but the diversity declines considerably after disturbance. Reptile species observed or expected to occur in the grassland vegetation types include western fence lizard, side-blotched lizard, Blainville's horned lizard, western whiptail, southern alligator lizard, gopher snake, common kingsnake, red coachwhip, and western rattlesnake.

Riparian vegetation types support a moderate level of diversity of lizards and snakes. The western fence lizard, southern alligator lizard, and western skink (*Plestidon skiltonianus*) *are* typically among the most common reptiles in these vegetation types. Other reptiles expected in these vegetation types in the study area include the gopher snake, San Bernardino ring-neck snake (*Diadophis punctatus similis*), and western rattlesnake.

Birds

A variety of bird species are expected to be residents on the Project site, using the habitats throughout the year. Other species are present only during certain seasons. For example, the white-crowned sparrow *(Zonotrichia leucophrys*) is expected to occur on the Project site during the winter season and will then migrate north in the spring to breed during the summer.

Sage scrub vegetation types on the Project site support an avifauna that is comprised of species that are adapted to the dense, low vegetation that typifies these areas. Although large numbers of individuals can often be found inhabiting this vegetation type, species diversity is usually low to moderate, depending on the season. A relatively high number of birds breeding in the sage scrub vegetation type are permanent residents. On the Project site, California quail (*Callipepla*

californica), Anna's hummingbird (*Calypte anna*), Bewick's wren (*Thryomanes bewickii*), wrentit (*Chamaea fasciata*), California thrasher (*Toxostoma redivivum*), spotted towhee (*Pipilo maculatus*), California towhee (*Melozone crissalis*), Bell's sparrow (*Artemisiospiza belli*), and house finch (*Haemorhous mexicanus*) were found to be common. During winter months, the scrub vegetation type provides habitat for a number of species that migrate from breeding grounds further north. Hermit thrush (*Catharus guttatus*), golden-crowned sparrow (*Zonotrichia atricapilla*), and white-crowned sparrow are expected to be common winter residents of this habitat on the Project site. By March, migratory birds returning from wintering ground further away begin to appear on the Project site. A few of the migratory birds observed in this habitat during spring and summer surveys included Costa's hummingbird (Calypte costae) and lazuli bunting (*Passerina amoena*).

Grassland vegetation types support fewer bird species than most other vegetation types on the Project site. However, these areas do provide important habitat for a number of species, including mourning dove (*Zenaida macroura*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), horned lark (*Eremophila alpestris*), lark sparrow (*Chondestes grammacus*), western meadowlark (*Sturnella neglecta*), and lesser goldfinch (*Spinus psaltria*) are expected to use this vegetation type year round on the Project site. Migratory birds expected to use this vegetation type on the Project site either during the summer or winter include western kingbird (*Tyrannus verticalis*), mountain bluebird (*Sialia currucoides*), American pipit (*Anthus rubescens*), and savannah sparrow (*Passerculus sandwichensis*).

Woody and herbaceous vegetation along pools, seeps, streams, ponds, and other watercourses can be extremely important to birds by providing food, cover, and breeding habitat. The riparian vegetation types on the Project site provide resources for a wide variety of resident and migratory birds. Resident species observed include the western scrub-jay *(Aphelocoma californica),* bushtit *(Psaltriparus minimus*), song sparrow *(Melospiza melodia*), and American goldfinch *(Spinus tristis*). Summer residents observed of this vegetation type during surveys on the Project site include the black-chinned hummingbird (*Archilochus alexandri*), ash-throated flycatcher *(Myiarchus cinerascens),* black-headed grosbeak *(Pheucticus melanocephalus),* blue grosbeak *(Passerina caerulea),* and Bullock's oriole *(Icterus bullockii*). During spring and fall migration, a variety of migratory birds are expected to use this vegetation type on the Project site. Some expected and observed migrants include the olive-sided flycatcher (*Contopus cooperi*), black-throated gray warbler *(Setophaga nigrescens),* Townsend's warbler *(Setophaga townsendi),* MacGillivray's warbler *(Geothlypis tolmiei),* and Wilson's warbler *(Cardellina pusilla).*

Raptors observed on the Project site included the northern harrier *(Circus cyaneus),* sharp-shinned hawk *(Accipiter striatus*), Cooper's hawk *(Accipiter cooperii),* red-tailed hawk *(Buteo jamaicensis*), golden eagle *(Aquila chrysaetos*), American kestrel *(Falco sparverius),* and prairie falcon *(Falco mexicanus)*. White-tailed kite *(Elanus leucurus*) is expected to occur on the Project site. Another raptor, the turkey vulture *(Cathartes aura),* is a scavenger that was also observed on the Project site.

Mammals

Bats occur throughout most of southern California and may use any portion of the Project site as foraging habitat. The riparian vegetation type and steep rocky cliff faces in Grasshopper Canyon provide potential roosting habitat for many bat species. Most of the bats that could potentially occur on the Project site are inactive during the winter and either hibernate or migrate, depending on the species. Common bat species expected to forage or roost on the Project site include the big brown bat *(Eptesicus fuscus),* Brazilian free-tailed bat *(Tadarida brasiliensis),* California myotis *(Myotis californicus),* western pipistrelle *(Parastrellus Hesperus*), and hoary bat *(Lasiurus cinereus).*

Rodents and other small mammals are expected to be among the most diverse and widespread mammals on the Project site. The North American deermouse (*Peromyscus maniculatus*) is a common and widespread rodent that is expected to occur on the Project site. California deermouse (*Peromyscus californicus*) and cactus deermouse (*Peromyscus eremicus*) are common species that prefer sage scrub vegetation types and are expected to occur on the Project site. The western harvest mouse (*Reithrodontomys megalotis*), Botta's pocket gopher (*Thomomys bottae*), and California ground squirrel (*Otospermophilus beecheyi*) were observed or are expected to occur in the grassland vegetation types of the Project site.

Carnivores are expected to be common throughout the Project site and include many predatory and omnivorous species. The coyote (*Canis latrans*) was observed and is expected to occur throughout the Project site, while the common gray fox (*Urocyon cinereoargenteus*) is expected to occur more frequently in the vicinity of the riparian vegetation types in Grasshopper Canyon. Other carnivores observed or expected to occur in the study area include the raccoon (*Procyon lotor*), American badger (*Taxidea taxus*), striped skunk (*Mephitis mephitis*), bobcat (*Lynx rufus*), and mountain lion (*Puma concolor*).

Open grassland vegetation types and the understory of scrub and woodland vegetation types provide excellent foraging habitat for herbivorous mammals. Common herbivores observed during field surveys include the desert cottontail *(Sylvilagus audubonii*) and mule deer (*Odocoileus hemionus*).

Wildlife Movement

Wildlife corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic information. Corridors mitigate the effects of this fragmentation by: (1) allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events, such as fire or disease, will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move in their home ranges in search of food, water, mates, and other necessary resources.

Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas or individuals extending range distributions); (2) seasonal migration; or (3) movements related to home range activities (e.g., foraging for food or water, defending territories, or searching for mates, breeding areas, or cover). A number of terms such as "wildlife corridor," "travel route," "habitat linkage," and "wildlife crossing" have been used in various wildlife movement studies to refer to areas in which wildlife move from one area to another. To clarify the meaning of these terms and to facilitate the discussion on wildlife movement in this analysis, these terms are defined as follows:

- **Travel Route –** a landscape feature (such as a ridgeline, drainage, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and to provide access to necessary resources (e.g., water, food, cover, den sites). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another. It contains adequate food,

water, and/or cover while moving between habitat areas and provides a relatively direct link between target habitat areas.

- **Wildlife Corridor –** a piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or isolated from one another. Wildlife corridors are usually bound by urban land or other areas unsuitable for wildlife. The corridor generally contains suitable cover, food, and/or water to support species and facilitate movement while in the corridor. Larger, landscape-level corridors, often referred to as "habitat or landscape linkages," can provide both transitory and resident habitat for a variety of species.
- **Wildlife Crossing –** a small, narrow area, relatively short in length and generally constricted in nature, that allows wildlife to pass under or through an obstacle or barrier that otherwise hinders or prevents movement. Crossings typically are manmade and include culverts, underpasses, drainage pipes, and tunnels to provide access across or under roads, highways, pipelines, or other physical obstacles. These often represent "choke points" along a movement corridor, which may impede wildlife movement and increase the risk of predation.

It is important to note that, in a large open space area in which there are few or no man-made or naturally occurring physical constraints to wildlife movement, wildlife corridors as defined above may not yet exist. Given an open space area that is both large enough to maintain viable populations of species and to provide a variety of travel routes (e.g., canyons, ridgelines, trails, riverbeds, and others), wildlife will use these "local" routes while searching for food, water, shelter, and mates and will not need to cross into other large open space areas. Based on their size, location, vegetative composition, and availability of food, some of these movement areas (e.g., large drainages and canyons) are used for longer lengths of time and serve as source areas for food, water and cover, particularly for small- and medium-sized animals. This is especially true if the travel route is within a larger open space area. However, once open space areas become constrained and/or fragmented as a result of urban development or construction of physical obstacles (e.g., roads and highways), the remaining landscape features or travel routes that connect the larger open space areas become corridors as long as they provide adequate space, cover, food and water and as long as they do not contain obstacles or distractions (e.g., man-made noise, lighting) that would generally hinder wildlife movement.

On the Project site, Grasshopper Canyon is undeveloped and is adjacent to open space in the Angeles National Forest (ANF) and Castaic Lake State Recreation Area (SRA), both of which provide high-quality wildlife habitat. Historically, the Castaic Creek drainage adjacent to the site may have been an important north-south linkage between the mountainous open space of the ANF and resource rich riparian zones along the Santa Clara River. However, construction of Castaic Dam, Lake, Lagoon, and Castaic SRA and its associated facilities along with residential development west of the Lagoon has essentially eliminated this linkage. Only local movement of species habituated to an urban landscape (e.g., coyote), are expected to navigate the extensive set of existing barriers. Regional movement along the east-west aligned Transverse Range north of the site has also been restricted through the Project site as a result of construction of I-5. As discussed in the Biological Technical Report, results of regional landscape linkage studies identify the importance of this east-west connection. However, Castaic Lake and Lagoon to the east and I-5 to the west substantially reduce the Project site's potential to provide significant east-west linkage value. Although the lake and lagoon are sources of water, they are unpassable for nearly all but avian species and are difficult to access due to un-vegetated and steep shorelines surrounding nearly all of the water bodies other than the northern edge of Castaic Lake. West of the Project site, a single underpass beneath I-5 is likely to be utilized by a variety of wildlife as a safe crossing to and from either side of the highway. Due to the constraints of the southern and eastern edges of the site, wildlife using this crossing are expected to move to and from the

crossing and areas north of the Project site to allow continued east-west movement. Under existing conditions, the Project site itself does not represent an important component of the regional movement of the area.

Special Status Biological Resources

The following section addresses special status biological resources observed, reported, or that have the potential to occur on the Project site. These resources include plant and wildlife species that have been afforded special status and/or recognition by federal and State resource agencies, as well as private conservation organizations. Exhibit 5.2-2, Special Status Biological Resources, depicts the special status biological resources on the Project site.

In general, the principal reason an individual taxon (i.e., species, subspecies, or variety) is given special status recognition is the documented or perceived decline or limitations of its population size, geographic range, and/or distribution resulting in most cases from habitat loss. Table 5.2-3, Special Status Plant Species Known to Occur in the Project Region, and Table 5.2-4, Special Status Wildlife Species Known to Occur in the Project Region, provide a summary of each special status plant and wildlife species known to occur in the project region including information on the status, likelihood for occurrence, and definitions for the various status designations. In addition, special status biological resources include vegetation types and habitats that are either unique, of relatively limited distribution in the region, or of particularly high wildlife value. These resources have been defined by federal, State, and local government conservation programs. Sources used to determine the special status of biological resources are as follows:

- **Plants –** the CNPS' Electronic Inventory of Rare and Endangered Vascular Plants of California; the CNDDB; various *Federal Register* notices from the USFWS regarding listing status of plant species; and the *List of Special Vascular Plants, Bryophytes, and Lichens.*
- **Wildlife –** the CDFW's California Wildlife Habitat Relationships Database System; the CNDDB; various USFWS *Federal Register* notices regarding listing status of wildlife species; and the CDFW's *List of Special Animals*.
- **Habitats –** CNDDB.

Definitions of Special Status Biological Resources

A **federally Endangered species** is one facing extinction throughout all, or a significant portion of, its geographic range. A **federally Threatened species** is one likely to become endangered within the foreseeable future throughout all or a significant portion of its range. The presence of any federally Threatened or Endangered species on a project site generally imposes severe constraints on development, particularly if development would result in "take" of the species or its habitat. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct. Harm, in this sense, can include any disturbance to habitats used by the species during any portion of its life history.

Proposed species or **Candidate species** are those officially proposed by the USFWS for addition to the federal Threatened and Endangered species list. Because proposed species may soon be listed as Threatened or Endangered, these species could become listed prior to or during implementation of a proposed project. The presence of a Proposed or Candidate species within a project impact area may impose constraints on development if they are listed prior to issuance of project permits, particularly if a project would result in "take" of the species or its habitat.

#1
#2
4/10/2014
4/9/2014
Pond 1
Pond 2
4/25/2014
5
5

Project Boundary
Burrowing Owl
Western Spadefoot

General CAGN Detection Area

Adult Female
Adult Male
2015 CAGN Nest
Southern California Black Walnut
Round-Leaved Filaree
Bobtail barley
Paniculate Tarplant
Slender/Club-haired Mariposa Lily - Tallied
Slender/Club-haired Mariposa Lily - Low Density
Slender/Club-haired Mariposa Lily - Medium Density
Slender/Club-haired Mariposa Lily - High Density
Southwestern Spiny Rush
Burned Area

Special Status Vegetation Types

Purple sage scrub
Black sage scrub
California annual grassland/Wildflower fields
California sagebrush - California buckwheat scrub
California sagebrush - California buckwheat scrub/California annual grassland
California sagebrush - California buckwheat scrub/Foothill needlegrass grassland
Foothill needlegrass grassland

Aerial Source: LAR-IAC 2011

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Special Status Biological Resources

Exhibit 5.2-2

NorthLake Specific Plan SEIR

N W E S

1,500 750 0 1,500 Feet

BonTerra PSOMAS

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The State of California considers an Endangered species to be one whose prospects of survival and reproduction are in immediate jeopardy, a Threatened species as one present in such small numbers throughout its range that it is likely to become an Endangered species in the near future in the absence of special protection or management, and a **Rare species** as one present in such small numbers throughout its range that it may become Endangered if its present environment worsens. "Rare species" only applies only to California native plants. State-listed Threatened and Endangered species are protected against take unless an Incidental Take Permit is obtained from the resource agencies. The presence of any State-listed Threatened or Endangered species in a project impact area generally imposes severe constraints on development, particularly if a project would result in "take" of the species or its habitat.

California Species of Special Concern is an informal designation used by the CDFW for some declining wildlife species that are not State Candidates for listing. This designation does not provide legal protection, but signifies that these species are recognized as special status by the CDFW. Recently, the CDFW downlisted several species from Species of Special Concern to the **Watch List**.

Species that are **California Fully Protected** and **Protected** include those protected by special legislation for various reasons, such as the mountain lion (*Puma concolor*) and white-tailed kite (*Elanus leucurus*). Fully Protected species may not be taken or possessed at any time. California Protected species include those species that may not be taken or possessed at any time except under special permit from the department issued pursuant to Sections 650 and 670.7 of the *California Code of Regulations* or Section 2081 of the *Fish and Game Code.*

Species of **Local Concern** are those that have no official status with the resource agencies, but are being watched because there is either a unique population in the region or the species is declining in the region.

Special Animal is a general term that refers to species that the CNDDB is interested in tracking, regardless of legal or protective status. This term includes species designated as any of the above terms, but also includes species that may be considered biologically rare; restricted in distribution; declining throughout their range; have a critical, vulnerable stage in their life cycle that warrants monitoring; are on the periphery of their range and are threatened with extirpation in California; are associated with special status habitats; or are considered by other State or federal agencies or private organizations to be sensitive or declining.

The California Rare Plant Rank (CRPR), formerly known as CNPS List, is a ranking system by the Rare Plant Status Review group[3] and managed by the CNPS and the CDFW. A CRPR summarizes information on the distribution, rarity, and endangerment of California's vascular plants. Plants with a CRPR of **1A** are presumed extirpated (eliminated) from the state because they have not been seen in the wild in California for many years and they are either rare or extinct elsewhere. Plants with a CRPR of **1B** are Rare, Threatened, or Endangered throughout their range. Plants with a CRPR of **2A** are presumed extirpated from California, but are more common elsewhere. Plants with a CRPR of **2B** are considered Rare, Threatened, or Endangered in California, but are more common elsewhere. Plants with a CRPR of **3** require more information before they can be assigned to another rank or rejected; this is a "review" list. Plants with a CRPR of **4** are of limited distribution or are infrequent throughout a broader area in California; this is a "watch" list. The Threat Rank is an extension that is added to the CRPR to designate the plant's endangerment level. An extension of **.1** is assigned to plants that are considered to be "seriously threatened" in California (i.e., over 80 percent of the occurrences are threatened or have a high

3 This group consists of over 300 botanical experts from the government, academia, non-governmental organizations, and the private sector.

degree and immediacy of threat). Extension **.2** indicates the plant is "fairly threatened" in California (i.e., between 20 and 80 percent of the occurrences are threatened or have a moderate degree and immediacy of threat). Extension **.3** is assigned to plants that are considered "not very threatened" in California (i.e., less than 20 percent of occurrences are threatened or have a low degree and immediacy of threat or no current threats are known). The absence of a threat code extension indicates that this information is lacking for the plant(s) in question.

Special Status Vegetation Types

In addition to providing an inventory of special status plant and wildlife species, the CNDDB also provides an inventory of vegetation types that are considered special status by the State and federal resource agencies, academic institutions, and various conservation groups (such as the CNPS). Determination of the level of imperilment is based on the NatureServe Heritage Program Status Ranks that rank both species and vegetation types on a global (**G**) and statewide (**S**) basis according to their rarity; trend in population size or area; and recognized threats (e.g., proposed developments, habitat degradation, and non-native species invasion). The ranks are scaled from 1 to 5. NatureServe considers **G1 or S1** communities to be critically imperiled and at a very high risk of extinction or elimination due to extreme rarity, very steep declines, or other factors; **G2 or S2** communities to be imperiled and at high risk of extinction or elimination due to very restricted range, very few populations or occurrences, steep declines, or other factors; **G3 or S3** communities to be vulnerable and at moderate risk of extinction or elimination due to a restricted range, relatively few populations or occurrences, recent and widespread declines, or other factors; **G4 or S4** communities to be apparently secure and uncommon but not rare with some cause for long-term concern due to declines or other factors; and **G5 or S5** communities to be secure.

All vegetation alliances[4] that have State ranks of **S1** to **S3** are considered to be highly imperiled. Currently, association ranks are not provided, but associations ranked as **S3** or rarer are noted. Special status vegetation types within the study area are shown in Exhibit 5.2-2, Special Status Biological Resources. All the vegetation types below are considered a high priority for preservation by agencies and conservation groups.

Sage Scrub

The sage scrub on the Project site is comprised of purple sage scrub, California sagebrush–California buckwheat scrub, black sage scrub, California sagebrush–California buckwheat scrub/foothill needlegrass grassland, and California sagebrush–California buckwheat scrub/California annual grassland. Coastal sage scrub has declined by approximately 70 to 90 percent in its historic range in California. It has largely been lost to land use changes in southern California basins and foothills. Coastal sage scrub supports many special status plant and wildlife species such as the coastal California gnatcatcher. The ecological function in southern California's remaining coastal sage scrub is threatened by habitat fragmentation, invasive non-native species, livestock grazing, off-highway vehicles, altered fire regime, and possibly air pollution.

Native Grasslands

Native grasslands, which include foothill needlegrass grassland, have declined by approximately 99 percent in their historic range in California. Native grasslands are composed mainly of drought-resistant perennial bunchgrasses such as needlegrasses (*Stipa* sp.), wild rye (*Leymus* sp.), melic

4 A vegetation alliance is "a classification unit of vegetation, containing one or more associations and defined by one or more diagnostic species, often of high cover, in the uppermost layer or the layer with the highest canopy cover" (Sawyer et al. 2009).

grass (*Melica imperfecta*), and deergrass (*Muhlenbergia rigens*). In the mid-nineteenth century, heavy cattle and sheep grazing caused native perennials to be replaced by fast-growing annual grasses, which are able to take advantage of spring rains and produce seeds before the dry heat of summer. The native perennial grasses, which are more palatable to livestock than the annuals, were damaged by grazing and trampling. Non-native weedy species, such as wild oats (*Avena* spp.) and soft chess (*Bromus hordeaceus*) have largely replaced native grasslands. Native grasslands have also been lost to development and conversion to agriculture.

Wildflower Fields

The California annual grassland portion of this vegetation type is not considered a special status vegetation type; however, wildflower fields, a subset vegetation type, is considered a special status vegetation type (CNDDB 2010). As mentioned above for foothill needlegrass grasslands, throughout much of California, heavy cattle and sheep grazing caused native perennials to be replaced by fast-growing annual grasses. Also like the foothill needlegrass grasslands, native wildflower fields have been impacted by development and conversion to agriculture.

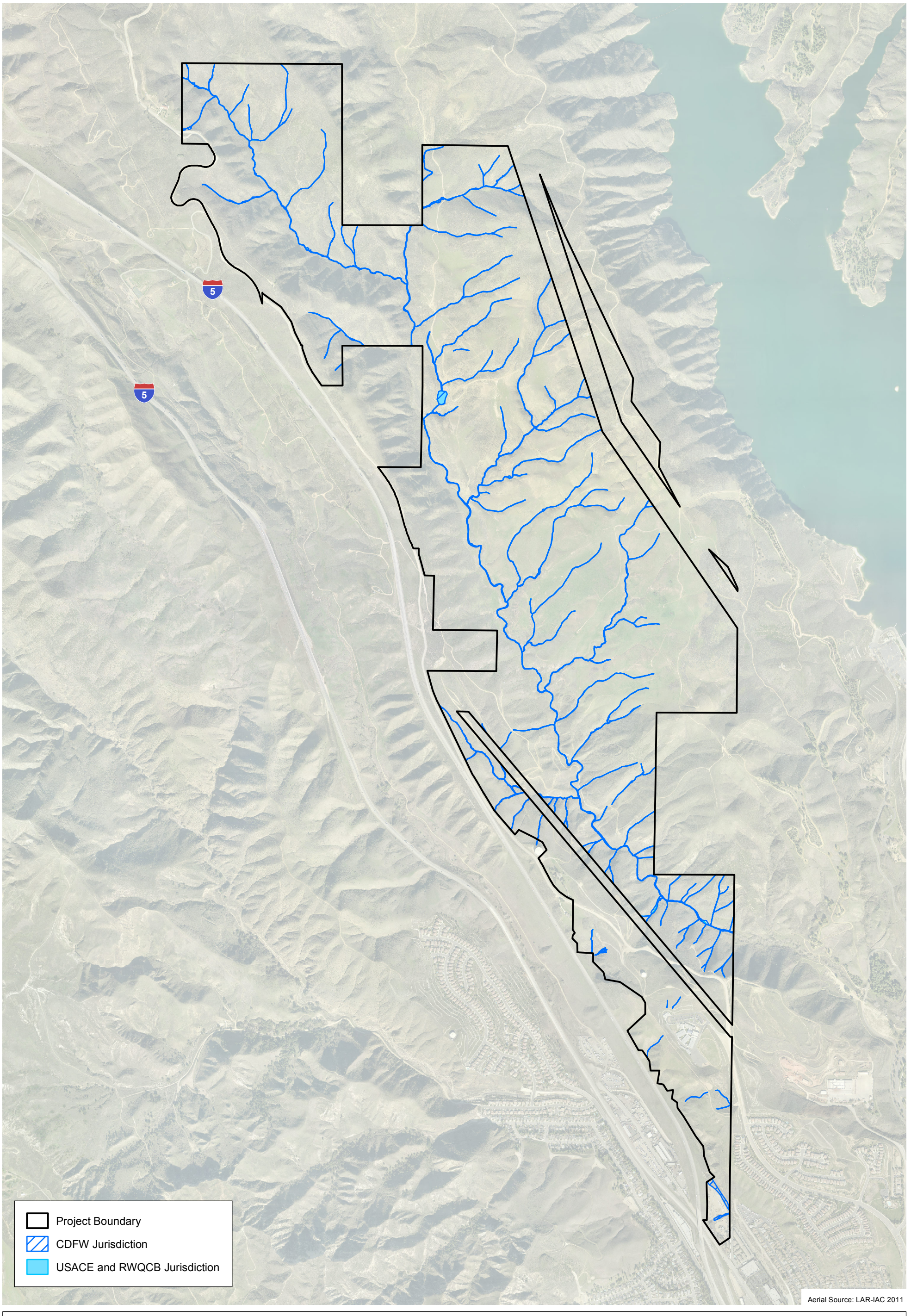
Riparian Areas

Willow thickets, mule fat thickets, burned Fremont cottonwood riparian forest, burned southern willow scrub, burned mule fat scrub, Baltic and Mexican rush marsh and open water (including the ephemeral ponds) are present on the Project site. In general, these vegetation types can provide important biological functions for an ecosystem, such as providing vegetation cover and a water source for wildlife, filtration of runoff water, groundwater recharge, flood control, and sediment stabilization. As a result, the resource agencies often consider these vegetation types to be important resources. These vegetation types may be subject to permit conditions as regulated by the USACE, pursuant to Section 404 of the Clean Water Act. These areas may also require a Streambed Alteration Agreement under Section 1600 et seq. of the California *Fish and Game Code.* In addition, the USACE would require a Section 401 Water Quality Certification or a waiver thereof from the Regional Water Quality Control Board. It should be noted that the acreage of vegetation mapped often exceeds the amount of jurisdictional areas on a project site because these areas are delineated with different methods. Vegetation mapping is conducted using general field surveys, supplemented with aerial photographs when necessary, while very detailed measurements are taken for jurisdictional delineations. Therefore, permitting for projects is always based on the results of the jurisdictional delineation.

Jurisdictional Resources

The USACE takes jurisdiction over areas considered “waters of the U.S.” and wetlands. Jurisdictional waters are typically defined by the ordinary high water mark and other specific criteria. Wetlands, a subset of jurisdictional waters, are defined as those that possess the following three parameters: (1) hydrology providing permanent or periodic inundation by groundwater or surface water; (2) hydric soils; and (3) hydrophytic vegetation. CDFW jurisdictional limits are similar to the USACE jurisdiction, but include riparian habitat supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. The limits of CDFW jurisdiction are often defined by riparian vegetation. The original jurisdictional delineation for the Project site was conducted by Vandermost Consulting Service, Inc. in 1998, updated in 2001, and updated again in 2014.

The delineation of the Project site identified a total of 10.59 acres of USACE “waters of the U.S.” (3.47 acre of wetlands, 7.12 acres of non-wetland waters); 10.59 acres under RWQCB jurisdiction (same as USACE); and 15.04 acres under the jurisdiction of the CDFW present in the study area. Exhibit 5.2-3, Jurisdictional Features, shows the location of the verified jurisdictional drainages,



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Jurisdictional Features

Exhibit 5.2-3

NorthLake Specific Plan SEIR

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1,500 750 0 1,500 Feet

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and the corresponding acreages are provided in Table 5.2-2, Summary of Existing Jurisdictional Features.

TABLE 5.2-2
SUMMARY OF EXISTING JURISDICTIONAL FEATURES

Jurisdiction	Existing Acres
Total USACE Jurisdiction	**10.59**
Wetland "waters of the U.S."	3.47
Non-wetland "waters of the U.S."	7.12
Total RWQCB Jurisdiction	**10.59**
Total CDFW Jurisdiction	**15.04**
Source: Vandermost Consulting 2015.	

Special Status Plant Species

A summary of special status plant species known to occur in the Project region is provided in Table 5.2-3 below. Following the Table is a discussion of those species with potential to occur on the Project site.

TABLE 5.2-3
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR WITHIN THE PROJECT REGION

Species	Status			Potential to Occur on the Project site; Results of Surveys
	USFWS	CDFW	CRPR	
Allium howellii var. *clokeyi* Mount Pinos onion	—	—	1B.3	Outside elevation range; not expected to occur.
Berberis nevinii Nevin's barberry	FE	SE	1B.1	Potentially suitable habitat; not observed during focused surveys.
California macrophylla round-leaved filaree	—	—	1B.1	Suitable habitat and known from the study area; not observed during 2014 surveys.
Calochortus catalinae Catalina mariposa lily	—	—	4.2	Potentially suitable habitat; not observed during focused surveys.
Calochortus clavatus var. *clavatus* club-haired mariposa lily	—	—	4.3	Suitable habitat; observed (possible hybrid with slender mariposa lily).
Calochortus clavatus var. *gracilis* slender mariposa lily	—	—	1B.2	Suitable habitat; observed (possible hybrid with club-haired mariposa lily).
Calochortus plummerae Plummer's mariposa lily	—	—	4.2	Potentially suitable habitat, but the Project site is at the edge of known range; not observed during focused surveys.
Calystegia peirsonii Peirson's morning-glory	—	—	4.2	Suitable habitat; observed.
Cercocarpus betuloides var. *blanceae* island mountain-mahogany	—	—	4.3	No suitable habitat; not expected to occur.

TABLE 5.2-3
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR WITHIN THE PROJECT REGION

Species	Status			Potential to Occur on the Project site; Results of Surveys
	USFWS	CDFW	CRPR	
Chorizanthe parryi var. *fernandina* San Fernando Valley spineflower	FC	SE	1B.1	Potential marginally suitable habitat; not observed during focused surveys.
Deinandra paniculata paniculate tarplant	—	—	4.2	Suitable habitat; observed.
Delphinium parryi ssp. *purpureum* Mount Pinos larkspur	—	—	4.3	Outside elevation range; not expected to occur.
Dodecahema leptoceras slender-horned spineflower	FE	SE	1B.1	No suitable habitat; not expected to occur.
Galium grande San Gabriel bedstraw	—	—	1B.2	No suitable habitat; not expected to occur.
Harpagonella palmeri Palmer's grapplinghook	—	—	4.2	Potentially suitable habitat; not observed during focused surveys.
Helianthus inexpectatus Newhall sunflower	—	—	1B.1	No suitable habitat; not expected to occur.
Helianthus nuttallii ssp. *parishii* Los Angeles sunflower	—	—	1A	No suitable habitat and presumed extinct; not expected to occur.
Hordeum intercedens bobtail barley	—	—	3.2	Potentially suitable habitat and known from the study area; not observed during 2014 surveys.
Juglans californica Southern California black walnut	—	—	4.2	Suitable habitat; observed.
Juncus acutus ssp. *leopoldi* southwestern spiny rush	—	—	4.2	Suitable habitat; observed.
Lepechinia fragrans fragrant pitcher sage	—	—	4.2	No suitable habitat; not expected to occur.
Lepechinia rossii Ross' pitcher sage	—	—	1B.2	No suitable habitat; not expected to occur.
Lilium humboldtii ssp. *ocellatum* ocellated Humboldt lily	—	—	4.2	Potentially suitable habitat; not observed during focused surveys.
Malacothamnus davidsonii Davidson's bush-mallow	—	—	1B.2	Potentially suitable habitat; not observed during focused surveys.
Navarretia ojaiensis Ojai navarretia	—	—	1B.1	No suitable habitat; not expected to occur.
Opuntia basilaris var. *brachyclada* short-joint beavertail	—	—	1B.2	Outside elevation range; not expected to occur.
Orcuttia californica California orcutt grass	FE	SE	1B.1	No suitable habitat; not expected to occur.
Phacelia hubbyi Hubby's phacelia	—	—	4.2	Potentially suitable habitat; not observed during focused surveys.
Phacelia mohavensis Mojave phacelia	—	—	4.3	Outside elevation range; not expected to occur.
Senecio aphanactis chaparral ragwort	—	—	2B.2	Potentially suitable habitat; not observed during focused surveys.

TABLE 5.2-3
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR WITHIN THE PROJECT REGION

Species	Status			Potential to Occur on the Project site; Results of Surveys
	USFWS	CDFW	CRPR	
Symphyotrichum greatae Greata's aster	—	—	1B.3	Potential marginally suitable habitat; not observed during focused surveys.

USFWS: U.S. Fish and Wildlife Service; CDFW: California Department of Fish and Wildlife; CRPR: California Rare Plant Rank.

LEGEND

Federal (USFWS)
FE Endangered
FC Candidate Species

State (CDFW)
SE Endangered

CRPR
1A Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
1B Plants Rare, Threatened, or Endangered Throughout Their Range
2B Plants Rare, Threatened, or Endangered in California But More Common Elsewhere
3 Plants of About Which We Need More Information – A Review List
4 Plants of Limited Distribution – A Watch List

CRPR Threat Rank Extensions
.1 Seriously Endangered in California (over 80% of occurrences threatened; high degree and immediacy of threat)
.2 Fairly Endangered in California (20–80% of occurrences threatened)
.3 Not Very Threatened in California (low degree/immediacy of threat or no current threats known)

Source: BonTerra Psomas 2015.

Round-leaved filaree (*Erodium macrophyllum*) is a CRPR of 1B.1 species. One population of 39 round-leave filaree individuals were observed on the Project site during the 2003 botanical surveys. Round-leave filaree was not detected during the 2014 spring botanical surveys.

Two varieties of lily—club-haired mariposa lily (*Calochortus clavatus* var. *clavatus*) and slender mariposa lily (*Calochortus clavatus* var. *gracilis*)—occur throughout the sage scrub, native grasslands, and annual grasslands on the Project site and were observed during focused botanical surveys. The slender mariposa lily species is a CRPR of 1B.2 species, while the club-haired mariposa lily has a CRPR of 4.3 species. Locations of groupings of these species were first mapped on the Project site in 2002, then again during a 2004 pre-construction survey. Most recently, during the botanical survey in 2014, approximately 1,709 individuals of slender/club-haired mariposa lily hybrids were observed at 36 locations; an additional 22 populations contained plants of varying densities, likely representing an additional 1,000 or more individuals. Therefore, it is likely that over 3,000 individuals occur on the project site (see Exhibit 5.2-2, Special Status Biological Resources). It should be noted that within one population, different individuals may bloom from year to year; therefore, the number that are blooming varies from year to year.

During the previous botanical surveys four CRPR 4 species were observed on the Project site. Peirson's morning-glory (*Calystegia* p*eirsonii*) was observed scattered throughout the Project site. Southwestern spiny rush (*Juncus acutus* ssp. *leopoldi*) was observed along the main Grasshopper Canyon drainage with a population estimate of hundreds of individuals. Bobtail barley (*Hordeum intercedens*) was observed at one location in 1998 which is now approximately 4,350 feet outside the current Project boundary. One mature southern California black walnut (*Juglans californica* var. *californica*), which has a CRPR of 4.2, was observed below Ridge Route Road in the northern portion of the Project site. All of the above mentioned species were observed during the 2014 botanical survey, except bobtail barley.

One new special status plant species, paniculate tarplant (*Deinandra paniculata*), which has a CRPR of 4.2, was detected during the spring 2014 botanical surveys. One population of paniculate tarplant, estimated at hundreds of individuals, was observed on the disturbed, northwest-oriented gas pipeline cut in the northern portion of the project site. The area is surrounded by mixed sage scrub on a west-facing slope (see Exhibit 5.2-2, Special Status Biological Resources).

Special Status Wildlife Species

A summary of special status wildlife species known to occur in the Project region is provided in Table 5.2-4 below. The Los Angeles Audubon maintains a list of Sensitive Bird Species which are bird species at risk of decline or extirpation in Los Angeles County. These species were analyzed for potential to occur on the Project site. Species that did not warrant detailed analysis are not listed in Table 5.2-4. Following the Table is a discussion of those species with potential to occur on the Project site.

TABLE 5.2-4
SPECIAL STATUS WILDLIFE SPECIES KNOWN TO OCCUR IN THE PROJECT REGION

Species	Status		Potential to Occur on the Project site; Results of Surveys
	USFWS	CDFW	
Fairy Shrimp			
Branchinecta conservation conservancy fairy shrimp	FE	—	Not observed during 2004–2005 or during 2014–2015 focused surveys; potentially suitable habitat
Branchinecta longiantenna longhorn fairy shrimp	FE	—	Not observed during 2004–2005 or during 2014–2015 focused surveys; marginally suitable habitat
Branchinecta lynchi vernal pool fairy shrimp	FT	—	Not observed during 2004–2005 or during 2014–2015 focused surveys; potentially suitable habitat
Branchinecta sandiegonensis San Diego fairy shrimp	FE	—	Not observed during 2004–2005 or during 2014–2015 focused surveys; potentially suitable habitat
Streptocephalus woofttoni Riverside fairy shrimp	FE	—	Not observed during 2004–2005 or during 2014–2015 focused surveys; potentially suitable habitat
Fish			
Catostomus santaanae Santa Ana sucker	FT	SSC	Not expected to occur; marginally suitable habitat
Gasterosteus aculeatus williamsoni unarmored threespine stickleback	FE	SE/FP	Not expected to occur; marginally suitable habitat
Gila orcutti arroyo chub	—	SSC	Not expected to occur; marginally suitable habitat
Amphibians			
Anaxyrus californicus arroyo toad	FE	SSC	Not expected to occur; marginally suitable habitat; not observed during 2000 or 2014 focused surveys
Rana draytonii California red-legged frog	FT	SSC	Not expected to occur; marginally suitable habitat; not observed during 2003 focused surveys

TABLE 5.2-4
SPECIAL STATUS WILDLIFE SPECIES KNOWN TO OCCUR IN THE PROJECT REGION

Species	Status		Potential to Occur on the Project site; Results of Surveys
	USFWS	CDFW	
Spea hammondii western spadefoot	—	SSC	Observed during 2014 focused surveys; suitable habitat
Reptiles			
Anniella pulchra pulchra silvery legless lizard	—	SSC	May occur; potentially suitable habitat
Aspidoscelis tigris stejnegeri coastal western whiptail	—	SA	Observed; suitable habitat
Charina trivirgata rosy boa	—	SA	Expected to occur; suitable habitat
Diadophis punctatus similis San Bernardino ringneck snake	—	SA	May occur; potentially suitable habitat
Actinemys marmorata western pond turtle	—	SSC	Not expected to occur; no suitable habitat
Phrynosoma blainvillii Blainville's horned lizard	—	SSC	Expected to occur; suitable habitat
Salvadora hexalepis virgultea coast patch-nosed snake	—	SSC	Expected to occur; suitable habitat
Thamnophis hammondii two-striped garter snake	—	SSC	Not expected to occur; limited marginally suitable habitat
Birds			
Accipiter cooperii Cooper's hawk	—	WL	Observed; expected to occur for nesting; suitable foraging and nesting habitat
Accipiter striatus sharp-shinned hawk	—	WL	Observed; no potential for nesting; suitable foraging habitat; does not typically nest in the Project region
Agelaius tricolor tricolored blackbird	—	SSSC	Observed; expected to occur for foraging migrants; no suitable nesting habitat
Aimophila ruficeps canescens Southern California rufous-crowned sparrow	—	WL	Observed; suitable habitat
Ammodramus savannarum grasshopper sparrow	—	SSC	Observed; suitable habitat
Amphispiza Belli Bell's sage sparrow	—	WL	Observed; suitable habitat
Aquila chrysaetos golden eagle	—	SSC/FP	Observed; suitable foraging habitat; no suitable nesting habitat
Asio otus long-eared owl	—	SSC	Observed; suitable foraging habitat; no suitable nesting habitat
Athene cunicularia burrowing owl	—	SSC	Observed (wintering only); expected to occur for wintering; not expected to occur for nesting; marginally suitable nesting habitat
Buteo regalis ferruginous hawk	—	SSC	Observed; no potential for nesting; suitable foraging habitat; does not typically nest in the Project region
Buteo swainsoni Swainson's hawk	—	ST	Observed as a migrant fly-over; potentially suitable foraging habitat, but no suitable nesting habitat

TABLE 5.2-4
SPECIAL STATUS WILDLIFE SPECIES KNOWN TO OCCUR IN THE PROJECT REGION

Species	Status		Potential to Occur on the Project site; Results of Surveys
	USFWS	CDFW	
Circus cyaneus northern harrier	—	SSC	Observed; may occur for nesting; suitable foraging habitat; potentially suitable nesting habitat
Coccyzus americanus occidentalis western yellow-billed cuckoo	FT	SE	Not expected to occur; no suitable habitat
Dendroica petechia brewsteri yellow warbler	—	SSC	Observed as migrant only during 2014 focused surveys; limited suitable nesting habitat
Elanus leucurus white-tailed kite	—	FP	May occur for foraging and for nesting; suitable foraging and nesting habitat
Empidonax traillii willow flycatcher	—	SE	Observed during 2006 and 2014 focused surveys; suitable migratory habitat but marginal nesting habitat.
Empidonax traillii extimus southwestern willow flycatcher	FE	SE	Potentially observed during 2006 focused surveys; not observed during 1997 focused surveys, not observed during 2000–2005 focused surveys, and not observed during 2014 focused surveys; marginal nesting habitat
Eremophila alpestris actia California horned lark	—	WL	Observed; suitable habitat
Falco columbarius merlin	—	WL	Observed; no potential for nesting; suitable foraging habitat; does not typically nest in the Project region
Falco mexicanus prairie falcon	—	WL	Observed; suitable foraging habitat; limited nesting habitat
Gymnogyps californianus California condor	FE	SE/FP	May occur as a fly-over; not expected to occur for foraging or nesting; potentially suitable foraging habitat; no suitable nesting habitat
Haliaeetus leucocephalus bald eagle	—	SE	May occur as fly-over; no suitable foraging or nesting habitat
Icteria virens yellow-breasted chat	—	SSC	Observed; limited suitable habitat
Lanius ludovicianus loggerhead shrike	—	SSC	Observed; suitable habitat
Polioptila californica coastal California gnatcatcher	FT	SSC	Observed during 2014 and 2015 focused surveys; suitable habitat
Pooecetes gramineus affinis Oregon vesper sparrow	-—	SSC	Observed; suitable wintering habitat.
Vireo bellii pusillus least Bell's vireo	FE	SE	Observed in current study area during focused surveys in 2006 and 2014; may occur for nesting; limited suitable habitat
Xanthocephalus xanthocephalus yellow-headed blackbird	—	SSC	Observed; suitable foraging but no suitable nesting habitat.

TABLE 5.2-4
SPECIAL STATUS WILDLIFE SPECIES KNOWN TO OCCUR IN THE PROJECT REGION

Species	Status		Potential to Occur on the Project site; Results of Surveys
	USFWS	CDFW	
Mammals			
Antrozous pallidus pallid bat	—	SSC	May occur for foraging and roosting; suitable foraging habitat; limited roosting habitat
Corynorhinus townsendii Townsend's big-eared bat	—	CST/SSC	May occur for foraging; not expected to occur for roosting; suitable foraging habitat; no suitable roosting habitat
Euderrna maculatum spotted bat	—	SSC	May occur for foraging and roosting; suitable foraging habitat; limited suitable roosting habitat
Eumops perotis californicus western mastiff bat	—	SSC	May occur for foraging; not expected to occur for roosting; suitable foraging habitat; no suitable roosting habitat
Lasiurus cinereus hoary bat	—	SSC	May occur for foraging; not expected to occur for roosting; suitable foraging habitat; no suitable roosting habitat
Lepus califomicus bennettii San Diego black-tailed jackrabbit	—	SSC	May occur; potentially suitable habitat
Macrotis califomicus California leaf-nosed bat		SSC	Not expected to occur; limited suitable habitat; outside current known range
Myotis ciliolabrum western small-footed myotis	—	SA	May occur for foraging and roasting; suitable foraging habitat; limited roosting habitat
Myotis yumanensis Yuma myotis	—	SA	May occur for foraging; not expected to occur for roosting; limited suitable foraging habitat; no suitable roosting habitat
Onychomys torridus ramona southern grasshopper mouse	—	SSC	May occur; potentially suitable habitat
Taxidea taxus American badger	—	SSC	Observed; suitable habitat

Status Definitions

Federal (USFWS)	**State (CDFW)**
FE Endangered	SE Endangered
FT Threatened	ST Threatened
	SSC Species of Special Concern
	SA Special Animal
	FP Fully Protected
	WL Watch List

Source: BonTerra Psomas 2015.

Fairy Shrimp

Although the Project site is outside the current known range of all federally-listed fairy shrimp species, the range of most fairy shrimp is not well known. The nearest known population of Riverside fairy shrimp is located approximately 22 miles away from the Project site; longhorn fairy shrimp is located approximately 86 miles away from the Project site; vernal pool fairy shrimp is located approximately 12 miles from the Project site; and conservancy fairy shrimp is located 30 miles away from the Project site. Protocol surveys for fairy shrimp were conducted in 2004–

2005, and 2014–2015, and determined that no federally-listed fairy shrimp were present on the Project site.

Fish

No special status fish species are expected to occur on the Project site due to lack of potentially suitable habitat.

Amphibians

Three special status amphibians were identified with potential to occur on the Project site: arroyo toad, California red-legged frog, and western spadefoot. The arroyo toad and California red-legged frog were not observed during focused surveys conducted for these species in 2000 and 2003, respectively. Additionally arroyo toad was not detected during the 2014 focused surveys. However, during all these surveys, the western spadefoot was observed both in the cattle pond and in the ephemeral ponds. The Project site is located outside designated critical habitat areas for the arroyo toad and red-legged frog.

Reptiles

Six special status reptiles were identified with potential to occur on the Project site. The coastal western whiptail was the only special status reptile observed. Table 5.2-4 lists those reptiles that may occur or are expected to occur on the Project site.

Birds

Of the Threatened and Endangered bird species known to occur in the region, five species have been detected, or have the potential to occur on the Project site: Swainson's hawk *(Buteo swainsoni)*, southwestern willow flycatcher California condor (*Gymnogyps californianus*), least Bell's vireo, and coastal California gnatcatcher. Of these four species, only the coastal California gnatcatcher have the potential to breed on the Project site. The remaining three species are not expected to occur for nesting.

Focused surveys for the least Bell's vireo, southwestern willow flycatcher, and coastal California gnatcatcher were conducted in 1997; annually from 2000 through 2006; 2014, and in 2015. The least Bell's vireo has been observed on the Project site over several years. In 2001, two least Bell's vireo territories were observed at the lower end of Grasshopper Canyon in habitat near Castaic Lagoon (outside the current study area); only migrant willow flycatchers were observed. In 2004, a least Bell's vireo was observed in the upper end of Grasshopper Canyon but no territory or breeding was detected; only migrant willow flycatchers were observed. In 2005, two vireo territories were again located in the lower end of Grasshopper Canyon near Castaic Lagoon (outside the current study area); only migrant willow flycatchers were observed. In 2006, the survey area was revised to exclude the lower end of Grasshopper Canyon because the development project proposed at the time would not have impacted that area. Although not included in the 2006 survey area, one pair of least Bell's vireo was incidentally observed in the same area where they had previously been observed at the lower end of Grasshopper Canyon near Castaic Lagoon (outside the current study area). In 2006, two willow flycatchers were observed in the upper end of Grasshopper Canyon. The territorial behavior of these birds at the time suggested to the biologists conducting the surveys that they may be southwestern willow flycatcher. During focused surveys in 2014 least bell's vireo was detected in the upper end of Grasshopper Canyon, but no territory or breeding was detected. The Project site is outside of designated critical habitat areas for these species. Southwestern willow flycatcher was not detected during the 2014 focused surveys. Focused surveys were conducted for coastal

California gnatcatcher in 2014 and 2015, and gnatcatchers were detected during both years and breeding was detected during the 2015 surveys. The Project site is outside of designated critical habitat areas for all three of these species.

Nineteen special status bird species that are not federally or State-listed species with potential to occur on the Project site are listed in Table 5.2-4, and include the Cooper's hawk, sharp-shinned hawk, tricolored blackbird (*Agelaius tricolor*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), grasshopper sparrow (*Ammodramus savannarum*), Bell's sage sparrow, golden eagle, long-eared owl (*Asio otus*), burrowing owl, ferruginous hawk (*Buteo regalis*), northern harrier, white-tailed kite, California horned lark, merlin (*Falco columbarius*), prairie falcon, yellow-breasted chat (*Icteria virens*), loggerhead shrike (*Lanius ludovicianus*), Oregon vesper sparrow (*Pooecetes gramineus affinis*), and yellow-headed blackbird (*Xanthocephalus xanthocephalus*). These species were either observed or they may occur within suitable habitat on the Project site.

Ten of the above mentioned special status bird species are raptors. These species are Cooper's hawk, sharp-shinned hawk, golden eagle, long-eared owl, burrowing owl, ferruginous hawk, northern harrier, white-tailed kite, merlin, and prairie falcon. These nine species were all either observed or have potential to occur on the Project site for foraging. The Cooper's hawk, golden eagle, burrowing owl, northern harrier, white-tailed kite, and prairie falcon all have potential or limited potential to nest on the Project site.

Mammals

Six special status bat species have potential to occur on the Project site (Table 5.2-4). Four of these species, pallid bat (*Antrozous pallidus*), spotted bat (*Euderma maculatum*), hoary bat and western small-footed myotis (*Myotis ciliolabrum*), also have potential or limited potential to roost on the Project site.

Three other special status mammals have potential to occur on the Project site (Table 5.2-4). The San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) and southern grasshopper mouse (*Onychomys torridus ramona*) may occur on the Project site, and American badger was observed on the Project site.

Significant Ecological Areas

Significant Ecological Areas (SEAs) were established in 1980 by Los Angeles County as part of the Los Angeles County General Plan in order to designate areas with sensitive environmental conditions and/or resources. SEA boundaries broadly outline the biotic resources of concern. The Project site is not located within an SEA. SEA boundaries with the region have recently been revised with approval of the Santa Clarita Valley Area Plan or the One Valley One Vision Plan. The study area is not located in a SEA. The closest SEA boundary to the study area is within Castaic Creek portion of the Santa Clara River SEA. This creek is a tributary to Santa Clara River, and is located approximately 4,470 feet southeast of the southernmost Project boundary.

5.2.4 RELEVANT PLANS, POLICIES, AND REGULATIONS

Federal

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973 protects plants and animals that the government has listed as "Endangered" or "Threatened". The FESA is implemented by enforcing

Sections 7 and 9 of the Act. A federally listed species is protected from unauthorized "take" pursuant to Section 9 of the FESA. "Take", as defined by the FESA, means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or to attempt to engage in any such conduct. All persons are presently prohibited from taking a federally listed species unless and until (1) the appropriate Section 10(a) permit has been issued by the USFWS or (2) an Incidental Take Permit is obtained as a result of formal consultation between a federal agency and the USFWS pursuant to Section 7 of the FESA and the implementing regulations that pertain to it (*Code of Federal Regulations* [CFR], Title 50, Section 402). "Person" is defined in the FESA as an individual, corporation, partnership, trust, association, or any private entity; any officer, employee, agent, department or instrument of the federal government; any State, Municipality, or political subdivision of the State; or any other entity subject to the jurisdiction of the U.S. The Project Applicant is a "person" for purposes of the FESA.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 USC 661–666), enacted in 1934, applies to any federal project where the waters of any stream or other body of water are impounded, diverted, deepened, or otherwise modified. Project proponents are required to consult with the USFWS and the appropriate State wildlife agency. These agencies prepare reports and recommendations that document project effects on wildlife and identify measures that may be adopted to prevent loss or damage to wildlife resources. The term "wildlife" includes both animals and plants. Provisions of the Act are implemented through the NEPA process and Section 404 permit process.

Section 404 and 401 of the Clean Water Act of 1972

Section 404 of the Clean Water Act (CWA, 33 USC 1251 et seq.) regulates the discharge of dredged or filled material into "Waters of the U.S.", including wetlands. "Waters of the U.S." include navigable coastal and inland waters, lakes, rivers, streams, and their tributaries; interstate waters and their tributaries; wetlands adjacent to such waters; intermittent streams; and other waters that could affect interstate commerce. The USACE is the designated regulatory agency responsible for administering the 404 permit program and for making jurisdictional determinations. This permitting authority applies to all "Waters of the U.S." where the material has the effect of (1) replacing any portion of "Waters of the U.S." with dry land or (2) changing the bottom elevation of any portion of "Waters of the U.S.". These fill materials would include sand, rock, clay, construction debris, wood chips, and materials used to create any structure or infrastructure in the "Waters of the U.S.". Dredge and fill activities are typically associated with development projects; water-resource related projects; infrastructure development and wetland conversion to farming; forestry; and urban development.

Under Section 401 of the CWA, an activity requiring a USACE Section 404 permit must obtain a State Water Quality Certification (or waiver thereof) to ensure that the activity will not violate established State water quality standards. The U.S. Environmental Protection Agency (USEPA) is the federal regulatory agency responsible for implementing the CWA. However, the State Water Resources Control Board (SWRCB), in conjunction with the 9 California Regional Water Quality Control Boards (RWQCBs), has been delegated the responsibility for administering the Section 401 water quality certification program.

The RWQCB is the primary agency responsible for protecting water quality in California through the regulation of discharges to surface waters under the CWA and the California Porter-Cologne Water Quality Control Act. The RWQCB's jurisdiction extends to all "Waters of the State" and to all "Waters of the U.S.", including wetlands (isolated and non-isolated). Section 401 requires the RWQCB to provide "certification that there is reasonable assurance that an activity which may result in the discharge to 'waters of the U.S.' will not violate water quality standards". Water Quality

Certification must be based on a finding that the proposed discharge will comply with water quality standards, which contain numeric and narrative objectives that can be found in each of the 9 Regional Boards' Basin Plans.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 may have originally been intended to reduce hunting of migratory birds, but has been interpreted more broadly by some resource agencies in recent years. The broader interpretation is that bird nests containing eggs or young are protected under the MBTA from any disturbance that may directly or indirectly affect the success of the nesting attempt regardless of the intent of the activity that caused the disturbance. Although federal agencies have not enforced this interpretation, some State and local agencies have referred to it as a reason to require avoidance measures as part of project approval permits.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 USC 668) provides for the protection of the bald eagle (*Haliaeetus leucocephalus*) and the golden eagle (*Aquila chrysaetos*) by prohibiting—except under certain specified conditions—the taking, possession, and commerce of these 2 bird species. The 1972 amendments increased penalties for violating provisions of the Act and strengthened other enforcement measures. A 1978 amendment authorizes the Secretary of the Interior to permit the taking of golden eagle nests that interfere with resource development or recovery operations. A 1994 Memorandum (59 CFR 22953, April 29, 1994) from President William J. Clinton to the heads of Executive Agencies and Departments sets out the policy concerning collection and distribution of eagle feathers for Native American religious purposes.

State

California Endangered Species Act

Pursuant to the California Endangered Species Act (CESA) and Section 2081 of the *California Fish and Game Code*, an Incidental Take Permit from the CDFW is required for projects that could result in the take of a State-listed Threatened or Endangered species. Under the CESA, a "take" is defined as an activity that would directly or indirectly kill an individual of a species, but the definition does not include "harm" or "harass", as the federal act does. As a result, the criteria for a take under the CESA is less strict than that under the FESA. A CDFW-authorized Incidental Take Permit under Section 2081(b) is required when a project could result in the take of a State-listed Threatened or Endangered Species.

California Fish and Game Code

California Native Plant Protection Act

The Native Plant Protection Act (NPPA; *California Fish and Game Code,* Sections 1900–1913) of 1977 directed the CDFW to carry out the Legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA gave the California Fish and Game Commission the power to designate native plants as "Endangered" or "Rare" and to protect Endangered and Rare plants from take. The CESA expanded on the original NPPA and enhanced legal protection for plants, but the NPPA remains part of the *California Fish and Game Code.* To align with federal regulations, CESA created the categories of "Threatened" and "Endangered" species. It converted all "Rare" animals in the Act as Threatened species, but did not do so for Rare plants. Thus, there are three listing categories for plants in California: Rare, Threatened,

and Endangered. Because Rare plants are not included in CESA, mitigation measures for impacts to Rare plants are specified in a formal agreement between the CDFW and the project proponent.

Chapter 6 of the California Fish and Game Code

Sections 1600–1616 of the *California Fish and Game Code* require a State, local governmental agency, or public utility to notify the CDFW before beginning construction on a project that will (1) divert, obstruct, or change the natural flow or the bed, bank, channel, or bank of any river, stream, or lake; (2) use materials from a streambed; or (3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake. When an existing fish or wildlife resource may be substantially adversely affected, the CDFW is required to propose reasonable project changes to protect the resource. These modifications are formalized in a Streambed Alteration Agreement (SAA) that becomes part of the plans, specifications, and estimates documents for a project.

The term "stream," which includes creeks and rivers, is defined in the CCR as follows: "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (14 CCR 1.72). In addition, the term "stream" can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. Stream-dependent riparian habitat is defined in the *California Fish and Game Code* (Section 2785) as "lands which contain habitat which grows close to and which depends upon soil moisture from a nearby freshwater source". Removal of stream-dependent riparian vegetation may also require a Streambed Alteration Agreement from the CDFW.

Section 1802

State law confers upon the CDFW the trustee responsibility and authority for the public trust resource of wildlife in California. The CDFW may play various roles under the California Environmental Quality Act (CEQA) process. By State law, the CDFW has jurisdiction over the conservation, protection, and management of the wildlife, native plants, and habitat necessary to maintain biologically sustainable populations. The CDFW shall consult with lead and responsible agencies and shall provide the requisite biological expertise to review and comment on environmental documents and impacts arising from project activities.

As a trustee agency, the CDFW has jurisdiction over certain resources held in trust for the people of California. Trustee agencies are generally required to be notified of CEQA documents relevant to their jurisdiction, whether or not these agencies have actual permitting authority or approval power over aspects of the underlying project (*California Code of Regulations* [CCR], Title 14, Section 15386). The CDFW, as a trustee agency, must be notified of CEQA documents regarding projects involving fish and wildlife of the state as well as Rare and Endangered native plants, wildlife areas, and ecological reserves. Although, as a trustee agency, the CDFW cannot approve or disapprove a project, lead and responsible agencies are required to consult with them. The CDFW, as the trustee agency for fish and wildlife resources, shall provide the requisite biological expertise to review and comment upon environmental documents and impacts arising from project activities and shall make recommendations regarding those resources held in trust for the people of California (*California Fish and Game Code*, Section 1802).

Sections 3503, 3503.5, and 3513

Nesting birds are protected in Sections 3503, 3503.5, and 3513 of the *California Fish and Game Code.* These sections state that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code. Section 3503.5 explicitly provides protection for all birds of prey, including their eggs and nests. Section 3513 makes it unlawful to take or possess any migratory non-game bird as designated in the MBTA.

Regional

County of Los Angeles Tree Ordinance

Within Los Angeles County, the County of Los Angeles Tree Ordinance (Ordinance No. 22.56.16) stipulates that a person shall not cut, destroy, remove, relocate, inflict damage, or encroach into the protected zone of any tree of the oak tree genus that is 8 inches or more in diameter 4½ feet above mean natural grade or, in the case of oaks with multiple trunks, a combined diameter of 12 inches or more of the 2 largest trunks, without first obtaining a permit.

County of Los Angeles General Plan

The current General Plan requires the NorthLake development to address the following policies, as stated in Conservation/Natural Resources Element. The Project's consistency with the following policies is presented in Section 5.9, Land Use.

Conservation/Natural Resources Element

- **Policy C/NR 3.1:** Conserve and enhance the ecological function of diverse natural habitats and biological resources.
- **Policy C/NR 3.10:** Require environmentally superior mitigation for unavoidable impacts on biologically sensitive areas, and permanently preserve mitigation sites.
- **Policy C/NR 3.11:** Discourage development in riparian habitats, streambeds, wetlands, and other native woodlands in order to maintain and support their preservation in a natural state, unaltered by grading, fill, or diversion activities.

Santa Clarita Valley Area Plan

The SCVAP 2012 requires the *NorthLake Specific Plan* to address the following policies from its Conservation and Open Space Element. The Project's consistency with the following policies is presented in Section 5.9, Land Use.

Conservation and Open Space Element

- **Policy CO-1.1.3:** In making land use decisions, encourage development proposals that preserve natural ecosystem functions and enhance the health of the surrounding community.
- **Policy CO-3.1.2:** Avoid designating or approving new development that will adversely impact wetlands, floodplains, threatened or endangered species and habitat, and water bodies supporting fish or recreational uses, and establish an adequate buffer area as deemed appropriate through site specific review.
- **Policy CO-3.1.3:** On previously undeveloped sites ("greenfields"), identify biological resources and incorporate habitat preservation measures into the site plan, where

appropriate. (This policy will generally not apply to urban infill sites, except as otherwise determined by the reviewing agency).

- **Policy CO-3.1.5:** Promote the use of site-appropriate native or adapted plant materials, and prohibit use of invasive or noxious plant species in landscape designs.
- **Policy CO-3.1.6:** On development sites, preserve and enhance natural site elements including existing water bodies, soil conditions, ecosystems, trees, vegetation and habitat, to the extent feasible.
- **Policy CO-3.1.7:** Limit the use of turf-grass on development sites and promote the use of native or adapted plantings to promote biodiversity and natural habitat.
- **Policy CO-3.1.8:** On development sites, require tree planting to provide habitat and shade to reduce the heat island effect caused by pavement and buildings.
- **Policy CO-3.1.9:** During construction, ensure preservation of habitat and trees designated to be protected through use of fencing and other means as appropriate, so as to prevent damage by grading, soil compaction, pollution, erosion or other adverse construction impacts.
- **Policy CO-3.1.10:** To the extent feasible, encourage the use of open space to promote biodiversity.
- **Policy CO-3.2.1:** Protect wetlands from development impacts, with the goal of achieving no net loss (or functional reduction) of jurisdictional wetlands within the planning area.
- **Policy CO-3.2.3:** Ensure protection of any endangered or threatened species or habitat, in conformance with State and federal laws.
- **Policy CO-3.3.3:** Identify and protect one or more designated wildlife corridors linking the Los Padres and Angeles National Forests through the Santa Clarita Valley (the San Gabriel-Castaic connection).
- **Policy CO-3.3.5:** Encourage connection of natural open space areas in site design, to allow for wildlife movement.
- **Policy CO-3.4.1:** Coordinate with the United States Forest Service on discretionary development projects that may have impacts on the National Forest.
- **Policy CO-3.5.1:** Continue to plant and maintain trees on public lands and within the public right-of-way to provide shade and walkable streets, incorporating measures to ensure that roots have access to oxygen at tree maturity, such as use of porous concrete.
- **Policy CO-3.5.2:** Where appropriate, promote planting of trees that are native or climactically appropriate to the surrounding environment, emphasizing oaks, sycamores, maple, walnut, and other native species in order to enhance habitat, and discouraging the use of introduced species such as eucalyptus, pepper trees, and palms except as ornamental landscape features.
- **Policy CO-3.6.1:** Minimize light trespass, sky-glow, glare, and other adverse impacts on the nocturnal ecosystem by limiting exterior lighting to the level needed for safety and comfort; reduce unnecessary lighting for landscaping and architectural purposes, and encourage reduction of lighting levels during non-business nighttime hours.

- **Policy CO-3.6.2:** Reduce impervious surfaces and provide more natural vegetation to enhance microclimates and provide habitat. In implementing this policy, consider the following design concepts:
    - Consideration of reduced parking requirements, where supported by a parking study and/or through shared use of parking areas;
    - Increased use of vegetated areas around parking lot perimeters; such areas should be designed as bioswales or as otherwise determined appropriate to allow surface water infiltration;
    - Use of connected open space areas as drainage infiltration areas in lieu of curbed landscape islands, minimizing the separation of natural and landscaped areas into isolated "islands"; and
    - Breaking up large expanses of paving with natural landscaped areas planted with shade trees to reduce the heat island effect, along with shrubs and groundcover to provide diverse vegetation for habitat.
- **Policy CO-3.6.5:** Ensure revegetation of graded areas and slopes adjacent to natural open space areas with native plants (consistent with fire prevention requirements).

5.2.5 THRESHOLD CRITERIA

Thresholds Addressed in the Initial Study

The Initial Study prepared for the proposed Project (included in Appendix A) and circulated with the Notice of Preparation (NOP) concludes that Project implementation would not result in significant impacts for the thresholds of significance listed below. Further analysis of these thresholds in this Draft SEIR is not required (a summary of the analysis presented in the Initial Study is provided in Section 6.1, Effects Determined Not to be Significant, of this Draft SEIR):

- Would the project convert oak woodlands (as defined by the state, oak woodlands are oak stands with greater than 10% canopy cover with oaks at least 5 inch in diameter measured at 4.5 feet above mean natural grade) or otherwise contain oak or other unique native trees (junipers, Joshuas, southern California black walnut, etc.)?
- Would the project conflict with any local policies or ordinances protecting biological resources, including Wildflower Reserve Areas (L.A. County Code, Title 12, Ch. 12.36), the Los Angeles County Oak Tree Ordinance (L.A. County Code, Title 22, Ch. 22.56, Part 16), the Significant Ecological Areas (SEAs) (L.A. County Code, Title 22, § 22.56.215), and Sensitive Environmental Resource Areas (SERAs) (L.A. County Code, Title 22, Ch. 22.44, Part 6)?
- Would the project conflict with the provisions of an adopted state, regional, or local habitat conservation plan?

Thresholds Addressed in this Supplemental Environmental Impact Report

The County of Los Angeles utilizes an Initial Study Questionnaire with Thresholds of Significance specific to the County. The Initial Study for the proposed Project concludes that additional analysis of the following thresholds of significance is required in this Draft SEIR. The Project will be considered to have a significant effect related to biological resources if the Project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional

plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

- Have a substantial adverse effect on any sensitive natural communities (e.g., riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetlands) identified in local or regional plans, policies, regulations, or by CDFW or USFWS.
- Have a substantial adverse effect on federally or state protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, and drainages) or waters of the United States, as defined by Section 404 of the federal Clean Water Act or California Fish and Game Code Section 1600, et seq. through direct removal, filling, hydrological interruption, or other means.
- 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.

In addition, current regulatory guidelines for the protection of biological resources, including wetlands and other waters of the United States, fisheries habitats, tree resources, and species of special concern identify thresholds of significance for biological resources. Generally, a finding of significance under CEQA is made if a project would result in substantial impacts to species or communities of special concern, including federally or State-listed species. In the absence of regulatory thresholds, impacts are determined based on whether an action would: (1) substantially diminish population numbers of a species or distribution of a habitat type within the region or (2) eliminate the function and/or value of a biological resource in the region. Both the resource itself and how that resource fits into a regional context must be considered to evaluate whether an impact on biological resources would result in a "substantial adverse effect." The Santa Clarita Valley is considered the regional setting for the proposed Project.

5.2.6 RELEVANT PROJECT CHARACTERISTICS

The Project includes the preservation of approximately 325.50 acres of undeveloped natural land. In addition, the southeastern reach of Grasshopper Creek will be preserved as a significant habitat mitigation and restoration area. Additionally, **i**n accordance with the *NorthLake Specific Plan*, whenever possible, overall plant material selection for a given area shall have compatible drought resistant characteristics, and irrigation programming should be designed to minimize water applications so that impacts to adjacent natural areas are minimized.

5.2.7 IMPACT ANALYSIS AND MITIGATION MEASURES

Impact Analysis

Threshold 5.2-1 Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Special Status Plants

Eight special status plant species are known to occur on the Project site: round-leaved filaree club-haired mariposa lily, slender mariposa lily, Peirson's morning-glory, paniculate tarplant, bobtail barley, southern California black walnut, and southwestern spiny rush.

Exhibit 5.2-2, Special Status Biological Resources, shows the areas where the club-haired mariposa lily and slender mariposa lily have been observed during current surveys. During the most recent focused surveys (2014), approximately 1,709 individuals of slender/club-haired mariposa lily hybrids were observed at 36 locations; an additional 22 populations contain plants of varying densities, likely representing an additional 1,000 or more individuals. Therefore, it is likely that over 3,000 individuals occur in the study area. However, the existing lily population may be larger than this and under more favorable weather conditions more individuals may detected. Although the majority of the lilies occurring on site are likely hybrids between club-haired and slender mariposa lily and both species are locally relatively common, due to the rarity of the slender mariposa lily throughout its range, and the large population occurring on site, the loss of these lilies would be considered a potentially significant impact. These impacts would be reduced to less than significant through implementation of MM 5.2-4 which requires a Lily Mitigation Plan. This mitigation plan shall include the transplantation of lily bulbs from impact areas and shall include detailed performance criteria in an effort to sustain the population long-term in the region.

Round-leaved filaree was previously found at one location in 2003 (39 individuals) in annual grassland in the impact area. Impacts on this species would be considered adverse, and potentially significant due to its lack of abundance throughout its range. Therefore, mitigation would be required for this species. Implementation of MM 5.2-5 requiring a Special Status Plant Species Restoration Plan grassland replacement at a 1:1 ratio to compensate for the loss of round-leaved filaree individuals impacted by the Project. As a result of this mitigation measure, round-leaved filaree is expected to persist in the region following Project implementation.

Peirson's morning glory was observed throughout the native upland vegetation types, especially in sage scrub-grassland ecotone areas, as well as in disturbed areas along the side of Ridge Route Road. Impacts on these species would be considered adverse, but less than significant due to the low status of these species and their relative abundance throughout their range and no mitigation is required. However, impacts on these species are expected to be reduced through the implementation of mitigation requirements for vegetation types (MM 5.2-2 and MM 5.2-6, MM 5.2-7, and MM 5.2-8) and special status plants (MM 5.2-5).These mitigation measures would require preservation or restoration of impacted sage scrub, foothill needlegrass grassland, and California annual grassland/wildflower fields; habitat types in which this species is found. Additionally, restored habitats would include this species as a target for seed mix. These measures combined would lessen any adverse impacts due to Project implementation by providing for long-term population sustainment in the region.

Southwestern spiny rush occurs throughout much of the main drainage in Grasshopper Canyon in the study area. The population detected in 2014 was estimated at hundreds of individuals. Impacts on this species would be considered potentially significant due to its relative lack of abundance throughout its range. Therefore, mitigation would be required. Implementation of MM 5.2-5, which requires a Special Status Plant Species Restoration Plan, would reduce this impact to a level considered less than significant through replacement at a 1:1 ratio to compensate for the loss of southwestern spiny rush individuals impacted by the Project. As a result of this mitigation measure, southwestern spiny rush is expected to persist in the region following Project implementation.

Paniculate tarplant was found at one location in California Sagebrush – California Buckwheat Scrub in the study area during the 2014 focused surveys. Impacts on this species would be considered adverse and potentially significant due its relative lack of abundance throughout its range. Therefore, mitigation would be required. Implementation of MM 5.2-5 which requires a Special Status Plant Species Restoration Plan, would reduce this impact to a level considered less than significant through replacement at a 1:1 ratio to compensate for the loss of paniculate

tarplant individuals impacted by the Project. As a result of this mitigation measure, paniculate tarplant is expected to persist in the region following Project implementation.

Southern California black walnut was observed along the road in the southern portion of the study area. Based upon its location and confinement to this particular area of the Project site, it appears that these trees were planted and are not native to the site. These trees are not expected to be impacted by Project development and no mitigation is required.

Special Status Wildlife

Focused surveys for special status fairy shrimp were conducted in 2004–2005, 2013–2014, and 2014–2015 and determined that special status fairy shrimp species were absent from the Project site. Therefore, there would be no impact on these species and no mitigation would be required.

No special status fish species are expected to occur in the Project site because suitable habitat supporting specials status fish species does not occur within Project boundaries, or immediately adjacent, and therefore there would be no impact on special status fish species.

The arroyo toad and the California red-legged frog were determined to be absent from the Project site during focused surveys and are not expected to occur in the future due to isolation from known populations of these species. Therefore, there would be no impact on these species and no mitigation would be required.

The western spadefoot was observed incidentally during previous amphibian surveys, and in the focused surveys conducted for this species in 2014. The cattle pond, ephemeral pond, and other areas in the study area that pond water provide potentially suitable breeding habitat for the western spadefoot. Since this Grasshopper Canyon population is one of few known populations in the region and Project impacts would result in the loss of these populations (or a substantial portion thereof), impacts on this species would be considered significant according to Section 15380 of the State CEQA guidelines. Implementation of MM 5.2-9 which requires a western spadefoot relocation program, would reduce this impact to a less than significant level through translocation of individuals to suitable habitat. This measure would result in substantial avoidance of direct impacts to the western spadefoot and as a result the western spadefoot is expected to persist in the region following project implementation.

Special status reptile species potentially occurring in the Project site include the silvery legless lizard, coastal western whiptail (*Aspidoscelis tigris stejnegeri*), rosy boa (*Charina trivirgata*), San Bernardino ring-necked snake, Blainville's horned lizard, and coast patch-nosed snake. The loss of native habitat would be considered adverse but less than significant impact for these species due to the availability of habitat throughout in the project vicinity and region. Direct impacts to special status reptile species may be considered potentially significant. Implementation of MM 5.2-10, which would require a biological monitor during vegetation clearing activities (and as-needed), would reduce this impact to a less than significant level. A Biologist(s) would conduct sweeps prior to construction activities and relocate special status reptiles as necessary to avoid direct impacts. As a result, substantial avoidance of direct impacts to special status reptiles would occur and special status reptiles are expected to persist in the region following project implementation.

Several federal and/or State-listed Threatened or Endangered bird species occur in the project region; some are not expected to occur in the Project site due to lack of suitable habitat. Swainson's hawk (*Buteo swainsoni*) has been observed during surveys as a spring migrant fly-over in the study area, but is not expected to occur for nesting due to a lack of suitable habitat. Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) is not expected to occur on the

Project site because it does not contain habitat extensive enough for this species. The California condor (*Gymnogyps californianus*) and bald eagle (*Haliaeetus leucocephalus*) may occur as fly-overs in the study area, but are not expected to occur for foraging or nesting due to a lack of suitable nesting (both species) and foraging (eagle) habitat. No impacts to the federal and/or State-listed Threatened or Endangered species mentioned above are expected to occur, therefore, no mitigation is required.

Occasional single tricolored blackbirds have been observed foraging on the Project site. There is no suitable nesting habitat within or in the vicinity of the Project site. This is a highly colonial species that requires protection of nesting colonies and areas where the colonies forage in flocks; therefore, project implementation is not expected to impact this species. Two other species, southwestern willow flycatcher and least Bell's vireo, have the potential to occur in riparian vegetation located along Grasshopper Canyon. Focused surveys for these species conducted in 1997, 2000 to 2006, and in 2014 have not found any nesting activity in the study area. In 2001, two least Bell's vireo territories were observed at the lower end of Grasshopper Canyon in habitat near Castaic Lagoon (outside the current study area); only migrant willow flycatchers were observed. Additionally, an unpaired male least Bell's vireo was detected on May 1 to 22, 2004, and a transient male on April 16, 2014, in upper Grasshopper Canyon. These surveys also identified two willow flycatchers in upper Grasshopper Canyon that exhibited territorial behavior at the time to the biologists conducting the surveys in 2006; however, they were last observed on June 17, 2006, and no nesting behavior was observed. The proposed Project would not directly impact the areas where the flycatchers and vireo were detected in 2006 and 2004, respectively, but would impact a total of approximately 12.34 acres of riparian habitat that could potentially be occupied by these species in future years. Impacts on riparian habitat would be considered potentially significant because the Project site has been used by these species. Mitigation Measures MM 5.2-1, MM 5.2-2, MM 5.2-3 and MMs 5.2-8, MM 5.2-10, and MM 5.2-11 would reduce this impact to less than significant through biological monitoring during vegetation removal and preservation, creation, and enhancement of habitat potentially used by these species. These measures would ensure these species would persist in the region through replacing potentially suitable habitat impacted at a 2:1 ratio.

The coastal California gnatcatcher was observed on the Project site during 2014 and 2015 focused surveys. An adult female and male coastal California gnatcatcher were observed at opposite ends of the study area in Grasshopper Canyon in 2014, but were not paired at that time. In 2015, a pair, detected at the northern edge of the site, nested successfully on the Project site and within the Project buffer. The nesting observation represents the northernmost known breeding location for this species. Project implementation would impact the coastal sage scrub habitat that supported nesting coastal California gnatcatchers in 2015, and 634.70 acres of sage scrub vegetation potentially used by the coastal California gnatcatcher for breeding, foraging, or dispersal. These impacts would be considered potentially significant and mitigation would be required. Implementation of MM 5.2-1**,** MM 5.2-2**,** MM 5.2-6, MM 5.2-12, and MM 5.2-13 would reduce these significant impacts to a level that is considered less than significant through biological monitoring during vegetation removal and preservation, creation, and enhancement of habitat potentially used by the coastal California gnatcatcher. These measures would ensure the coastal California gnatcatcher would persist in the region through replacing potentially suitable habitat impacted at a 2:1 ratio. Additionally, MM 5.2-15 requires consultation with CDFW within the framework of Section 7 through the USACE regulatory permitting process. If required by the USFWS, a Biological Assessment will be provided to support the Service's Biological Opinion.

A variety of bird species that are considered special status, but are not listed as Threatened or Endangered by federal or State resources agencies occur or potentially occur on the Project site. These species include nine passerine bird species: southern California rufous-crowned sparrow, grasshopper sparrow, Bell's sage sparrow, yellow warbler (*Dendroica petechia brewsteri*),

California horned lark (*Eremophila alpestris actia*), yellow-breasted chat, loggerhead shrike, Oregon vesper sparrow, and yellow-headed blackbird. Project implementation would result in the loss of 423.11 acres of grassland habitats that are used by the Oregon vesper sparrow in winter, and by the grasshopper sparrow and California horned lark in summer for breeding. This would be an adverse impact on these three species, but not substantial enough on a regional basis to warrant a finding of significance under Section 15380 of the State CEQA Guidelines because the Project would not impact a substantial population of these species and would not cause regional populations to drop below self-sustaining levels. Project implementation would result in the loss of 634.70 acres of sage scrub habitat that is potentially used for breeding by the Bell's sage sparrow. This would be an adverse impact on this species, but is not considered substantial enough on a regional basis to warrant a finding of significance under Section 15380 of the State CEQA Guidelines because the Project would not impact a substantial population of Bell's sage sparrow and would not cause regional populations to drop below self-sustaining levels. The yellow warbler and yellow-breasted chat breed in riparian habitats. Project implementation would result in the loss of 12.35 acres of riparian habitats that would be considered adverse but not substantial enough on a regional basis to warrant a finding of significance under Section 15380 of the State CEQA Guidelines because the Project would not impact a substantial population of yellow warbler or yellow-breasted chat and would not cause regional populations to drop below self-sustaining levels. The loggerhead shrike uses a combination of habitat for wintering and breeding; therefore, project implementation would result in the loss of 1,070.16 combined acres of grassland, coastal sage scrub, and riparian habitats potentially used by this species. These impacts would be considered adverse but not substantial enough on a regional basis to warrant a finding of significance under Section 15380 of the State CEQA Guidelines for the loggerhead shrike because the Project would not impact a substantial population of loggerhead shrike and would not cause regional populations to drop below self-sustaining levels. The potential for direct mortality for the special status bird species mentioned above is expected to be very low due to high mobility of these species. The acreage removed of the various vegetation types which potentially support these species is adverse but unlikely to represent a substantial portion of the regionally available habitat, and therefore would not be considered a significant impact. Therefore, no mitigation would be required; however, any potential impacts would be reduced through implementation of MMs 5.2-6, 5.2-7, 5.2-8, and 5.2-11 which provide for native vegetation enhancement, restoration, and preservation of sage scrub, foothill needlegrass grassland, California annual grassland/wildflower fields, and riparian vegetation types. The Project site does not provide suitable nesting habitat for the yellow-headed blackbird, and Project implementation is not expected to have adverse impacts on the yellow-headed blackbird because it is not expected to occur for breeding and therefore Project would not impact nesting habitat for that species and would not cause regional populations to drop below self-sustaining levels.

The proposed project would result in the loss of suitable foraging habitat for a variety of raptor species such as the Cooper's hawk, sharp-shinned hawk, golden eagle, long-eared owl, ferruginous hawk, Swainson's hawk, northern harrier, white-tailed kite, merlin (*Falco columbarius*), and prairie falcon. Of these species, the golden eagle and white-tailed kite are also considered Fully Protected species. This foraging habitat is located in the foothills, a topographical area where relatively abundant open spaces still remain in the region. The loss of 1,070.16 acres of foothill foraging habitats consisting of grasslands, coastal sage scrub, and riparian vegetation types for these raptor species would contribute to an ongoing cumulative loss of regional and local foraging habitat that is considered adverse but less than significant under Section 15380 of the State CEQA Guidelines because the Project would not impact a substantial population of the raptor species mentioned above and would not cause regional populations to drop below self-sustaining levels. The Cooper's hawk, golden eagle, northern harrier, white-tailed kite, and prairie falcon have potential to nest in the study area. Should an active raptor nest (common or special status species) be found in the study area, the loss of the nest due to Project implementation would be considered a violation of Sections 3503, 3503.5, and 3513 of the *California Fish and*

Game Code, and would be considered significant. Implementation of MM 5.2-12 and MM 5.2-13 would reduce this impact to less than significant through requiring pre-construction nesting raptor surveys and providing a biological monitor during vegetation removal activities.

The burrowing owl winters on the Project site. This is an unusual wintering location for this species, since it is located in the foothills rather than on the valley floor. The focused surveys determined that the Project site is only used by the burrowing owls for wintering and not breeding. Breeding or wintering populations of burrowing owl have been almost completely extirpated from the coastal slope of southern California; therefore, impacts to this wintering population would be considered potentially significant. Implementation of MM 5.2-12, MM 5.2-13, and MM 5.2-14 would reduce impacts to less than significant. These mitigation measures require pre-construction wintering owl surveys, and if active wintering burrows are detected within the Project impact boundary, artificial burrows outside the impact boundary within suitable habitat would be constructed at a 1:1 ratio, ensuring a substantial reduction in potential impacts during and after Project implementation.

The proposed Project would potentially impact foraging habitat for the several bat species, including pallid bat, Townsend's big-eared bat (*Corynorhinus townsendii*), spotted bat, western mastiff bat (*Eumops perotis californicus*), hoary bat, western small-footed myotis (*Myotis ciliolabrum*), and Yuma myotis (*Myotis yumanensis*). This foraging habitat is located in the foothills, a topographical area where relatively abundant open spaces still remain in the region. The loss of 1,070.16 acres of foothill foraging habitats consisting of grasslands, coastal sage scrub, and riparian vegetation types for these bat species would contribute to an ongoing cumulative loss of regional and local foraging habitat. This impact is considered adverse but less than significant under Section 15380 of the State CEQA Guidelines because the Project would not impact a substantial population of the bat species mentioned above and would not cause regional populations to drop below self-sustaining levels.

The study area provides potential, but limited, daytime roosting opportunities for bat species such as pallid bat, spotted bat, and small-footed myotis. Areas such as shallow voids between or under rocks, rock crevices, and tree foliage (particularly western sycamore) can potentially provide day roosting habitat. Habitat that could potentially support maternity or hibernation roosts, do not occur in the study area. Maternity and hibernation roost generally include areas such as rock crevices, spaces between rocks in rock outcrops, and mines or caves. The study area contains few large rocks or boulders with fractures/cavities or rock outcrops. Most of the larger rocks in the study area are associated with creek bottoms. There are some areas on steep slopes, mostly in the northern portion of the study area, that contain exposed rocks, but these rocks are generally not assembled into rock outcrops. Caves and mines do not occur in the study area. Project implementation may impact bats directly and indirectly if large trees or rocky areas are used for roosting by bats. Roosting habitat in the study area is considered to be marginal and unable to support large numbers of bats; therefore, this impact would contribute to an ongoing cumulative loss of regional roosting habitat that is considered adverse but less than significant under Section 15380 of the State CEQA Guidelines. The direct loss of roosting bats, however, would be considered potentially significant and would require mitigation. Implementation of MM 5.2-12 and 5.2-20 would reduce this impact to a level considered less than significant. These measures require a biologist during vegetation removal and pre-construction bat surveys, including methods for avoiding direct impacts to bats.

Three other species status mammal species are either potentially present (San Diego black-tailed jackrabbit and southern grasshopper mouse) or were observed (American badger) on the Project site. Project implementation would result in the loss of 1,070.16 combined acres of grassland, coastal sage scrub, and riparian habitats that provide potentially suitable habitat for the San Diego black-tailed jackrabbit and southern grasshopper mouse and suitable habitat for the American

badger. These impacts would be considered adverse but not substantial enough on a regional basis to warrant a finding of significance under Section 15380 of the State CEQA Guidelines for these three species because the Project would not impact a substantial population of these species mentioned above and would not cause regional populations to drop below self-sustaining levels.

Indirect Impacts

Occupation of the project would have indirect impacts on wildlife due to noise, nighttime lighting, and other human activities. Invasive exotic plant species may also indirectly impact the remaining open space.

Noise

Implementation of the proposed development (modification of land use) would result in an increase of existing noise levels as identified in Section 5.10, Noise. This increase in noise would disturb habitat remaining in the vicinity adjacent to the development. The noise-related stress on wildlife in the study area and vicinity may extirpate species from the remaining natural open space, leaving only wildlife tolerant of human activity. The increased disturbed area along the edges is identified as an "edge effect." The number of these edges increases as habitat is fragmented and results in magnification of this impact. The long-term "edge effect" noise increase, in addition to the increased edge effects from habitat fragmentation and habitat loss, would be considered potentially significant as it would contribute to an incremental loss of viable habitat. Because most species in the vicinity of the study area are not listed as Threatened or Endangered by State or federal resource agencies, these impacts are considered adverse but not significant. However, the southwestern willow flycatcher, coastal California gnatcatcher, and least Bell's vireo, if present, and potential nesting raptor species, would incur temporary short-term impacts from construction noise if present in the vicinity of the Project impact area and may be temporarily displaced due to these disturbances. Indirect noise impacts on these species would be considered potentially significant because these species are protected by federal and State wildlife agencies. Impacts on these species would be reduced to less than significant with implementation of MMs 5.2-16 and 5.2-18 which requires transition zones to screen noise from the development as well as a Fencing Plan to deter human activity in natural areas.

Nighttime Lighting

As an indirect effect, lighting of infrastructure and developed areas would inadvertently result in impacts to the behavioral patterns of nocturnal and crepuscular (i.e., active at dawn and dusk) wildlife at adjacent natural open space areas. Small, ground-dwelling animals that use the darkness to hide from predators and specialized night foragers (owls) would be most affected by this impact. As adjacent land is primarily undeveloped high-quality wildlife habitat, the increased lighting from the proposed development, in addition to the increased edge effects from habitat fragmentation and habitat loss, would be considered potentially significant because it would contribute to an additional incremental loss of habitat. Implementation of MM 5.2-17 would reduce this impact to a less than significant level through the preparation and submittal of a Lighting Plan which will limit lighting adjacent to open space areas.

Human Activity

The disturbance of natural open space remaining in or adjacent to the Project site would be increased by the human activity (i.e., noise, foot traffic) from the development. The value of the habitat in the study area would diminish as human disturbance from the development may disrupt normal foraging and breeding behavior of wildlife remaining in the study area and vicinity. The

disturbance from human activity in conjunction with the increased edge effects from habitat fragmentation and habitat loss would be considered potentially significant as it would contribute to an additional incremental loss of habitat. Implementation of MM 5.2-18 would reduce this impact to a less than significant level which requires a Fencing Plan to deter human activity in natural areas.

Invasive Exotic Plant Species

The proposed project includes landscaping adjacent to the residential development, parks, and other areas of infrastructure. The landscaping could include planting ornamental species that are known to be particularly invasive (e.g., pepper trees [*Schinus* spp.], fountain grass [*Pennisetum setaceum*], Japanese honeysuckle [*Lonicera japonica*], or fan palm [*Washingtonia* spp.]). Seeds from invasive species may be transported to natural areas and degrade the native vegetation, particularly along downstream riparian areas. This impact would be considered potentially significant because the project is adjacent to natural open space of high habitat value. As a result of these potential indirect effects of the Project, impacts on wildlife in general would be significant and mitigation would be required. Implementation of MM 5.2-19 would reduce these impacts to less than significant through the preparation and submittal of a Landscape Plan ensuring that no invasive, exotic plant species are used in any proposed landscaping and that suitable substitutes are proposed. Ideally, only native species from the Santa Clarita Valley region will be used in landscaping along the Project boundaries adjacent to open space.

Increased Dust and Urban Pollutants

Grading activities would disturb soils and result in the accumulation of dust on the surface of the leaves of trees, shrubs, and herbs. The respiratory function of the plants in the area would be impaired when dust accumulation is excessive. This indirect effect of construction of the proposed Project on the native vegetation in the construction area's immediate vicinity is considered adverse, but less than significant since it would not reduce plant populations below self-sustaining levels. Therefore, no mitigation would be required.

Additional impacts on biological resources in the area could occur as a result of changes in water quality. Runoff of silt from the Project site or improper disposal of petroleum and chemical products from construction equipment could temporarily impact water quality during construction. Urban runoff from Project infrastructure or landscaping could permanently impact water quality during operation of the proposed Project. Adverse effects on water quality could affect populations of aquatic species, including special status species, by reducing the amount of available habitat, smothering eggs of aquatic species, and may result in direct mortality. Adverse effects on water quality could also impact populations of terrestrial wildlife species that use riparian areas by affecting the plant species that are used by terrestrial species, which would reduce the available riparian habitat, the food web interactions affecting prey (e.g., insects, tadpoles, fish, and other aquatic prey), or through bio-magnification (i.e., the buildup of pesticides to toxic levels in higher trophic levels). Areas downstream of the Project site that could have indirect impacts include Castaic Lake, Castaic Creek, and possibly the Santa Clara River SEA. These indirect impacts are considered potentially significant since the Project could incrementally contribute to a reduction in water quality in the Project region. These impacts would be reduced to less than significant with the implementation of 5.2-21 which requires a Storm Water Pollution Prevention Plan to ensure that site runoff does not adversely affect downstream biological resources.

Level of Significance without Mitigation: Potentially significant.

Recommended SCVAP 2012 EIR Mitigation Measures:

MM 5.2-1 If special-status species may potentially be subject to direct loss through implementation of construction activities, mitigation measures proposed as part of biological site survey reports shall include a requirement for preconstruction special-status species surveys, followed by measures to ensure avoidance, relocation or safe escape of special-status species from construction activity, whichever action is the most appropriate. If special status species are found to be brooding, denning, nesting, etc. on site during the preconstruction survey, construction activity shall be halted until offspring are weaned, fledged, etc. and are able to escape the site or be safely relocated to appropriate off-site habitat areas. A qualified biologist shall be on site to conduct surveys, to perform or oversee implementation of protective measures, and to determine when construction activity may resume. **(SCVAP 2012 EIR MM 3.7-2)**

MM 5.2-2 Impacts on sensitive habitats resulting from implementation of the Area Plan shall be compensated for through the acquisition of lands described in Policies CO 10.1.3, CO 10.1.11 and CO 10.1.12. Said acquisition shall prioritize habitat types that are particularly at risk in the region. At risk habitats include but are not limited to waterways, wetlands and vernal pools; alluvial scrub; native grasslands; savannas, woodlands and forests; holly-leaf cherry and Great basin sagebrush associations; and rocklands. **(SCVAP 2012 EIR MM 3.7-2)**

Level of Significance with SCVAP 2012 EIR Mitigation: Potentially significant.

Recommended 1992 EIR Mitigation Measures:

MM 5.2-3 Removal of riparian habitat will require coordination with the California Department of Fish and Wildlife and the U.S. Army Corps of Engineers. Mitigation for riparian habitat lost may include one or a combination of the following measures: (1) project alteration to avoid impacting the onsite riparian habitat; (2) the onsite creation of at least an equal amount of equal quality habitat; (3) enhancement of poor quality onsite habitat, usually greater than 1:1 ratio (habitat lost to habitat enhanced); and (4) creation of offsite habitat where none currently exists. Final mitigation requirements shall be determined through consultation with the appropriate agencies. **(1992 SP EIR MM 4.7-5)**

Level of Significance with 1992 EIR Mitigation: Potentially significant.

Recommended Project Specific Mitigation Measures:

MM 5.2-4 Mitigation for the club-haired mariposa lily and the slender mariposa lily shall consist of transplantation of lilies to a mitigation site and establishment of a self-sustaining population. Seeds will be collected from all lilies that are located within the impact boundaries and bulbs will be subsequently excavated and stored for later transplantation to a suitable mitigation site(s). The Biological Monitor shall prepare a Mitigation Plan for review and approval by LACDRP and shall oversee its implementation. Development of the Mitigation Plan shall consist of the following activities:

- A pre-grading survey shall be conducted during the peak flowering period (approximately March through June) by the Biological Monitor. The Biological Monitor shall clearly identify each lily location within the impact

area with a pin flag for later collection. The pre-grade survey shall also document the approximate coverage of native and non-native plants at each lily population to be impacted.

- The existing lily locations shall be monitored every two weeks by Biological Monitor or a qualified Seed Collector to determine when the seeds are ready for collection. The Seed Collector shall collect seeds from the plants within the collection area when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or an institution with appropriate storage facilities.
- Individual lily bulbs shall be excavated and collected following the seed collection and once the bulbs have entered their winter dormancy period (approximately September 1). The bulbs shall be stored by a qualified nursery or institution with appropriate storage facilities and all non-target bulbiferous species shall be discarded.
- A mitigation site, shall be located in dedicated open space in the study area or at an off-site mitigation site. The mitigation site shall have similar soils, associated native species, and topographical features to the impact areas. If any lily species occur in the mitigation site, no pesticides or herbicides shall be used.
- Approximately 60 percent of the seeds and bulbs collected shall be spread and/or placed in the fall following soil preparation. Forty percent of the seed and bulbs shall be kept in storage for subsequent seeding, if necessary.
- Approximately 60 percent of the seeds and bulbs collected shall be spread and/or placed in the fall following soil preparation. Forty percent of the seed and bulbs shall be kept in storage for subsequent seeding, if necessary.
- A detailed Maintenance and Monitoring Plan shall be developed by the Biological Monitor. The plan shall include detailed descriptions of maintenance appropriate for the site, monitoring requirements, and annual report requirements.
- Performance criteria shall be developed in the Maintenance and Monitoring Plan and approved by the LACDRP Biologist. The performance criteria shall address (1) native and non-native plant coverage requirements (mitigation site conditions should be consistent with lily populations in the impact area) and (2) percentage of lilies that bloom each year (e.g., 70 percent of transplanted bulbs bloom during the first year after transplantation, 60 percent the second year, 50 percent the third year, 40 percent the fourth year, and 30 percent the fifth year).
- The monitoring shall be conducted for five years, or until the mitigation site reaches its performance standards. If the performance standards are not being met during the first year, remediation measures shall be implemented prior to seeding with the remaining 40 percent of seed and bulbs. Remedial measures may include the following actions based on the recommendations of the Biological Monitor: soils testing, control of invasive species, placement of mulch, application of native seed, and/or protection from herbivores. Additional mitigation measures may be suggested as determined appropriate by the Biological Monitor, including identification of a new mitigation site(s) if it is determined that the initial mitigation site(s) are incompatible with lily establishment.

- Potential seed sources from additional donor sites shall also be identified in case it becomes necessary to collect additional seed for use on the site following performance of remedial measures.

MM 5.2-5 The Project Applicant shall prepare and implement a Special Status Plant Species Restoration Plan covering the round-leaved filaree, paniculate tarplant, and southwestern spiny rush that shall specify, at a minimum, the following: (1) procedures for the collection and temporary storage of seed (all available seed from every impacted occurrence shall be collected); (2) planting procedures, including soil preparation and irrigation; (3) a schedule and action plan to maintain and monitor restored and/or created populations; (4) methods to control plant densities (of competing plants) to promote the establishment of round-leaved filaree, paniculate tarplant, and southwestern spiny rush; and (5) a list of County-approved success criteria (e.g., germination rates, growth, plant cover) to compare to the density of existing populations. The Project Applicant shall develop the Special Status Plant Species Restoration Plan and the County shall approve it prior to any vegetation clearing or grading on the site. Adoption of this plan shall be used as the performance standard. An overview of the plan objectives is provided in the Biological Resource Mitigation Program to be submitted and approved by the County prior to issuance of grading permits.

Prior to the commencement of vegetation clearing and/or grading activities, the Project Applicant shall contract a qualified firm to harvest round-leaved filaree, paniculate tarplant, and southwestern spiny rush seeds from the impacted populations on the Project site. In addition, seeds of Peirson's morning glory shall also be collected. The seed shall be collected in the manner and time described in the Special Status Plant Species Restoration Plan. The harvested seed of round-leaved filaree, paniculate tarplant, and southwestern spiny rush shall be used for the creation and/or enhancement of these species' populations that will be preserved in open space areas on the Project site, or off-site preserved areas if open space areas on the Project site are not suitable. The harvested seeds of Peirson's morning glory will be included in the seed mixes for the restoration of Foothill needlegrass grasslands described in Mitigation Measures 1 and 2.

Round-leaved filaree, paniculate tarplant, and southwestern spiny rush shall be planted in appropriate areas on the site within preserved open space (if feasible), or at designated off-site preserve locations that are suitable at a 1:1 ratio to compensate for the loss of individuals impacted by the Project.

Due to the fact that round-leaved filaree has not been detected since 2001 (these species were not re-located during subsequent focused plant surveys), the occurrence location will be checked prior to construction during the appropriate blooming period to determine if this species still occurs on the site. If it is not found, the population will be assumed extirpated; no impacts to them would then be expected and no mitigation for this species would be required.

MM 5.2-6 The loss of sage scrub habitat within the impact area is considered a significant impact. Sage scrub habitat shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP). The ratio shall be no less than 2:1 for habitat restoration or preservation. Habitat enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. The mitigation ratio for

habitat enhancement shall depend on the initial quality of the habitat area to be enhanced, and would be determined by the Project Applicant and the LACDRP. Sage scrub habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The Project Applicant shall develop a Habitat Mitigation and Monitoring Program (HMMP) and shall submit it to the LACDRP for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). Habitat restoration/enhancement will consist of seeding and/or installing container plants of suitable sage scrub species. If it is ecologically appropriate for the selected mitigation site (e.g., soil types), Peirson's morning-glory will be incorporated into the restoration/enhancement planting and/or seeding palettes. The Project Applicant shall implement the HMMP as approved by the LACDRP and according to its specified materials, methods, and performance criteria, which shall include the following items:

a. **Responsibilities and Qualifications.** The responsibilities and qualifications of the Project Applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration programs, implemented under LACDRP mitigation measures and/or State or federal natural resource agency permit conditions. A successful program shall be defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency.

b. **Performance Criteria.** Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The HMMP shall state that the use of the mitigation site by special status wildlife species (e.g., coastal California gnatcatcher), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program sign-off.

c. **Site Selection.** The mitigation sites shall be determined in coordination with the Project Applicant and the LACDRP. The site(s) shall be located in dedicated open space areas, and shall be contiguous with other natural open space areas.

d. **Native Plant and Seed Materials Procurement.** At least two years prior to mitigation implementation of the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. All container plants shall be propagated from seed of local origin as defined above. No plant or seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in the following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat

areas (lowest priority), assuming availability of seed species in multiple locations.

e. **Wildlife Surveys and Protection.** The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., coastal California gnatcatcher]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. The HMMP shall also describe potential restrictions on these management tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits).

f. **Site Preparation and Plant Materials Installation.** Mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, de-compacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photo-degradable'] fiber roll); (f) application of salvaged native plant materials (i.e., duff) as available, and supervised by a biological monitor; (g) temporary irrigation installation; (h) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)—including specification of approved herbicides; (i) planting of container species; and (j) seed mix application.

g. **Schedule.** An implementation schedule shall be developed that includes planting and seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below).

h. **Maintenance Program.** The Maintenance Program shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal—including specification of approved herbicides; (d) maintenance of erosion-control measures; (e) inspection/repairs of irrigation components; (f) replacement of dead container plants (as needed); (g) application of remedial seed mixes (as needed); (h) herbivory control; and (i) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. The mitigation site shall be maintained for a period of five years to ensure the successful sage scrub habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria.

i. **Monitoring Program.** The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative monitoring (e.g., randomly placed point-intercept transects); (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site

performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the Project Applicant has been released from maintenance requirements by the LACDRP.

j. **Long-term preservation.** Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.

MM 5.2-7 The loss of California annual grassland/wildflower fields within the impact area is considered to be a significant impact. California annual grassland/wildflower fields shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP). Habitat enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. The ratio shall be no less than 2:1 for habitat restoration or preservation. The mitigation ratio for habitat enhancement shall depend on the initial quality of the habitat area to be enhanced, and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). California annual grassland/wildflower fields habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The project applicant shall develop a HMMP and shall submit it to the LACDRP for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for burrowing owl. Habitat restoration/enhancement shall consist of seeding of suitable California annual grassland/wildflower fields plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP and according to its specified materials, methods, and performance criteria, which shall include the following items:

- The responsibilities and qualifications of the project applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration programs, implemented under LACDRP mitigation measures or State and/or federal natural resource agency permit conditions. A successful program shall be

defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency.

- Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The performance criteria shall reflect the habitat requirements for burrowing owl; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The HMMP shall state that the establishment of burrowing owls, and/or special status plant species (e.g., Peirson's morning-glory), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program sign-off.
- The mitigation sites shall be determined in coordination with the project applicant and the LACDRP. The site(s) shall be (1) located in dedicated open space areas, and shall be contiguous with other natural open space areas; (2) configured to provide maximum habitat values for burrowing owl and other wildlife species; e.g., opportunities for escape and refuge from stochastic events such as fire, flood, etc.; (3) consist of level or gently sloping terrain, soil types, and microhabitat conditions suitable for occupation by the burrowing owl as determined by a qualified Biologist; and (4) include, to the extent feasible, soil types and microhabitat conditions suitable for the special status plant species listed above.
- At least two years prior to mitigation plant and seed installation, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. No seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in the following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations.
- The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., burrowing owl]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. Specifically, the HMMP shall specify the performance of wintering and breeding season surveys for burrowing owl, to determine the species' occupation of the mitigation site(s). The HMMP shall also describe potential restrictions on these tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits).
- Mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, de-compacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photo-degradable'] fiber roll); (f) temporary irrigation

installation; (g) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)—including specification of approved herbicides; and (g) seed mix application. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owl; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage.

- An implementation schedule shall be developed that includes seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below).
- The Maintenance Program shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal—including specification of approved herbicides; (d) maintenance of erosion-control measures; (e) inspection/repairs of irrigation components; (f) application of remedial seed mixes (as needed); (g) herbivory control; and (h) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owl; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The mitigation site shall be maintained for a period of five years to ensure successful foothill needlegrass grassland habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria.
- The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative monitoring; (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the project applicant has been released from maintenance requirements by the LACDRP.
- Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program:

MM 5.2-8 The loss of foothill needlegrass grassland within the impact area is considered to be a significant impact. Foothill needlegrass grassland shall be preserved, restored, or enhanced on site and/or off site at a ratio to be determined by the County of Los Angeles Department of Regional Planning (LACDRP). Habitat enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or

seeds, or other measures. The ratio shall be no less than 2:1 for habitat restoration or preservation. The mitigation ratio for habitat enhancement shall depend on the initial quality of the habitat area to be enhanced, and would be determined by the project applicant and the LACDRP. The mitigation ratio shall also be no less than 6.5 acres of habitat preserved/restored per burrowing owl location impacted (individual or pair using the same burrows) or greater than 6.5 acres of habitat enhancement per burrowing owl location impacted, depending on the ratio applied to the enhancement site(s). Foothill needlegrass grassland habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The project applicant shall develop a HMMP and shall submit it to the LACDRP for review and approval. The HMMP shall be developed by a qualified restoration ecologist, submitted for review and approval to the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). The HMMP shall also provide mitigation for the loss of burrowing owl habitat; therefore, mitigation site selection criteria shall include the suitability of the potential site(s) for burrowing owl. Habitat restoration/enhancement shall consist of seeding of suitable foothill needlegrass grassland plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil type), Peirson's morning-glory will be incorporated into the restoration/enhancement palette. The Project Applicant shall implement the HMMP as approved by the LACDRP and according to its specified materials, methods, and performance criteria, which shall include the following items:

a. **Responsibilities and Qualifications.** The responsibilities and qualifications of the project applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration programs, implemented under LACDRP mitigation measures or State and/or federal natural resource agency permit conditions. A successful program shall be defined as one that has been signed off on by the LACDRP and/or a State or federal natural resource agency.

b. **Performance Criteria.** Mitigation performance criteria to be specified in the HMMP shall include native vegetation percent coverage and diversity (minimum), non-native vegetation percent coverage (maximum), and the cessation of irrigation a minimum of two years prior to eligibility for sign-off. The performance criteria shall reflect the habitat requirements for burrowing owl; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The HMMP shall state that the establishment of burrowing owls, and/or special status plant species (e.g., Peirson's morning-glory), though not a requirement for site success, would be regarded by the LACDRP as a significant factor in considering eligibility for program sign-off.

c. **Site Selection.** The mitigation sites shall be determined in coordination with the project applicant and the LACDRP. The site(s) shall be (1) located in dedicated open space areas, and shall be contiguous with other natural open space areas; (2) configured to provide maximum habitat values for burrowing owl and other wildlife species; e.g., opportunities for escape and refuge from stochastic events such as fire, flood, etc.; (3) consist of level or

gently sloping terrain, soil types, and microhabitat conditions suitable for occupation by the burrowing owl as determined by a qualified Biologist; and (4) include, to the extent feasible, soil types and microhabitat conditions suitable for the special status plant species listed above.

d. **Seed Materials Procurement.** At least two years prior to mitigation plant and seed installation, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. No seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in the following order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations.

e. **Wildlife Surveys and Protection.** The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., burrowing owl]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. Specifically, the HMMP shall specify the performance of wintering and breeding season surveys for burrowing owl, to determine the species' occupation of the mitigation site(s). The HMMP shall also describe potential restrictions on these tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits).

f. **Site Preparation and Plant Materials Installation.** Mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, de-compacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photo-degradable'] fiber roll); (f) temporary irrigation installation; (g) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)—including specification of approved herbicides; and (g) seed mix application. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owl; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage.

g. **Schedule.** An implementation schedule shall be developed that includes seeding to occur in late fall and early winter (i.e., between November 1 and December 31) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below).

h. **Maintenance Program.** The Maintenance Program shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal—including specification of approved herbicides; (d) maintenance of erosion-control measures;

(e) inspection/repairs of irrigation components; (f) application of remedial seed mixes (as needed); (g) herbivory control; and (h) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. Mitigation site preparation and installation shall reflect the habitat requirements for burrowing owl; i.e., grassland habitat with vegetation gaps or areas of lower vegetation coverage. The mitigation site shall be maintained for a period of five years to ensure successful foothill needlegrass grassland habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the LACDRP prior to five years if the mitigation program has achieved all performance criteria.

i. **Monitoring Program.** The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative monitoring; (c) annual monitoring reports, which shall be submitted to the LACDRP for five years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the project applicant has been released from maintenance requirements by the LACDRP.

j. **Long-term preservation.** Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program

MM 5.2-9 A relocation program for western spadefoot toad shall be conducted prior to construction during the spring at the height of the breeding season for this species (February through May, or as determined by a qualified Biologist monitoring a known location of this species). A detailed methodology for this effort shall be reviewed by the CDFW and the LACDRP prior to implementation of the relocation program. Results of the relocation program shall be provided to the CDFW and the LACDRP.

- The intent of the Relocation Plan is to capture and relocate as many western spadefoot toads as possible. Western spadefoot toads shall be relocated on or off site to an area of suitable habitat, as reviewed by the CDFW and the LACDRP. The relocation site shall be of similar (or better) quality as the habitat within the project impact area where the western spadefoot toads are captured. If no suitable habitat is available for the relocation, suitable habitat shall be created.

MM 5.2-10 A Biological Monitor shall be on site during the all vegetation clearing activities and thereafter on an as-needed basis. The Biological Monitor will conduct a clearance sweep prior to clearing activities to minimize potential for special status reptile mortality. If feasible, special status reptiles will be removed from the disturbance area and relocated to suitable habitat in adjacent areas.

MM 5.2-11 Riparian vegetation shall be preserved, restored, or enhanced on site or off site at a ratio identified in the USACE and CDFW permits/agreements for the project. The ratio shall be no less than 2:1 for habitat restoration or preservation. Habitat enhancement is the improvement of existing, disturbed native habitat areas through the removal of exotic plant species, the addition of native plants and/or seeds, or other measures. The mitigation ratio for habitat enhancement shall depend on the initial quality of the habitat area to be enhanced, and would be determined by the Project Applicant, the USACE, the CDFW, and the LACDRP. Riparian habitat restoration/enhancement implementation shall begin not more than one year following project impacts to this habitat type. The Project Applicant shall develop a HMMP and shall submit it to the USACE, the CDFW, and the LACDRP for review and approval. The HMMP shall be developed by a qualified restoration ecologist and approved by the USACE, the CDFW, and the LACDRP prior to issuance of grading permits, and shall be implemented by a qualified restoration ecologist and a qualified restoration contractor (as defined below). Habitat restoration/enhancement will consist of seeding and/or installing container plants and cuttings of suitable riparian plant species. If it is ecologically appropriate for the selected mitigation site (e.g., soil types), spiny rush will be incorporated into the restoration/enhancement planting and/or seeding palettes. The Project Applicant shall implement the HMMP as approved by the LACDRP and according to its specified materials, methods, and performance criteria, which shall include the following items:

a. **Responsibilities and Qualifications.** The responsibilities and qualifications of the Project Applicant, ecological specialists, and restoration (landscape) contracting personnel who will implement the plan shall be specified. At a minimum, the HMMP shall specify that the ecological specialists and contractors have performed successful installation and long-term monitoring and maintenance of southern California native habitat mitigation/restoration programs, implemented under USACE and CDFW permit conditions. A successful program shall be defined as one that has been signed off on by the USACE and the CDFW.

b. **Performance Criteria.** Mitigation performance criteria to be specified in the HMMP shall conform to USACE and CDFW permit conditions. The HMMP shall state that the use of the mitigation site by special status wildlife species (e.g., least Bell's vireo), though not a requirement for site success, would be regarded by the USACE, the CDFW, and the LACDRP, as a significant factor in considering eligibility for program sign-off.

c. **Site Selection.** The mitigation sites shall be determined in coordination with the Project Applicant, the USACE, the CDFW, and the LACDRP. The site(s) shall be located in dedicated open space areas, and shall be contiguous with other natural open space areas.

d. **Seed Materials Procurement.** At least two years prior to mitigation implementation, the Project Applicant or its consultants/contractors shall initiate collection of the native seed materials specified in the HMMP. All seed mixes shall be of local origin; i.e., collected within 30 miles, and within the same Watershed (Santa Clara River Watershed), as the selected restoration/enhancement site(s), to ensure genetic integrity. No seed materials of unknown or non-local geographic origin shall be used. Seed collection shall be prioritized according to habitat area, in the following

order: (a) project impact areas (highest priority); (b) other on-site habitat areas; and (c) off-site habitat areas (lowest priority), assuming availability of seed species in multiple locations.

e. **Wildlife Surveys and Protection.** The HMMP shall specify any wildlife surveys (i.e., nesting bird surveys, focused/protocol surveys for special status species [e.g., least Bell's vireo]) and biological monitoring that are required to avoid adverse impacts to wildlife species during the performance of mitigation site preparation, installation, or maintenance tasks. The HMMP shall also describe potential restrictions on these tasks due to sensitive wildlife conditions on the mitigation site (e.g., suspension of these tasks during the nesting bird season, as defined in project permits).

f. **Site Preparation and Plant Materials Installation.** Mitigation site preparation shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) installation of protective fencing and/or signage (as needed); (c) initial trash and weed removal (outside the nesting bird season) and methods; (d) soil treatments, as needed (i.e., imprinting, de-compacting); (e) installation of erosion-control measures (i.e., fully natural/bio-degradable [not 'photo-degradable'] fiber roll); (f) application of salvaged native plant materials (i.e., coarse woody debris), as available and supervised by a biological monitor; (g) temporary irrigation installation; (h) a minimum one-year preliminary weed abatement program (prior to the installation of native plant and seed materials)—including specification of approved herbicides; (i) planting of container plant and cutting species; and (j) seed mix application.

g. **Schedule.** An implementation schedule shall be developed that includes planting and seeding to occur in late fall and early winter (i.e., between November 1 and February 15) and the frequency of long-term maintenance and monitoring activities (including the dates of annual quantitative surveys, as described below).

h. **Maintenance Program.** The Maintenance Program shall include (a) protection of existing native species and habitats (including compliance with seasonal restrictions, if any); (b) maintenance of protective fencing and/or signage; (c) trash and weed removal—including specification of approved herbicides; (d) maintenance of erosion-control measures; (e) inspection/repairs of irrigation components; (f) replacement of dead container plant and cuttings (as needed); (g) application of remedial seed mixes (as needed); (h) herbivory control; and (i) removal of all non-vegetative materials (i.e., fencing, signage, irrigation components) upon project completion. The mitigation site shall be maintained for a period of five years to ensure the successful sage scrub habitat establishment within the restored/enhanced sites; however, the Project Applicant may request to be released from maintenance requirements by the USACE, the CDFW, and the LACDRP prior to five years if the mitigation program has achieved all performance criteria.

i. **Monitoring Program.** The Monitoring Program shall include (a) qualitative monitoring (i.e., general habitat conditions, photo-documentation from established photo stations); (b) quantitative monitoring (in conformance with the USACE 2015 Guidelines); and (c) annual monitoring reports, which shall be submitted to the USFWS, the CDFW, and the LACDRP for five

years or until project completion; and (d) wildlife surveys and monitoring as described above. The annual monitoring reports shall include a detailed discussion of mitigation site performance (e.g., measured vegetation coverage and diversity) and compliance with required performance criteria, a discussion of wildlife species' use of the restored and/or enhanced habitat area(s), and a list of proposed remedial measures to address non-compliance with any performance criteria. The site shall be monitored for five years or until the Project Applicant has been released from maintenance requirements by the USACE, the CDFW, and the LACDRP.

j. **Long-term preservation.** Long-term preservation of the sites shall be outlined in the HMMP to ensure that the mitigation sites are not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the mitigation program.

MM 5.2-12 Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of vegetation associated with project implementation, the limits of disturbance shall be clearly defined and marked in the field using lath and flagging or orange snow fencing. The Biological Monitor shall review the limits of disturbance prior to initiation of construction activities. The Biological Monitor shall be on site during the initial vegetation clearing and thereafter on an as-needed basis to assist the Project Applicant with mitigation measure compliance and to provide guidance in avoiding and/or minimizing impacts to biological resources.

MM 5.2-13 The Project shall be conducted in compliance with the conditions set forth in the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code with methods approved by USFWS and CDFW to protect active bird/raptor nests. The nature of the Project requires that work would be initiated during the breeding season for nesting birds (March 15–September 15) and nesting raptors (February 1–June 30). LACFCD, in consultation with a qualified biologist, may employ bird exclusionary measures (e.g., mylar flagging) prior to the start of bird breeding season to minimize opportunities for birds to nest within established boundaries of the Project. In order to avoid direct impacts on active nests, a pre-construction survey shall be conducted by a qualified Biologist for nesting birds and/or raptors within 3 days prior to clearing of any vegetation or any work near existing structures (i.e., within 50 feet for nesting birds and within 500 feet for nesting raptors). If the Biologist does not find any active nests within or immediately adjacent to the impact area, the vegetation clearing/construction work shall be allowed to proceed. Results of the surveys will be provided to the CDFW and the LACDRP.

If the Biologist finds an active nest within or immediately adjacent to the construction area and determines that the nest may be impacted or breeding activities substantially disrupted, the Biologist shall delineate an appropriate buffer zone (at a minimum of 25 feet) around the nest depending on the sensitivity of the species and the nature of the construction activity. Any nest found during survey efforts shall be mapped on the construction plans. The active nest shall be protected until nesting activity has ended. To protect any nest site, the following restrictions to construction activities shall be required until nests are no longer active, as determined by a qualified Biologist: (1) clearing limits shall be established within a buffer around any occupied nest (the buffer shall be 25–100 feet for nesting birds and 300–500 feet for nesting raptors), unless otherwise

determined by a qualified Biologist and (2) access and surveying shall be restricted within the buffer of any occupied nest, unless otherwise determined by a qualified Biologist. Encroachment into the buffer area around a known nest shall only be allowed if the Biologist determines that the proposed activity would not disturb the nest occupants. Construction can proceed when the qualified Biologist has determined that fledglings have left the nest or the nest has failed.

Burrowing owls are raptors that use burrows for wintering and nesting (during the raptor breeding season). If a wintering burrow is observed during the non-nesting season, the burrow will be monitored by a qualified Biologist and, when the raptor is away from the burrow, the burrow will be removed (or the burrow closed) so raptors cannot return to the burrow. The qualified Biologist will supervise the removal of the burrow.

MM 5.2-14 Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of potentially suitable wintering burrowing owl habitat, the area shall be assessed. If the habitat assessment concludes that the area lacks potentially suitable burrowing owl burrows, no additional action is required. However, if potentially suitable burrows are located in the assessment area, any burrows that may be impacted by the project will be replaced with artificial burrows within on-site or off-site (if applicable) preserved areas with potentially suitable burrowing owl habitat.

MM 5.2-15 Due to the close proximity of occupied habitat of a federally listed coastal California gnatcatcher, the Project shall not commence without consultation with the USFWS due to the potential for take per the FESA. The consultation will occur within the framework of Section 7 through the USACE regulatory permitting process. If required by the USFWS, a Biological Assessment will be provided to support the Service's Biological Opinion.

MM 5.2-16 To limit the amount of operational noise (i.e., from residents) to surrounding natural open space areas, a 100-foot buffer within the fuel-modification zone shall be planted along the boundary of developed land uses with plant species to be reviewed and approved by the Los Angeles County Fire Department and the LACDRP Biologist. The vegetation within the transition zone buffer will block sound waves and screen noise from the adjacent development so that the amount of indirect noise reaching the wildlife habitat would be reduced. Landscaping in areas adjacent to natural open space shall use species native to the project region that are considered fire-retardant (e.g., toyon [*Heteromeles arbutifolia*]). The Planting Plan shall be submitted to the Los Angeles County Fire Department and LACDRP Biologist for review and approval prior to issuance of a building permit.

MM 5.2-17 Prior to the issuance of building permits, a Lighting Plan for the subject tract shall be submitted to the LACDRP for review and approval to demonstrate that lighting from the proposed project shall be directed away from natural open space areas and any proposed biological resources mitigation sites. Land uses with high-intensity lighting shall be relocated within the development to areas away from natural open space.

MM 5.2-18 To limit the amount of human disturbance to surrounding natural open space areas, a Fencing Plan to deter project occupants from entering the natural areas shall be prepared by the project developer and implemented. The Fencing Plan

shall include provisions for signs and split-rail fencing to direct residents to keep out of sensitive natural open space and revegetation and/or mitigation areas.

In areas bordering natural open space and fuel-modification zones, the Landscape Plan shall reflect a transition zone designed to buffer natural habitats from developed areas. This transition zone should reduce impacts associated with invasion by introduced species and should help buffer human activity adjacent to the wildlife habitat. Landscaping in areas adjacent to natural open space shall use species native to the project region (e.g., toyon) and be consistent with guidelines from the Los Angeles County Fire Department.

MM 5.2-19 Landscaping designs shall be submitted to LACDRP for review and approval by a qualified Biologist. The review shall ensure that no invasive, exotic plant species are used in any proposed landscaping and that suitable substitutes are proposed. Ideally, only native species from the Santa Clarita Valley region shall be used in landscaping along the project boundaries adjacent to open space.

MM 5.2-20 Prior to the initiation of any grading and/or construction-related activity involving the disturbance and/or removal of potentially suitable bat roosting habitat, namely rocky outcrops or trees, a qualified Biologist shall conduct a pre-construction bat habitat assessment of the potential habitat marked for removal. Potential for roosting will be categorized by (1) potential for solitary roost sites and (2) potential for colonial roost sites (i.e., ten bats or more). If the potential for colonial roosting is determined, those rocky outcrops or trees shall not be removed during the bat maternity roost season (March 1 to July 31). Trees potentially supporting colonial roosts outside the maternity roost season and trees potentially supporting solitary roosts may be removed via a two-step removal process whereby, at the direction of the Biologist, some level of disturbance (such as trimming of lower branches of trees) is applied to the habitat on the day prior to removal to allow bats to escape during the darker hours. In the case of a tree, it shall be removed the following day (i.e., there shall be no less or more than one night between initial disturbance and the grading or tree removal). Rock outcrops potentially supporting colonial roosts outside the maternity roost season and rock outcrops potentially supporting solitary roosts may be fitted with a bat exclusionary device, at the entry location, whereby bats are allowed to leave the structure but unable to return. The structure can be demolished the following day.

MM 5.2-21 Prior to the issuance of a grading permit, the project applicant will apply for coverage under the State Water Resources Control Board's General Permit for Storm Water Discharge Associated with Construction Activity (Construction Activities General NPDES Permit) and will comply with all the provisions of the permit, including the development of a Storm Water Pollution Prevention Plan, which includes provisions for the implementation of Best Management Practices and erosion control measures. Best Management Practices will include both structural and non- structural measures. The purpose of this mitigation measure is to ensure that site runoff does not adversely affect downstream biological resources including Castaic Lake, Castaic Creek, and the Santa Clara River.

Net Level of Significance: Less than significant.

Threshold 5.2-2 Would the Project have a substantial adverse effect on any sensitive natural communities (e.g., riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetlands) identified in local or regional plans, policies, regulations, or by CDFW or USFWS?

Implementation of the proposed Project would impact 1,104.97 acres of natural open space and wildlife habitat. The impact areas of the proposed Project are shown in Exhibit 5.2-4, Project Impact Area, and impact acreages are summarized in Table 5.2-5, Impacted Vegetation Types. In summary, a total of approximately 634.70 acres of sage scrub, 423.11 acres of grassland and 13.26 acres of riparian vegetation (including open waters) types would be removed through direct construction impacts. Impacts on sage scrub vegetation types would be considered significant due to the ongoing loss of this vegetation type in southern California and the potential for this habitat to support special status species. Impacts on foothill needlegrass grassland, riparian, and California annual grassland/wildflower fields vegetation types would also be considered significant due to the limited distribution of these vegetation types in California. Impacts on California annual grassland would be considered adverse but less than significant because there is a substantial amount of this vegetation type in the project vicinity. The loss of disturbed and ornamental vegetation types would be considered less than significant because they have a relatively low biological value. The combined loss of 1,070.16 acres of native habitat and annual grassland habitat would be considered a significant impact on biological resources, because these habitats provide valuable nesting, foraging, roosting, and denning opportunities for a wide variety of wildlife species. Implementation of MM 5.2-6 through MM 5.2-8 and MM 5.2-11 would reduce these impacts to a level considered less than significant by requiring habitat preservation, restoration, and creation at a 2:1 ratio for sage scrub, foothill needlegrass grassland, riparian, and California annual grassland/wildflower fields vegetation types. These mitigation measures ensure that these special status vegetation types impacted by Project development would persist in the region long-term.

Level of Significance without Mitigation: Potentially significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None

Level of Significance with SCVAP 2012 EIR Mitigation: Potentially significant

Recommended 1992 EIR Mitigation Measures: None

Level of Significance with 1992 EIR Mitigation: Potentially significant

Recommended Project Specific Mitigation Measures:

Refer to MMs 5.2-6, through 5.2-8, and MM 5.2-11 identified previously.

Net Level of Significance: Less than significant.

CASTAIC LAKE

See Inset

Pipeline Relocation Area

5

5

Project Boundary

Burned Area

Project Impact Areas

Permanent

Temporary

Vegetation Types and Other Areas

Purple sage scrub

Black sage scrub

California annual grassland

California annual grassland/Wildflower fields

California sagebrush - California buckwheat scrub

California sagebrush - California buckwheat scrub/California annual grassland

California sagebrush - California buckwheat scrub/Foothill needlegrass grassland

Foothill needlegrass grassland

Fremont cottonwood riparian forest

Mulefat thickets

Willow thickets

Willow thicktes/Mulefat thickets

Baltic and Mexican rush marsh

Open water

Ornamental

Ornamental/Disturbed

Disturbed

Inset

0 300 600 Feet

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Project Impact Area

Exhibit 5.2-4

NorthLake Specific Plan SEIR

N W E S

1,500 750 0 1,500 Feet

PSOMAS

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TABLE 5.2-5
IMPACTED VEGETATION TYPES

Vegetation Type	On-Site				Off-Site			Grand Total
	Non impacted	Permanent	Temporary	Total	Permanent	Temporary	Total	
Sage Scrub Communities								
Purple sage scrub	0.00	4.57	0.30	4.87	2.90	0.16	3.07	7.93
California sagebrush–California buckwheat scrub	186.39	390.55	52.02	442.57	24.90	13.59	38.48	667.44
Black sage scrub	3.21	8.41	0.54	8.95	0.00	0.08	0.08	12.25
California sagebrush–California buckwheat scrub/Foothill needlegrass grassland	14.13	3.33	1.37	4.70	0.15	0.81	0.96	19.79
California sagebrush–California buckwheat scrub/California annual grassland	13.30	23.71	2.31	26.01	1.17	0.51	1.67	40.98
burned Purple sage scrub	28.43	56.81	8.30	65.11	9.25	4.88	14.13	107.67
burned California sagebrush–California buckwheat scrub	9.22	2.96	2.31	5.27	0.10	0.34	0.44	14.93
burned Black sage scrub	3.69	5.33	0.32	5.65	1.35	1.65	3.00	12.35
burned California sagebrush–California buckwheat scrub/California annual grassland	3.11	9.10	0.63	9.74	0.00	0.00	0.00	12.84
Sage Scrub Subtotal	*261.48*	*504.77*	*68.09*	*572.86*	*39.82*	*22.02*	*61.84*	*896.18*
Native Grassland Communities								
Foothill needlegrass grassland	0.00	23.46	0.00	23.46	0.00	0.00	0.00	23.46
burned Foothill needlegrass grassland	0.97	0.36	0.29	0.65	0.13	0.00	0.13	1.74
Native Grassland Subtotal	*0.97*	*23.82*	*0.29*	*24.11*	*0.13*	*0.00*	*0.13*	*25.20*
Annual Grassland Communities								
California annual grassland	28.16	37.61	3.42	41.03	3.92	1.33	5.26	74.44
California annual grassland/Wildflower fields	0.94	328.17	7.49	335.66	2.96	4.22	7.19	343.79
burned California annual grassland	8.35	7.24	2.20	9.45	0.15	0.16	0.30	18.10
Annual Grassland Subtotal	*37.45*	*373.02*	*13.11*	*345.11*	*7.03*	*5.71*	*12.75*	*436.33*
Riparian/Open Water Communities								
Willow thickets	0.64	0.30	0.04	0.34	0.00	0.04	0.04	1.03
Willow thickets/Mulefat thickets	0.00	0.81	0.00	0.81	0.00	0.00	0.00	0.81
Mulefat thickets	0.64	5.60	0.02	5.62	0.55	0.01	0.56	6.82
Baltic and Mexican rush marsh	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.04
Open water	0.00	0.91	0.00	0.91	0.00	0.00	0.00	0.91
burned Fremont cottonwood riparian forest	0.00	0.24	0.00	0.24	0.11	0.06	0.17	0.40

TABLE 5.2-5
IMPACTED VEGETATION TYPES

Vegetation Type	On-Site				Off-Site			Grand Total
	Non impacted	Permanent	Temporary	Total	Permanent	Temporary	Total	
burned Willow thickets	0.00	0.26	0.00	0.26	0.00	0.00	0.00	0.26
burned Mulefat thickets	0.00	4.26	0.00	4.26	0.00	0.00	0.00	4.26
Riparian/Open Water Subtotal	*1.28*	*12.42*	*0.06*	*12.48*	*0.66*	*0.11*	*0.77*	*14.54*
Disturbed/Ornamental Communities								
Ornamental	0.55	0.58	0.00	0.58	0.00	0.04	0.04	1.17
Ornamental/Disturbed	12.85	2.67	1.20	3.87	1.07	1.04	2.12	18.84
Disturbed	10.93	15.93	3.93	19.86	3.42	4.00	7.42	38.21
Disturbed/Ornamental Subtotal	*24.32*	*19.18*	*5.13*	*24.31*	*4.49*	*5.09*	*9.58*	*58.22*
Total	***325.50***	***933.21***	***86.69***	***978.87***	***52.13***	***32.94***	***85.07***	***1,430.47***

Note: Columns may not add up to the total shown due to complications regarding rounding.

Threshold 5.2-3 Would the project have a substantial adverse effect on federally or state protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, and drainages) or waters of the United States, as defined by Section 404 of the federal Clean Water Act or California Fish and Game Code Section 1600, et. seq. through direct removal, filling, hydrological interruption, or other means?

As indicated in Table 5.2-6 below, Project site development would impact 10.59 acres of USACE regulated streambeds, 10.59 acres of RWQCB-regulated waters, and 15.04 acres of CDFW-regulated streambeds and riparian areas (Vandermost Consulting, 2015). Impacts to the jurisdictional drainages, wetlands, and riparian vegetation are considered significant due to their protected status. A less than significant impact would be achieved through implementation of MM 5.2-2,MM 5.2-3 and MM 5.2-11 which require a Riparian Restoration Program be developed and approved by USACE, CDFW, and LACDRP prior to issuance of grading permits. The plan will require habitat be preserved, restored, or enhanced on site or off site at a ratio no less than 2:1. This mitigation measure ensure that jurisdictional drainages, wetlands, and riparian vegetation impacted by Project development would persist in the region long-term.

TABLE 5.2-6
IMPACTS TO JURISDICTIONAL FEATURES

Jurisdiction	Impacts (Acres)
Total USACE Jurisdiction	**10.59**
Wetland "waters of the U.S."	3.47
Non-wetland "waters of the U.S."	7.12
Total RWQCB Jurisdiction	**10.59**
Total CDFW Jurisdiction	**15.04**
Source: Vandermost Consulting 2015.	

Level of Significance without Mitigation: Potentially significant.

Recommended SCVAP 2012 EIR Mitigation Measures: Refer to MM 5.2-2 identified previously.

Level of Significance with SCVAP 2012 EIR Mitigation: Less than significant.

Recommended 1992 EIR Mitigation Measures: Refer to MM 5.2-3 identified previously.

Level of Significance with 1992 EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measure: Refer to MM 5.2-11 identified previously.

Net Level of Significance: Less than significant.

Threshold 5.2-4 Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The Project site is utilized by resident and migratory wildlife for both movement and breeding of various degrees. On the Project site, Grasshopper Canyon is undeveloped and is adjacent to

open space in the ANF and Castaic Lake SRA, both of which provide high-quality wildlife habitat. Historically, the Castaic Creek drainage adjacent to the site may have been an important north-south linkage between the mountainous open space of the National Forest and resource rich riparian zones along the Santa Clara River. However, construction of Castaic Dam, Lake, Lagoon, SRA and its associated facilities along with residential development west of the Lagoon has essentially eliminated this linkage. Only local movement of species habituated to an urban landscape (e.g., coyote) are expected to navigate the extensive set of existing barriers. Regional movement along the east-west-aligned Transverse Range north of the site has also been restricted through the Project site as a result of construction of I-5. As discussed in the Biological Technical Report, results of regional landscape linkage studies identify the importance of this east-west connection. However, Castaic Lake and Lagoon to the east and I-5 to the west substantially reduce the Project site's potential to provide significant east-west linkage value. Although the lake and lagoon are sources of water, they are unpassable for nearly all but avian species and are difficult to access due to unvegetated and steep shorelines surrounding nearly all these water bodies other than the northern edge of Castaic Lake. West of the Project site, a single underpass beneath I-5 is likely to be utilized by a variety of wildlife as a safe crossing to and from either side of the highway. Due to the constraints of the southern and eastern edges of the site, wildlife using this crossing are expected to move to and from the crossing and areas north of the Project site to allow continued east-west movement. Under existing conditions, the Project site itself does not represent an important component of the regional movement of the area. Therefore, Project implementation would result in adverse but less than significant impacts on regional wildlife movement.

Many of wildlife species present on the site either seasonal or as year-round residents are expected to breed on the Project site. Most of these species occur throughout the region and are expected to breed in potentially suitable habitat throughout the region. The Project site does not represent a unique breeding area or nursery site for these species other than special status species described separately, and the loss of native and non-native habitat would not be expected to reduce general wildlife populations below self-sustaining levels. Therefore, Project implementation would result in adverse but less than significant impacts on native wildlife nursery sites and no mitigation is required. However, MM 5.2-09 and MM 5.2-13, requiring a western spadefoot relocation program and nesting bird mitigation, would reduce these impacts.

Level of Significance without Mitigation: Less than significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None

Level of Significance with SCVAP 2012 EIR Mitigation: Less than significant.

Recommended 1992 EIR Mitigation Measures: None

Level of Significance with 1992 EIR Mitigation: Less than significant.

Recommended Mitigation Measures: Although a significant impact was not identified, implementation of MMs 5.2-09 and 5.2-13, identified previously, would further reduce less than significant impacts on native wildlife nursery sites.

Net Level of Significance: Less than significant.

5.2.8 CUMULATIVE IMPACTS

This cumulative impact analysis considers potential impacts to sensitive biological resources that would result from combined, incremental impacts of the Project when added to other past, present, and reasonably foreseeable future projects having closely related impacts. The following cumulative impact analysis is based on a review of related projects in the vicinity of the Project site, the Project's direct and indirect impacts with implementation of mitigation measures existing conditions in the Project vicinity, and an analysis of aerial photographs.

The Project would have potentially significant adverse impacts on biological resources. Several mitigation measures (MM 5.2-4 through MM 5.2-21) would be implemented to avoid and/or reduce these impacts to less than significant levels. Cumulative projects in the area are expected to have similar potential impacts to the Project on biological resources in the Project vicinity due to similar project type and similar existing conditions. The cumulative impact on biological resources such as special status species, sensitive habitat, jurisdictional resources, and wildlife movement would be considered to be greater than the individual proposed Project. However, when considering all of the proposed and existing projects in the Project area, the NorthLake Project contributes a relatively small portion of the impacts in the area due to its relatively small impact acreage, and the location adjacent existing development. The Project is not expected to contribute a significant impact to the Project area. Incremental impacts would not be cumulatively considerable and no additional mitigation is required.

5.2.9 IMPACT CONCLUSION

Potentially significant direct impacts on biological resources relating to loss of native habitat would be considered less than significant after implementation of the recommended mitigation measures noted in this section. Significant direct impacts on special status biological resources and significant indirect impacts on biological resources relating to noise, lighting, and human disturbance from the proposed Project would be considered adverse but less than significant following implementation of the mitigation measures noted in this section. While, cumulative regional impacts from the loss of wildlife habitat after development of the Project would also be considered adverse but less than significant, incremental impacts from the proposed Project would not be cumulatively considerable and no additional mitigation is required.

5.2.10 REFERENCES

BonTerra Psomas. 2015 (December). *Biological Technical Assessment Report, NorthLake Specific Plan Development Project*. Pasadena, CA: BonTerra Psomas.

Los Angeles County Department of Regional Planning (LACDRP). 2015 (March). *Los Angeles County General Plan, Public Review Draft.* Los Angeles, CA: LACDRP. http://planning.lacounty.gov/generalplan/draft.

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5.3 CULTURAL RESOURCES

5.3.1 METHODOLOGY

This section of the SEIR describes potential cultural and paleontological resources impacts relative to the proposed Project and is based on information incorporated by reference and contained in the *Phase I Cultural Resources Assessment, NorthLake Specific Plan* and the *Phase I Paleontological Resources Assessment, NorthLake Specific Plan Area, Castaic, Los Angeles County, California,* prepared by BonTerra Psomas (BonTerra Psomas 2015; BonTerra Psomas 2016) and included as Appendix E-1 and Appendix E-2, respectively. Preparation of the Cultural Resources Assessment included a cultural resources records search, Native American scoping, and a pedestrian survey of the property to identify known resources and formally record any cultural resources that were discovered as a result of the survey. Preparation of the Paleontological Resources Assessment included a paleontological resources literature and records search, interviews, and paleontological resources surveys.

5.3.2 BACKGROUND INFORMATION

1992 NorthLake Specific Plan Environmental Impact Report

The 1992 NorthLake Specific Plan Environmental Impact Report (1992 SP EIR) did not include a cultural resources analysis.

2012 Santa Clarita Valley Area Plan Environmental Impact Report

The 2012 Santa Clarita Valley Area Plan Environmental Impact Report (SCVAP 2012 EIR) concluded that, with implementation of mitigation measures, all impacts related to cultural and paleontological resources would be less than significant.

Buildout in the SCVAP 2012 was described as resulting in a substantial increase in population and infrastructure. This increase in population requires the development and disturbance of vacant lands. Implementation of the SCVAP 2012 has the potential to have a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the California Environmental Quality Act (CEQA) Guidelines. However, the implementation of the SCVAP 2012 policies would reduce the potential impact on significant historical resources to a less than significant level.

The SCVAP 2012 area is rich with many different cultural and archeological resources with many of the potential archeological resources still buried under soil. The disturbance of the soil has the potential to uncover any unknown resources. Implementation of the SCVAP 2012 has the potential to negatively impact these resources. However, implementation of SCVAP 2012 policies and mitigation measures would reduce any potentially adverse impacts on archaeological resources to a less than significant level.

The potential increase in development resulting from buildout of the County's Planning Area will potentially affect paleontological and unique geologic resources. However, implementation of mitigation measures will reduce potentially significant impacts on paleontological or unique geologic resources to a less than significant level.

5.3.3 EXISTING CONDITIONS

The nature of cultural resources does not limit the potential occurrences to a specific or finite area. Therefore, the records search and background perspective considered the entire Project area and the immediate vicinity.

Prehistoric Background

Several chronologies are generally used to describe the sequence of the prehistoric periods of Southern California. William Wallace developed the first comprehensive California chronologies and defines four periods for the southern coastal region.

Wallace's synthesis is largely "descriptive and classificatory, emphasizing the content of archaeological cultures and the relationships among them". Wallace relies on the concept of "cultural horizons", which are generally defined by the temporal and spatial distribution of a set of normative cultural traits, such as the distribution of a group of commonly associated artifact types. As a result, his model does not allow for much cultural variation within the same time period, nor does it provide precise chronological dates for each temporal division. Nonetheless, although now more than 50 years old, the general schema of the Wallace chronology has provided a general framework for Southern California prehistory that remains valid today.

Horizon I: Early Man or Paleo-Indian Period (11,000 BCE[1] to 7,500 BCE). While Wallace initially termed this period the Early Man Horizon (I), this early stage of human occupation is commonly referred to as the Paleo-Indian Period today. The precise start of this period is still a topic of considerable debate. At inland archaeological sites, the surviving material culture of this period is primarily lithic, consisting of large, extremely well made stone projectile points and tools such as scrapers and choppers. Encampments were probably temporary, located near major kills or important resource areas.

Horizon II: Milling Stone Assemblages (7,500 BCE to 1,000 BCE). Encompassing a broad expanse of time, the Milling Stone Period was named for the abundant millingstone tools associated with sites of this period. These tools, the mano and metate, were used to process small, hard seeds from plants associated with shrub-scrub vegetation communities. An annual round of seasonal migrations was likely practiced, with movements coinciding with ripening vegetal resources and the periods of maximal availability of various animal resources. Along the coast, shell midden sites are common site types. Some formal burials, occasionally with associated grave goods, are also evident. This period of time is roughly equivalent to Warren's Encinitas Tradition. Warren suggests that, as millingstones are common and projectile points are comparatively rare during this period of time, hunting was less important than the gathering of vegetal resources.

More recent studies suggest that a diversity of subsistence activities, including hunting of various game animals, were practiced during this period. At present, little is known about cultural change during this time period in Southern California. While this lack of noticeable change gives the appearance of cultural stasis, almost certainly many regional and temporal cultural shifts did occur. Future research that is focused on temporal change within the Milling Stone Period would greatly benefit the current understanding of Southern California prehistory.

1 BCE is defined as "Before Common Era" and generally refers to that time period commonly referred to as "Before Christ" (B.C.).

Horizon III: Intermediate Cultures (1,000 BCE to 750 CE[2]). The Intermediate Period is identified by a mixed strategy of plant exploitation, terrestrial hunting, and maritime subsistence strategies. Chipped stone tools, such as projectile points, generally decrease in size, but increase in number. Abundant bone and shell remains have been recovered from sites dating to these time periods. In coastal areas, the introduction of the circular shell fishhook and the growing abundance of fish remains in sites over the course of the period suggest a substantial increase in fishing activity during the Intermediate Horizon. It is also during this time period that mortar and pestle use intensified dramatically. The mano and metate continued to be in use on a reduced scale, but the greatly intensified use of the mortar and pestle signaled a shift away from a subsistence strategy based on seed resources to that of the acorn. It is probably during this time period that the acorn became the food staple of the majority of the indigenous tribes in Southern California. This subsistence strategy continued until European contact. Material culture became more diverse and elaborate and included steatite containers, perforated stones, bone tools, ornamental items, and asphalt adhesive.

Horizon IV: Late Prehistoric Cultures (750 CE to 1769 CE). During the Late Prehistoric Period, exploitation of many food resources, particularly marine resources among coastal groups, continued to intensify. The material culture in the Late Prehistoric Horizon increased in complexity in terms of the abundance and diversity of artifacts being produced. The recovery and identification of a number of small projectile points during this period likely suggests a greater utilization of the bow and arrow, which was likely introduced near the end of the Intermediate Period. Shell beads, ornaments, and other elements of material culture continue to be ornate, varied, and widely distributed; the latter evidence suggests elaborate trade networks. Warren's scheme divides the late prehistoric period into several regional traditions. Western Riverside County, Orange County, and the Los Angeles Basin area are considered part of the "Shoshonean" tradition, which may be related to a possible incursion of Takic speakers into these areas during this period. The Late Prehistoric Period includes the first few centuries of early European contact (1542–1769 CE); it is also known as the Protohistoric Period as there was a low level of interaction between native Californians and Europeans prior to Portolá's overland expedition in 1769.

In the few centuries prior to European contact, the archaeological record reveals substantial increases in the indigenous population. Some village sites may have contained as many as 1,500 individuals. Apparently, many of these village sites were occupied throughout the year rather than seasonally. This shift in settlement strategy was likely influenced by improved food procurement and storage technology, which enabled population growth and may have helped stimulate changes in sociopolitical organization.

Evidence is growing that prehistoric cultural change has been much more variable through time and across culture areas than previously thought. Cultural traits such as maritime economies, seafaring, complex trade networks, and year-round occupation of villages appear to have developed much earlier than previously thought. Culture change during the Late Prehistoric Period, in particular, may have been driven more by environmental and resource pressures than optimal adaptation to the environment.

Ethnographic Background

Late Period archaeology is generally better understood because the late nineteenth and early twentieth century descendants of these groups provided additional information to early anthropologists. However, so few descendants could be identified from the Tataviam or *Alliklik*, whose territory included the Castaic Creek area, that very little of them is known. By the time

2 CE is defined as "Common Era" and generally refers to that time period commonly referred to as "annō Dominī" (A.D.).

anthropologists began to collect data about traditional native cultures in California (about 1900), virtually no Tataviam could be found. Decimated by Spanish missionization and absorbed by other groups through inter-marriage, the Tataviam vanished rapidly from the cultural landscape. What is known about their culture has been reconstructed through linguistic and ethnohistoric research, archaeological analysis, and remembrances of individuals from neighboring bands.

Most of what is known about the Tataviam has been gleaned from raw field notes taken by anthropologists John P. Harrington and Alfred L. Kroeber; from records at Mission San Fernando, where many Tataviam were taken; and diaries of early Spanish explorers. Recent work with these materials has helped considerably in understanding more about Tataviam life. Their territory encompassed a roughly triangular area from the Piru area, eastward along the upper Santa Clara River through the Newhall area to Soledad Pass, and northward across the Sierra Pelona, Sawmill, and Liebre Mountains to the westernmost edge of the Antelope Valley and southernmost slopes of the Tehachapi Mountains.

The Tataviam were hunter-gatherers that spoke a variant of the indigenous Takic language. Takic-speakers are believed to have migrated into Southern California from the Great Basin sometime between 1,000 and 3,000 years ago, an event some archaeologists believe interrupted the long-standing Millingstone way of life. Tataviam subsistence centered upon the seasonal gathering of plant foods (yucca, acorns, sage seeds, and juniper berries) and hunting (rabbit, rodents, deer, and antelope). Acorns, the staple food of most Late Period groups in California, may have been less important to the Tataviam, who utilized yucca more extensively. The plant was roasted in stone-lined earth ovens, often identified archaeologically.

With the Santa Clara River Valley and Antelope Valley acting as east-west corridors between the deserts and coast, the Tataviam likely participated in “down the line” long-distance trade. Shell beads found in the western Mojave Desert, for example were acquired by the Takic-speaking Kitanemuk through a trade network in which the Tataviam may have been linked with Hokan-speaking Chumash on the coast.

A number of Tataviam villages have been identified through historic registers at Mission San Fernando, including *tsawayung* at the original Newhall Ranch site near Castaic Junction; *naqava’atang* in the Elderberry Canyon area along Castaic Creek; and *pi’ing* at the confluence of Castaic Creek and Elizabeth Lake Canyon. The village site of *pi’ing* probably lies under Castaic Lake, which was created when Castaic Creek was dammed in 1972. The Castaic area and Lake Castac near Lebec, though separated by some 25 miles, are named from the same Native American root: the Chumash *kashtik*.

Historic Background

The major historic periods for the greater Los Angeles area are defined by key events documented by participants, witnesses, historians, and cartographers:

- **Spanish Period** (1769–1822 or 233–180 years ago)
- **Mexican Period** (1822–1848 or 180–154 years ago)
- **American Period** (1848–Present or since 156 years ago).

Spanish explorer Juan Rodríguez Cabrillo made a temporary landfall at the Chumash village of *šišolop* (present-day Ventura) on October 12, 1542. However, the beginning of the post-prehistoric era in Southern California is marked by the arrival of the Gaspar de Portolá overland expedition from New Spain (Mexico) and the founding of the first Spanish settlement at San Diego on July 16, 1769. With the onset of the Spanish Period, the Tataviam first came into direct contact with Europeans when the Portolá expedition passed through their territory about two weeks later,

reaching the upper Santa Clara River in the Newhall-Saugus area and camping briefly as they continued west toward Ventura. In 1772, Pedro Fages, a soldier searching for Spanish deserters, traveled through the Antelope Valley and into the San Joaquin Valley via the Tejon Pass. In 1776, Friar Francisco Garcés arrived in the Newhall-Saugus area and turned northward, following lower Castaic Creek and Elizabeth Lake Canyon to reach the Antelope Valley.

Three of the 21 Franciscan missions established by the Spanish in *Alta California* impacted Tataviam people profoundly: Mission San Gabriel Arcángel (1771), Mission San Fernando Rey de España (1797), and Mission San Buenaventura (1782). An *asistencia* (outlying chapel and granary) of Mission San Fernando was established in 1802 along the upper Santa Clara River. In 1820, Friar Mariano Payéras, *Presidente* of the California missions, reported to Spain that a mission should be established on the Santa Clara River in the Newhall area, referring to the location as *Cajon de los Difuntos* because native people had killed two Spanish soldiers there. However, the rebellion in Mexico against Spain was already under way, and Payéras received no support for his campaign to establish additional missions in California's interior.

Mexico's independence from Spain in 1822 brought the Mexican Period to California. Mexico secularized the missions, but continued the Spanish practice of granting large tracts of ranch land to soldiers, civil servants, and pioneers. The Project site is not located within any grant. The land grant nearest the Project site was the 13,339-acre *Rancho Temescal* (or *Temascal*), located just 1.25 miles to the west at its nearest point. Temescal was granted to Francisco Lopez and Jose Arellanes in 1843 by Manuel Micheltorena, one of several Mexican governors of Alta California. The ranch was patented by the United States in 1871, but little is known of historic developments there.

Located 2.5 miles to the southeast at its nearest point, the massive 48,612-acre Rancho San Francisco was granted in 1839 to Antonio del Valle, a Spanish lieutenant, by Governor Juan Bautista Alvarado. Rancho San Francisco became popularly known as Rancho de Valle and is designated as California Historical Landmark No. 556. On March 9, 1842, gold was discovered on the great ranch in Placerita Canyon by Francisco López, six years before the famous discovery at Sutter's Mill that unleashed the California Gold Rush. López is said to have dreamed about finding the gold, and an oak tree growing at the spot came to be known as "Oak of the Golden Dream", which is now designated as California Historical Landmark No. 168.

Anglo-Americans began to explore Alta California as early as 1826, when trapper Jedediah Smith arrived at Mission San Gabriel. Mountain men James Ohio Pattie and Ewing Young passed through the Upper Santa Clara River Valley during the early 1830s. Preceding an American challenge for the California territory, John C. Fremont's topographical engineers began to survey the region for the United States during the 1840s. Before long, the Mexican-American War broke out, with Fremont in command of the California Battalion for the United States. Fremont's battalion marched through the Santa Clara River Valley and south to Mission San Fernando; the hostilities ended there on January 13, 1847, and the Treaty of Guadalupe Hidalgo was signed on February 2, 1848. The transition was more apparent in 1850, when the new State of California was apportioned into 27 original counties, including Los Angeles County.

The Gold Rush created a need for roads between the mining camps and major trade centers of San Francisco and Los Angeles. Early in 1855, shipping pioneer Phineas Banning blazed a wagon road north from Los Angeles to the newly established Fort Tejon, opening direct freight service between the growing business center, the Mojave Desert, and southern Kern County. The arduous route was improved in 1862 when a deep passageway was cut through an intervening ridge. Known as Beale's Cut, the feature is located in the Newhall area and is designated as California Historical Landmark No. 1006. In 1858, the Butterfield transcontinental stage line began

to utilize Banning's road. The route followed San Francisquito Canyon rather than the steep grade north of Castaic presently used for Old Route 99/Interstate (I) 5.

During the winter of 1861–1862, relentless rains in Southern California produced catastrophic floods that washed away thousands of buildings, crops, and livestock. The floods were followed by two years of catastrophic drought that dealt another crippling blow to crops and livestock. Land values fell dramatically, and most ranchers were forced to sell their holdings. The crisis opened the door to speculators and entrepreneurs from the East Coast who envisioned profitable new developments on cheap land. One of these was Thomas A. Scott of the Pennsylvania Railroad. Scott sent Thomas Bard to California to purchase land in the quest for oil, and Bard purchased Rancho San Francisco in 1865. The enterprise was unsuccessful, and Bard sold Rancho San Francisco to rancher Henry Mayo Newhall in 1875. Oil speculation in the region, however, continued at a brisk pace as discoveries were made in other locations.

On September 6, 1876, the Southern Pacific Railroad was completed through Soledad Canyon and crossed Newhall's Rancho San Francisco along the upper Santa Clara River. The golden spike driven at Lang Station represented a critical link among Los Angeles, Northern California, and transcontinental routes to the east. The site of Lang Station is designated as California Historical Landmark No. 590. A station aptly named Newhall was established on October 28, 1876, but was renamed Saugus two years later when the original name was transferred to a new station that was constructed two miles to the south. A small depot was constructed at Castaic Junction a few years later in 1887.

The history of the Castaic Valley and upper Santa Clara River Valley is perhaps best known for the Newhall Land and Farming Company founded in 1883 by the heirs of Henry Mayo Newhall after his death in 1882. Upon the company's 100-year anniversary, President and Chairman of the Board James Dickason summarized its history in terms of the chief economic pursuits during the first four quarters:

- **1883–1908:** cattle industries, including feed yards supplied by the company's own crops
- **1908–1933:** farming development and land sales
- **1933–1958:** mineral development and cultivation and irrigation improvements
- **1958–1983:** urban development (the communities of Newhall, Saugus, Valencia, and Canyon Country were incorporated as the City of Santa Clarita in 1987).

The earliest attempts to commercialize oil in Southern California occurred during the 1850s. The region was already well known to Native Americans and early explorers for tar seeps and petroleum springs, but the first saleable petroleum-based products were lubricants and lamp fuels such as camphene and kerosene (made to replace the more expensive alternative, whale oil). Crude petroleum for these products was skimmed or dipped from pools on the surface or in pits or shafts. According to Hutchinson, the first "true" oil well in Southern California was drilled in 1865 near Piru.

Oil speculation in Rancho San Francisco had commenced under Thomas Bard in 1865. However, Henry Mayo Newhall, who had acquired the ranch from Bard ten years later, was not interested in the oil business and concentrated instead on traditional ranching pursuits—raising cattle, sheep, and horses—as well as agricultural endeavors (e.g., growing wheat and fruit trees) and irrigation improvement. Even so, he allowed speculation by "wildcatters" to continue. In 1875, Well No. 4 in Pico Canyon struck oil, becoming the state's first successful well and establishing the Newhall Field. This well, known as "Pico No. 4", is designated California Historical Landmark No. 516. All other speculation efforts on the ranch failed, however and, as late as 1934, Newhall's son William declared that "there is no indication that this ranch is an oil property" (BonTerra Psomas

2015[3]). More than 60 years after the strike at Pico No. 4 (in 1936) was struck on the ranch again in Potrero Canyon. By 1940, however, most pools in the Greater Newhall Field had been exhausted, and the majority of operations in the Newhall area were shut down. The Castaic Junction and Honor Rancho fields were discovered in 1950, but did not produce substantial yields.

In August 1924, work began on a dam that would create the St. Francis Reservoir in upper San Francisquito Canyon. The facility was the vision of William Mulholland, then Chief Engineer for the Los Angeles Bureau of Water Works and Supply. Mulholland planned to route an aqueduct from Owens Valley through the canyon, bringing water and hydroelectric power to the metropolis, and the Newhall directors agreed to an easement for the Project through the ranch. The 185-foot-high dam was completed in May 1926, but on March 12, 1928, it collapsed, and a catastrophic flow of water surged down the canyon and into the Santa Clara River Valley, destroying everything in its path and taking more than 400 lives. The site of the St. Francis Dam disaster is designated as California Historical Landmark No. 919.

Only a handful of families occupied the Castaic area when the Southern Pacific established a depot at Castaic Junction roughly three miles to the south of what is now known as Castaic. A post office followed in 1894, but closed a year later (mail was left in a barn and picked up by the next resident to pass by). The Castaic School District was organized in 1889. In 1914, construction began on a more direct roadway between Castaic Junction and Gorman, with the original "Ridge Route" opening to vehicles in 1915. Even before the new road was completed, shops for travelers began to appear, leading one historian to observe, "From the very beginning, Castaic has been a truck stop and remains so today" (BonTerra Psomas 2015). More than just a truck stop, however, the community of Castaic hosts more than one million people a year who come to enjoy fishing and aquatic sports at the Castaic Lake State Recreation Area, created after Castaic Creek was dammed in 1972 (BonTerra Psomas 2015).

5.3.4 RELEVANT PLANS, POLICIES, AND REGULATIONS

State

California Health and Safety Code (Sections 7050.5, 7051, and 7054)

These sections of the *California Health and Safety Code* collectively address the illegality of interference with human burial remains (except as allowed under applicable sections of the *California Public Resources Code*). These sections also address the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction. Procedures to be implemented are established for (1) the discovery of Native American skeletal remains during construction of a project; (2) the treatment of the remains prior to, during, and after evaluation; and (3) reburial.

Section 7050.5 of the *California Health and Safety Code* specifically provides for the disposition of accidentally discovered human remains. Section 7050.5 states that, if human remains are found, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined the appropriate treatment and disposition of the human remains.

California Public Resources Code (Section 5097.98)

Section 5097.98 of the *California Public Resources Code* states that, if remains are determined by the Coroner to be of Native American origin, the Coroner must notify the Native American

3 Please refer to the technical report found in Appendix E-1 for a complete list of references.

Heritage Commission within 24 hours, which in turn must identify the person or persons it believes to be the most likely descended from the deceased Native American. The descendants shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains. This section of the *California Public Resources Code* has been incorporated into Section 15064.5(e) of the State CEQA Guidelines.

Local

County of Los Angeles General Plan

The current General Plan requires the NorthLake development to address the following policies, as stated in Conservation and Natural Resources Element. The Project's consistency with the following policies is presented in Section 5.9, Land Use.

Conservation and Natural Resources Element

- **Policy C/NR 14.1:** Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible.
- **Policy C/NR 14.6:** Ensure proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.

Santa Clarita Valley Area Plan

The SCVAP 2012 requires the *NorthLake Specific Plan* to address the following policies from its Conservation and Open Space Element. The Project's consistency with the following policies is presented in Section 5.9, Land Use.

Conservation and Open Space Element

- **Policy CO-5.1.1:** For sites identified on the Cultural and Historical Resources Map (Figure CO-6), review appropriate documentation prior to issuance of any permits for grading, demolition, alteration, or new development, to avoid significant adverse impacts. Such documentation may include cultural resource reports, Environmental Impact Reports, or other information as determined to be adequate by the reviewing authority.
- **Policy CO-5.1.2:** Review any proposed alterations to cultural and historic sites identified in Table CO-1 or other sites which are so designated, based on the guidelines contained in the Secretary of the Interior's Standards for the Treatment of Properties (Title 36, Code of Federal Regulations, Chapter 1, Part 68, also known as 36 CFR 68), or other adopted County guidelines.
- **Policy CO 5.3.1:** For any proposed Area Plan Amendment, Specific Plan, or Specific Plan Amendment, notify and consult with any California Native American tribes on the contact list maintained by the California Native American Heritage Commission that have traditional lands within the County's jurisdiction, regarding any potential impacts to Native American resources from the proposed action, pursuant to State guidelines.
- **Policy CO 5.3.2:** For any proposed development project that may have a potential impact on Native American cultural resources, provide notification to California Native American tribes on the contact list maintained by the Native American Heritage Commission that have traditional lands within the County's jurisdiction, and consider the input received prior to a discretionary decision.

- **Policy CO 5.3.3:** Review and consider a cultural resources study for any new grading or development in areas identified as having a high potential for Native American resources, and incorporate recommendations into the project approval as appropriate to mitigate impacts to cultural resources.
- **Policy CO 10.1.4:** Maintain and acquire, where appropriate, open space to preserve cultural and historical resources.

Land Use Element

- **Policy LU 2.2.2:** Identify sites and areas with historical or cultural value to the community, and ensure that uses in or adjacent to these areas will not impact their historical integrity.
- **Policy LU 6.4.6:** Through the environmental review and development review processes, evaluate impacts on historic and cultural sites from proposed development and require appropriate mitigation.

5.3.5 THRESHOLD CRITERIA

Thresholds Addressed in this Draft Supplemental Environmental Impact Report

The County of Los Angeles utilizes an Initial Study Questionnaire with Thresholds of Significance specific to the County. The Initial Study for the proposed Project concludes that additional analysis of the following thresholds of significance is required in this Draft SEIR. The Project will be considered to have a significant effect related to hazards if the Project would:

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

Under CEQA, a finding of significance is normally made if a project would result in substantial alterations or removal or relocation of historical, archaeological, or paleontological resources. Section 15064.5(a)(3) defines “historical resources” as buildings, structures, districts, sites, or objects that are eligible for the California Register of Historical Resources (CRHR). An eligible resource is one that meets at least one of the following criteria for significance:

- **Criterion A:** Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.
- **Criterion B:** Is associated with the lives of persons important in our past.
- **Criterion C:** Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- **Criterion D:** Has yielded, or may be likely to yield, information important in prehistory or history (referring to sites that have the potential to yield data relevant to important research topics).

5.3.6 RELEVANT PROJECT CHARACTERISTICS

The proposed Project would require earthwork in the form of cut and fill and grading activities. In total, approximately 30 million cubic yards (cy) of earthwork would be required. Due to the nature of archaeological and paleontological resources, this earthwork has the potential to disturb buried resources.

The Project site contains several utility features that may be considered historic resources based on their age and unique qualities. As part of the Project, segments of the on-site utility easements (natural gas and communication lines) will be relocated to allow for site grading. One of two oil pipelines that are located generally in the eastern ridge of Grasshopper Canyon will be relocated approximately 1,500–2,000 feet east. The relocated alignment of the Pacific Oil pipeline is proposed through adjacent lands owned by the City of Los Angeles Department of Water and Power (LADWP) and the Castaic Lake State Recreation Area (SRA). The Applicant is negotiating with both agencies for receipt of easements to realign the pipeline through these publicly owned properties. The results of these efforts are pending, but would be a condition of approval prior to initiation of development. The other pipeline would be vacated; its portion on the Specific Plan site removed; and the ends stubbed off. Several Southern California Edison (SCE) transmission towers on the NorthLake site will require alteration or relocation. Specifically, implementation of the proposed Project would require the relocation of two to three towers so that the transmission lines will not directly traverse an area proposed for residential development. The final engineering plans under preparation by SCE have not been completed and the full extent of modification to the towers is not known at this time.

5.3.7 ENVIRONMENTAL IMPACTS

Impact Analysis

Threshold 5.3-1 Would the Project disturb any human remains, including those interred outside of formal cemeteries?

A comment letter was received on April 10, 2015 from the Santa Clarita Valley Historical Society in response to the NOP public comment period. According to the letter, human remains were encountered while grading within the project area in 1997. More specifically, five bodies (with coffins) were exhumed and reburied at Eternal Valley Cemetery in Newhall and a comprehensive archaeological study of the discovery was subsequently completed in 1998. As noted in the comment letter, this discovery occurred south of the project site. As part of the proposed Project, a records search was conducted at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton, as detailed below under Threshold 5.3-2. According to the results of the records search, the proposed project site is not known to have been utilized for religious or sacred purposes.

Although no evidence is in place to suggest that the project site has been used for human burials, there is the potential to disturb previously undiscovered remains, thus resulting in a potentially significant impact. As stated in MM 5.3-1, the *California Health and Safety Code* (Section 7050.5) states that, if human remains are discovered on site, no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to the *California Public Resources Code* (Section 5097.98). Therefore, all potentially significant impacts related to disturbance of human remains would be reduced to less than significant levels with implementation of MM 5.3-1.

Level of Significance without Mitigation: Significant Impact.

Recommended SCVAP 2012 EIR Mitigation Measures:

MM 5.3-1 If human remains are encountered during a public or private construction activity, other than at a cemetery, State Health and Safety Code 7050.5 states that no further disturbance shall occur until the Los Angeles County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The Los Angeles County Coroner must be notified within 24 hours.

If the coroner determines that the burial is not historic, but prehistoric, the Native American Heritage Commission (NAHC) must be contacted to determine the most likely descendent (MLD) for this area. The MLD may become involved with the disposition of the burial following scientific analysis. (SCVAP 2012 EIR MM 3.8.7)

Level of Significance with SCVAP 2012 EIR Mitigation: Less Than Significant.

Recommended 1992 EIR Mitigation Measures: None.

Level of Significance with 1992 EIR Mitigation: Less Than Significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant. Although not anticipated, previously undiscovered human remains may be discovered on site during project development. Implementation of MM 5.3-1 would reduce potential impacts to less than significant levels through compliance with *California Health and Safety Code* (Section 7050.5) and *California Public Resources Code* (Section 5097.98).

Threshold 5.3-2 Would the Project cause a substantial adverse change in the significance of a historical resources as defined in CEQA Guidelines?

Based on consultation with the South Central Coastal Information Center (SCCIC) at California State University, Fullerton, two known historic resource sites are located within ½ mile of the Project site:

- **19-186861.** This historic resource, known as the 1913 SCE Bailey-Pardee and Pardee-Pastoria 220-kilovolt (kV) transmission line, is comprised of a historic electrical transmission line and its associated steel lattice towers dating to 1913; this resource was first recorded in 2003.
- **CA-LAN-99OH.** This historic resource, known as Old Ridge Route, is a roadway listed on the National Register of Historic Places (NRHP) and on the CRHR. This road was opened in 1915 and was the most direct automobile and truck route connecting Los Angeles to Northern California.

In addition, the cultural resources survey resulted in the discovery of one new historic resource site (NL-4). The historic resource site (NL-4) consists of the Pacific Pipeline, a crude oil pipeline that traverses the property from north to south.

Bailey-Pardee and Pardee-Pastoria 220-kilovolt Transmission Lines

BonTerra Psomas located historic structural resource 19-186861, which consists of a set of paired electrical transmission lines originally constructed in 1913 by SCE for the Big Creek Project. The lines are currently known as the Bailey-Pardee and Pardee-Pastoria 220-kV circuits (on the east and west, respectively) and appear on U.S. Geological Survey (USGS) quadrangles of the area as early as 1940 (i.e., 15-minute Violin Canyon and Castaic Quadrangles, based on surveys in 1929, 1931, and 1936). In his *Iron Men and Copper Wires: A Centennial History of the Southern California Edison Company,* William Myers identified the twin transmission lines as "the longest-distance and highest-voltage line in the world" at the time, stretching 241 miles from Big Creek Power House No. 1 in the Sierra Nevada to the Eagle Rock Substation in the Los Angeles area (BonTerra Psomas 2015).

Originally designed to carry 150,000 volts (the largest capacity at the time), the line had to be converted to 220,000 volts in 1922 to meet Los Angeles' growing demand. According to Myers:

> The most difficult single aspect of the job was converting the transmission towers themselves. New, longer insulators had to be installed, and most of the towers physically raised from 10 to 30 feet so the power lines would adequately clear the ground, all while the lines remained "hot"—energized at 150,000 volts—for the vital flow of energy to Los Angeles could not be interrupted. On Sunday morning May 6, 1923, the line was cut over to 220,000-volt operation, establishing another first for Edison. For this achievement, the Southern California Edison Company in 1923 became the first winner of the Charles A. Coffin Medal, today known as the Thomas A. Edison Award.

Around 1926, according to Schmidt, the line was physically modified again, possibly as a result of improvements to the Ridge Route road, when at least one tower was moved a short distance out of the original alignment. Additional modifications followed in 1986 when selected towers were elevated once again, certain lines truncated, and some adjacent land forms graded to allow for increased line sag. Thus, the resource's historic alignment remains largely intact (with slight variations), but the original historic materials (towers, insulators, and electrical lines) appear to have lost integrity through modifications in 1922, 1926, and 1986.

In 2004, Jones & Stokes evaluated the transmission lines. Their recommendation was that the transmission lines lacked direct association with historic events or persons and lacked sufficient integrity to convey potential engineering significance that they did not appear to meet the CRHR criteria for eligibility (BonTerra Psomas 2015).

Subsequently, in 2007, the State Historic Preservation Office, in a communication with SCE, concurred with Edison's proposal to conduct Level II Historic American Buildings Survey/Historic American Engineering Record/Historic American Landscapes Survey (HABS/HAER/HALS) documentation for each tower as ongoing changes and maintenance occur to the line, which had been determined a NRHP eligible property. According to the letter (refer to Appendix E of the Cultural Resources Assessment [included as Appendix E-1]) SCE would bear the responsibility associated with this documentation at the time modifications are proposed.

Old Ridge Route

The Old Ridge Route (CA-LAN-99OH), which is adjacent to a portion of the Project site, is a roadway listed on the NRHP as well as on the CRHR. According to the NRHP, this road was opened in 1915 and was the most direct automobile and truck route connecting Los Angeles to Northern California. The segment of Ridge Route Road that is considered historic, per the CRHP and CRHR criteria, is an unbroken span of the original Ridge Route roadway that retains most of its original 1914 to 1917 engineering features, and additional upgrades and modifications undertaken before 1933 (BonTerra Psomas 2015). Evaluation of Old Ridge Route for the NRHP listing resulted in a determination that the significance of this resource was based on two significance criteria: Criterion A (providing the first direct automobile and truck thoroughfare connecting Los Angeles to Northern California) and Criterion C (an example of early mountain motor vehicle highway engineering).

A segment of the historic Old Ridge Route (originally a graded dirt surface in 1915 and finished with concrete in 1919) also crosses a portion of the southern Project area. However, this was not noted by the SCCIC because only the portion of the road located in the Angeles National Forest north of the Project is recorded as a resource (and listed on the NRHP for important transportation events [Criterion A] and highway engineering [Criterion C]). The portion of the road located south of the Angeles National Forest boundary has been evaluated and determined as lacking physical integrity due to various alterations and resurfacing and was not included in the NRHP nomination.

NL-4 (Plains Pipeline)

An uncovered/exposed section of the Plains Pipeline L063 Tejon to Los Angeles pipeline was identified on the Project site running generally north-south along the western slopes of Grasshopper Canyon, and appears to have been unearthed because of a regional washout over the site. Information provided by Plains All American GP, LLC states that the underground pipeline, located in the steep terrain of the San Emigdio Mountain Range, was constructed in 1950 to transport crude oil from Kern County pumping facilities to Los Angeles County refineries. The 14-inch-diameter steel pipe was constructed to be permanently located below ground and, except for a small section discovered by Project archaeologists, the path of the pipeline can be found by location markers.

The pipeline was purchased by Plains Pipeline LP from Pacific Energy in November 2006, and retired in 2009. The pipeline is currently being evaluated and tested for restoration to service (Waldeck 2015).

Following a thorough evaluation by an architectural historian, it was determined that the Plains Pipeline L063 Tejon to Los Angeles 14-inch pipeline does not appear eligible for listing in the NRHP or CRHR as a significant historic resource, as it does not meet any of the criteria necessary for listing in the registries (BonTerra Psomas 2015).

Level of Significance Without Mitigation: Less than Significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None.

Level of Significance with SCVAP 2012 EIR Mitigation: Less than Significant.

Recommended 1992 EIR Mitigation Measures: None.

Level of Significance with 1992 EIR Mitigation: Less than Significant

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant. The Project would impact several utility lines through proposed development and relocation activities; however, these structures do not meet any of the criteria necessary for listing in the registries and therefore do not appear eligible for listing in the NRHP or CRHR as significant historic resources.

Threshold 5.3-3 Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5? and

Threshold 5.3-4 Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic features, or contain rock formations indicating potential paleontological resources?

Based on consultation with the SCCIC, four archaeological sites are located within ½ mile of the Project site:

- **CA-LAN-323.** This resource consists of prehistoric lithic artifacts, midden, and bedrock mortar features. The site was first recorded in 1965.
- **CA-LAN-325.** This resource consists of a prehistoric rock shelter containing basketry and beads. The site was first recorded in 1965.
- **CA-LAN-1222.** This resource consists of a prehistoric rockshelter and an associated lithic artifact. This site was first recorded in 1985.
- **CA-LAN-1672H.** This resource consists of the remains of a historic ranch, including ceramic, glass, and metal artifacts. This site was first recorded in 1989.

In addition, the cultural resources survey resulted in the discovery of three new historic archaeological sites (NL-1, NL-2, and NL-3). The historic archaeological sites consist of two historic refuse deposits (NL-1 and NL-2) and the remains of a wooden structure (NL-3). These sites lack sufficient density, diversity, and integrity for inclusion in the CRHR (BonTerra Psomas 2015). The survey also discovered five previously unrecorded isolated occurrences (isolates) of prehistoric artifacts. The prehistoric isolates consist of ground and chipped stone artifacts. Isolated artifacts will not meet the criteria for inclusion in the CRHR (BonTerra Psomas 2015). Therefore, these sites are not considered to be archeological resources under CEQA.

None of the identified archaeological resources occur within Project site boundaries or in the External Improvements Area; therefore, implementation of the *NorthLake Specific Plan* would not impact these recorded resources.

The resource identification effort included consultation with the Native American Heritage Commission (NAHC) in Sacramento regarding the possibility of traditional cultural properties or other Native American sites in the Project vicinity. On May 16, 2014 the NAHC reviewed the Sacred Lands file and prepared a list of local representatives who could be contacted in regard to the Project. The sacred lands file check failed to indicate the presence of any Native American cultural resources in the immediate vicinity of the project. The NAHC included a list of eight Native American individuals/organizations that may have knowledge of cultural resources in the Project vicinity (refer to Appendix B of the Cultural Resources Report [included in Appendix E-1]). In an effort to fully evaluate potential adverse effects to cultural resources, the individuals/organizations were contacted via letter on May 19, 2014, and invited to share any cultural resource information that they may have regarding the Project vicinity. Two responses have been received. The first

response from John Tommy Rosas indicates that the project is located within a high sensitivity area. The second response from the Fernandeño Tataviam Band of Mission Indians indicates that the project is located within traditional tribal boundaries and therefore the tribe would like to consult on the project. Although not mandated by State or federal law, the County met with tribal representatives on September 15, 2015 and presented the proposed Project.

Based on results of the paleontological literature review and records search, no paleontological resources have been recorded on the Project site; however, paleontological resources have been recorded within the Project vicinity in some of the same sedimentary rock units that occur on the Project site. The paleontological resources field surveys conducted from June through August of 2014 revealed the remains of invertebrate fossil marine mollusks and a bony fish that were present at the surface at 11 different locations on the Project site, as described in Appendix C of the Paleontological Resources Assessment, included in Appendix E-2 (BonTerra Psomas 2014).

Despite the lack of recorded archaeological and paleontological resources within the Project site, there is the potential to disturb previously undiscovered resources, thus resulting in a potentially significant impact. Implementation of MMs 5.3-7 through 5.3-9 would require monitoring during all ground disturbance activities and implementation of MMs 5.3-2 through 5.3-4 would require a qualified archaeologist or paleontologist to be notified and evaluate any discovered resources. In compliance with MM 5.3-5, when feasible any discovered resources would be preserved in place. However, when avoidance and preservation is not feasible MM 5.3-6 would require archaeological testing or excavation. Implementation of identified mitigation measures would reduce potential impacts to archaeological and paleontological resources to less than significant levels.

Level of Significance without Mitigation: Significant impact.

Recommended SCVAP 2012 EIR Mitigation Measures:

MM 5.3-2 In the unlikely event that artifacts are found during grading within the County's Planning Area or future roadway extensions, an archaeologist will be notified to stabilize, recover, and evaluate such finds. (SCVAP 2012 EIR MM 3.8.3)

MM 5.3-3 For archeological sites accidentally discovered during future construction, there shall be an immediate evaluation of the find by a qualified archeologist. If the find is determined to be a historical or unique archeological resource, as defined under CEQA, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be provided. Construction work may continue on other parts of the construction site while historical/archeological mitigation takes place, pursuant to Public Resources Code Section 21083.2(i). (SCVAP 2012 EIR MM 3.8.5)

MM 5.3-4 During grading activities. In the unlikely event that artifacts are found during grading within the Project site, a paleontologist will be notified to stabilize, recover, and evaluate such finds. (SCVAP 2012 EIR MM 3.8.6, modified)

MM 5.3-5 Avoidance is the preferred treatment for cultural resources. Where feasible, project plans shall be developed to allow avoidance of cultural resources. Where avoidance of construction impacts is possible, covering of the cultural resource site with a layer of chemically stable soil and avoidance planting (e.g., planting of prickly pear cactus) shall be employed to ensure that indirect impacts from increased public availability to the site are avoided. Where avoidance is selected, cultural resource sites shall be deeded into permanent conservation easements or dedicated open space. (SCVAP 2012 EIR MM 3.8.1)

MM 5.3-6 If avoidance and/or preservation of in place cultural resources is not possible, the following mitigation measures shall be initiated for each impacted site:

a. A participant-observer, as determined by the Native American Heritage Commission (NAHC), shall be used during archaeological testing or excavation in the project site.

b. Prior to the issuance of a grading permit for the project, the project proponent shall develop a test level research design detailing how the cultural resource investigation shall be executed and providing specific research questions that shall be addressed through the excavation program. In particular, the testing program shall characterize the site constituents, horizontal and vertical extent, and, if possible, period of use. The testing program shall also address the California Register and National Register eligibility of the cultural resource and make recommendations as to the suitability of the resource for listing on either Register. The research design shall be submitted to the County of Los Angeles Regional Park and Open-Space District for review and comment. For sites determined, through the Testing Program, to be ineligible for listing on either the California or National Register, execution of the Testing Program will suffice as mitigation of project impacts to this resource. (SCVAP 2012 EIR MM 3.8.2)

Level of Significance with SCVAP 2012 EIR Mitigation: Significant Impact.

Recommended 1992 EIR Mitigation Measures: None.

Level of Significance with 1992 EIR Mitigation: Significant Impact.

Recommended Project Specific Mitigation Measures:

MM 5.3-7 All Project-related ground-disturbing activities in archaeologically sensitive sediments shall be monitored by a qualified Archaeologist to reduce any archaeological resources impacts to a level considered less than significant. The construction monitoring program shall be preceded by a pre-grade meeting in the field in which the Project Archaeologist shall explain the procedures necessary to protect and safely remove potentially significant archaeological resources, and shall establish procedures for monitoring based on the sensitivity of the sediments being graded, schedule, and other information received from the applicant. If potential cultural sites are identified during construction-related ground disturbances, all work in that location shall cease or be immediately diverted until the qualified archaeologist has evaluated the nature and significance of the find. The Project Applicant shall then be notified if the materials are believed to be potentially significant, and the archaeologist may recommend further study and mitigation to the satisfaction of LACDRP.

MM 5.3-8 At such time when the Project Archaeologist is on-site for monitoring activities, a qualified Native American Tribal Monitor shall be notified and invited to observe ground-disturbing activities. The Native American Tribal Monitor shall coordinate with the Project Archaeologist and provide input regarding potential resources or cultural sites. Should any resources be discovered, the procedures set forth in MMs 5.3-2, 5.3-3, and 5.3-7 shall be followed.

MM 5.3-9 All Project-related ground-disturbing activities in paleontologically sensitive sediments shall be monitored by a qualified Paleontologist to reduce any impacts to non-renewable fossil resources to a level considered less than significant. The construction monitoring program shall be preceded by a pre-grade meeting in the field in which the Project Paleontologist shall explain the procedures necessary to protect and safely remove potentially significant fossil materials for study and curation at the Natural History Museum of Los Angeles County, and shall establish procedures for monitoring based on the sensitivity of the sediments being graded, schedule, and other information received from the applicant. If potential paleontological sites are identified during construction-related ground disturbances, all work in that location shall cease or be immediately diverted until the qualified paleontologist has evaluated the nature and significance of the find. The Project Proponent will then be notified if the materials are believed to be potentially significant, and the paleontologist may recommend further study and mitigation to the satisfaction of LACDRP.

Net Level of Significance: Less than significant. Grading, implementation of the fuel modification plan, and excavation for the construction of utility lines may disturb undiscovered cultural and/or Native American resources occurring at the site; however, implementation of MMs 5.3-7 through 5.3-9 requiring archaeological, Native American Tribal, and paleontological monitoring of ground-disturbing activities and MMs 5.3-2 through 5.3-6 requiring notification of a qualified archaeologist and/or paleontologist to recover and evaluate any discovered resources would reduce these impacts to less than significant levels.

5.3.8 CUMULATIVE IMPACTS

The known archaeological resources in the vicinity are either inundated by the water in Castaic Lake or on the opposite side of the freeway from the Project site. There are no known archaeological or paleontological resources on the Project site. Impacts to potential historical, archaeological, and paleontological resources as a result of the proposed Project are less than significant with the implementation of the recommended mitigation measures. Therefore, the proposed Project would not generate cumulative impacts to historical, archaeological or paleontological resources.

5.3.9 IMPACT CONCLUSION

After implementation of the recommended mitigation measures, significant impacts to historical, archaeological, and paleontological resources would be less than significant.

5.3.10 REFERENCES

BonTerra Psomas. 2015 (February). *Phase I Cultural Resources Assessment, NorthLake Specific Plan.* Santa Ana, CA: Psomas.

———. 2014 (October). *Phase I Paleontological Resources Assessment, NorthLake Specific Plan Area, Castaic, Los Angeles County, California.* Irvine, CA: BonTerra Psomas.

Los Angeles County Department of Regional Planning (LACDRP). 2015 (March). *Los Angeles County General Plan, Public Review Draft.* Los Angeles, CA: LACDRP. http://planning.lacounty.gov/generalplan/draft.

———. 2012a (February). *Santa Clarita Valley Area Plan Update Environmental Impact Report; SCH No. 2008071119*. Los Angeles, CA: LACDRP.

———. 2012b (adopted November). *Santa Clarita Valley Area Plan: One Valley One Vision*. Los Angeles, CA: LACDRP. http://planning.lacounty.gov/assets/upl/project/ovov_2012-fulldoc.pdf.

5.4 ENERGY

5.4.1 METHODOLOGY

This section evaluates the potential for energy-related impacts associated with the Project. Energy service providers to the site include Southern California Edison Company (SCE) for electrical service and Southern California Gas Company (SoCalGas) for natural gas.

5.4.2 BACKGROUND INFORMATION

1992 NorthLake Specific Plan Environmental Impact Report

The 1992 NorthLake Specific Plan Environmental Impact Report (1992 SP EIR) did not include an energy analysis.

2012 Santa Clarita Valley Area Plan Environmental Impact Report

The following summary reflects conditions existing at the time of preparation of the Santa Clarita Valley Area Plan (SCVAP 2012) EIR (which is incorporated by reference) and is included as further background information to provide a context for the scope of this Supplemental EIR (SEIR) analysis.

According to the 2012 SCVAP EIR, development of the Santa Clarita Valley planning area would create demand for energy resources, including natural gas and petroleum products, which are readily available but finite in supply given the length of time required by the natural process to create them. However, the investment of these energy resources for the proposed Project are not disproportionate to what would normally be used for a project of this type and scale. According to the 2012 SCVAP EIR, provided that all standard building codes, including energy conservation standards, are followed, the inefficient use of energy resources is not anticipated and a less than significant impact was identified.

5.4.3 EXISTING CONDITIONS

The proposed Project site is located within the SoCalGas 20,000-square-mile service area, and SoCalGas currently supplies approximately 21.4 million customers. SoCalGas (along with other utility service providers) is regulated by the California Public Utilities Commission (CPUC) (SoCalGas 2015). There is an existing 34-inch natural gas pipeline located along the western portion of the Project site almost parallel with Interstate (I) 5. The gas line is underground and within a SoCalGas easement that is 50 feet wide.

The proposed Project site is located within Southern California Edison's (SCE) 50,000-square-mile service area covering Central, coastal, and Southern California, and SCE provides power to approximately 14 million people. SCE is regulated by the CPUC (SCE 2015). There are six separate overhead electrical transmission lines in four separate easements either located adjacent to or that traverse the Project area. These easements and the transmission lines are described below:

- Two SCE 220-kV transmission lines cross the Project site from the western boundary to the southern boundary within SCE fee-owned right-of-way.
- The SCE 150-foot-wide easement crosses the Project site from the western boundary to the southern boundary, roughly parallel to the two 220-kV transmission lines discussed above. One 220-kV transmission line is located in this easement.

- Two Department of Water and Power (DWP) 230-kV transmission lines crosses a small portion of the Project site on the eastern boundary within DWP fee-owned right-of-way.
- There are also electrical facilities available in proximity to the periphery of the proposed Project site.

5.4.4 RELEVANT PLANS, POLICIES, AND REGULATIONS

This section includes relevant federal, State, and local programs and regulations that apply to Energy. In addition to those discussed below, the following relevant programs and regulations from Section 5.7, Greenhouse Gas Emissions, are applicable to the Energy discussion: Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards; the California Air Resources Board (CARB) Scoping Plan; the California Code of Regulations (Title 24, Part 6, Energy Efficiency Standards and Title 24, Part 11, Green Building Standards); the Countywide Energy and Environmental Policy; and the Los Angeles County Green Building Standards Code (Title 31).

Federal

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (Public Law 110-140) seeks to provide the nation with greater energy independence and security by increasing the production of clean renewable fuels; improving vehicle fuel economy; and increasing the efficiency of products, buildings, and vehicles. It also seeks to improve the energy performance of the federal government. The Act sets increased Corporate Average Fuel Economy Standards; the Renewable Fuel Standard; appliance energy efficiency standards; building energy efficiency standards; and accelerated research and development tasks on renewable energy sources (e.g., solar energy, geothermal energy, and marine and hydrokinetic renewable energy technologies), carbon capture, and sequestration.

State

California Public Utilities Commission

CPUC General Order 112E, which is based upon the Federal Department of Transportation Guidelines contained in Part 192 of the *Code of Federal Regulations,* specifies a variety of design, construction, inspection, and notification requirements. The CPUC conducts annual audits of pipeline operations to ensure compliance with these safety standards. In addition, the SoCalGas has a safety program which has reduced the risk of gas distribution fires by improving welds on the larger diameter (24- to 30-inch) pipelines and by replacing old distribution pipes with flexible plastic pipes. According to SoCalGas staff, high-pressure gas mains are common in developed areas throughout the country, and SoCalGas lines are inspected regularly and must comply with CPUC mandated safety requirements.

Renewables Portfolio Standard

The California Renewables Portfolio Standard (RPS) was established in 2002 under Senate Bill 1078 and was amended in 2006 and 2011. The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase the use of eligible renewable energy resources to 33 percent of total procurement by 2020. The CPUC is required to provide quarterly progress reports regarding the State's progress toward RPS goals. This has accelerated the development of renewable energy projects throughout the State. Based on the

3rd quarter 2014 report, the 3 largest retail energy utilities provided an average of 20.9 percent of its supplies from renewable energy sources. Since 2003, 8,248 megawatts (MW) of renewable energy projects have started operating (CPUC 2014).

California Energy Commission

In 1974, the California Energy Commission (CEC) was created to be the State's principal energy planning organization and in order to meet the energy challenges facing the state in response to the 1973 oil embargo. The CEC is charged with seven basic responsibilities when designing State energy policy:

- Advancing State Energy Policy;
- Achieving Energy Efficiency;
- Certifying Thermal Power Plants;
- Investing in Energy Innovation;
- Transforming Transportation;
- Developing Renewable Energy; and
- Preparing for Energy Emergencies.

State Alternative Fuels Plan

Assembly Bill (AB) 1007 requires the CEC to prepare a plan to increase the use of alternative fuels in California. The State Alternative Fuels Plan was prepared by the CEC with CARB and in consultation with other federal, State, and local agencies to reduce petroleum consumption; to increase use of alternative fuels (e.g., ethanol, natural gas, liquefied petroleum gas, electricity, and hydrogen); to reduce greenhouse gas (GHG) emissions; and to increase in-state production of biofuels. The State Alternative Fuels Plan recommends a strategy that combines private capital investment, financial incentives, and advanced technology that will increase the use of alternative fuels; result in significant improvements in the energy efficiency of vehicles; and reduce trips and vehicle miles traveled through changes in travel habits and land management policies. The Alternative Fuels and Vehicle Technologies Funding Program legislation (AB 118, Statutes of 2007) proactively implements this plan (CEC 2007).

Appliance Efficiency Regulations

California's Appliance Efficiency Regulations (*California Code of Regulations* [CCR], Title 20, Parts 1600–1608) contain energy performance, energy design, water performance, and water design standards for appliances (including refrigerators, wine chillers, ice makers, vending machines, freezers, water heaters, fans, boilers, washing machines, dryers, air conditioners, pool equipment, and plumbing fittings) that are sold or offered for sale in California. These standards are updated regularly to allow consideration of new energy efficiency technologies and methods.

Energy Efficiency Standards

The Energy Efficiency Standards for Residential and Nonresidential Buildings (24 *California Code of Regulations* [CCR] Part 6) were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The CEC adopted the 2008 changes to the Building Energy Efficiency Standards in order to (1) "Provide California with an adequate, reasonably-priced, and environmentally-sound supply of energy" and (2) "Respond to Assembly Bill 32, the Global Warming Solutions Act of 2006, which mandates that California must reduce its

greenhouse gas emissions to 1990 levels by 2020". Title 24, Part 6 of the 2013 California Building Standards Code (known as the 2013 California Energy Code or "Title 24") went into effect on July 1, 2014, and includes energy efficiency updates (CBSC 2015). The California Energy Efficiency Standards are updated on an approximately 3-year cycle. The 2016 Standards will continue to improve upon the 2013 Standards for new construction of, and addition and alterations to, residential and nonresidential buildings. The 2016 Standards will go into effect on January 1, 2017 (http://www.energy.ca.gov/title24/2016standards/index.html).

Green Building Standards

The 2013 California Green Building Standards Code (24 CCR 11), also known as the CALGreen Code, is a code with mandatory requirements for new residential and nonresidential buildings throughout California. The CALGreen Code is intended to (1) reduce GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. In short, the code is established to reduce construction waste; make buildings more efficient in the use of materials and energy; and reduce environmental impact during and after construction. The CALGreen Code contains requirements for construction site selection; storm water control during construction; construction waste reduction; indoor water use reduction; material selection; natural resource conservation; site irrigation conservation; and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency (CBSC 2015).

County

Renewable Energy Ordinance

The County is in the process of adopting a Renewable Energy Ordinance to establish regulations for the development of small-scale (for on-site or off-site use) and utility-scale renewable energy systems (solar and wind energy facilities). The ordinance is currently going through the public hearing process (County of Los Angeles 2015).

County of Los Angeles General Plan

The current General Plan requires the NorthLake development to address the following policies, as stated in Public Services and Facilities Element. The Project's consistency with the following policies is presented in Section 5.9, Land Use.

Public Services and Facilities Element

- **Policy PS/F 6.1:** Ensure efficient and cost-effective utilities that serve existing and future needs.
- **Policy PS/F 6.4:** Protect and enhance utility facilities to maintain the safety, reliability, integrity and security of utility services.
- **Policy PS/F 6.5:** Encourage the use of renewable energy source in utility and telecommunications networks.
- **Policy PS/F 6.6:** Encourage the construction of utilities underground, where feasible.
- **Policy PS/F 6.8:** Encourage projects that incorporate onsite renewable energy systems.

Santa Clarita Valley Area Plan

The SCVAP 2012 requires the *NorthLake Specific Plan* to address the following policies from its Conservation and Open Space Element. The Project's consistency with the following policies is presented in Section 5.9, Land Use.

Conservation and Open Space Element

- **Policy CO-8.2.6:** Promote use of solar lighting in parks and along paseos and trails, where practical.
- **Policy CO-8.2.7:** Support the use of sustainable alternative fuel vehicles for machinery and fleets, where practical, by evaluating fuel sources, manufacturing processes, maintenance costs, and vehicle lifetime use.
- **Policy CO-8.2.9:** Reduce heat islands through installation of trees to shade parking lots and hardscapes, and use of light-colored reflective paving and roofing surfaces.
- **Policy CO-8.2.10:** Support installation of energy-efficient traffic control devices, street lights, and parking lot lights.
- **Policy CO-8.2.13:** Support trip reduction strategies for employees as described in the Circulation Element.
- **Policy CO-8.3.1:** Evaluate development proposals for consistency with the ordinances developed through the County's Green Building Program.
- **Policy CO-8.3.2:** Promote construction of energy efficient buildings through the certification requirements of the ordinances developed through the County's Green Building Program.
- **Policy CO-8.3.4:** Encourage new residential development to include on-site solar photovoltaic systems, or pre-wiring, in at least 50% of the residential units, in concert with other significant energy conservation efforts.
- **Policy CO-8.3.5:** Encourage on-site solar generation of electricity in new retail and office commercial buildings and associated parking lots, carports, and garages, in concert with significant energy conservation efforts.
- **Policy CO-8.3.6:** Require new development to use passive solar heating and cooling techniques in building design and construction, which may include but are not be limited to building orientation, clerestory windows, skylights, placement and type of windows, overhangs to shade doors and windows, and use of light colored roofs, shade trees, and paving materials.
- **Policy CO-8.3.7:** Encourage the use of trees and landscaping to reduce heating and cooling energy loads, through shading of buildings and parking lots.
- **Policy CO-8.3.8:** Encourage energy-conserving heating and cooling systems and appliances, and energy-efficiency in windows and insulation, in all new construction.
- **Policy CO-8.3.9:** Limit excessive lighting levels, and encourage a reduction of lighting when businesses are closed to a level required for security.
- **Policy CO-8.4.2:** Adopt mandatory residential recycling programs for all residential units, including single-family and multi-family dwellings.
- **Policy CO-8.4.3:** Allow and encourage composting of greenwaste, where appropriate.

- **Policy CO-8.4.4:** Promote commercial and industrial recycling, including recycling of construction and demolition debris.
- **Policy CO-8.4.5:** Develop and implement standards for refuse and recycling receptacles and enclosures to accommodate recycling in all development.
- **Policy CO-8.4.7:** Provide information to the public on recycling opportunities and facilities, and support various locations and events to promote public participation in recycling.

5.4.5 THRESHOLD CRITERIA

Thresholds Addressed in the Initial Study

The Initial Study prepared for the proposed Project (included in Appendix A) and circulated with the NOP, concludes that Project implementation would not result in significant impacts for the thresholds of significance listed below. Further analysis of these thresholds in this Draft SEIR is not required (a summary of the analysis presented in the Initial Study is provided in Section 7.1, Effects Determined Not to be Significant, of this Draft SEIR):

- Would the project Conflict with Los Angeles County Green Building Standards Code (L.A. County Code Title 31)?

Thresholds Addressed in this Draft Supplemental Environmental Impact Report

The County of Los Angeles utilizes an Initial Study Questionnaire with Thresholds of Significance specific to the County. The Initial Study for the proposed Project concludes that additional analysis of the following thresholds of significance is required in this Draft SEIR. The Project will be considered to have a significant effect related to energy if the Project would:

- Involve the inefficient use of energy resources (see Appendix F of the CEQA Guidelines).
- Create energy utility (electricity, natural gas, propane) system capacity problems, or result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

5.4.6 RELEVANT PROJECT CHARACTERISTICS

As part of the Project, segments of on-site utility easements will be relocated to allow for site grading. One of two oil pipelines that are located generally in the eastern ridge of Grasshopper Canyon will be relocated approximately 1,500–2,000 feet east of their present location, off of the Project site. The Pacific Oil pipeline's relocated alignment is proposed through the Castaic Lake State Recreation Area (SRA) and through adjacent lands owned by the City of Los Angeles Department of Water and Power (LADWP). The Applicant is negotiating with both agencies for receipt of easements to realign the pipeline through these publicly owned properties. The results of these efforts are pending but would be a condition of approval prior to initiation of development. The other pipeline will be vacated, its portion on the Specific Plan site removed, and the ends stubbed off. In order to accommodate proposed development, several SCE transmission towers on the NorthLake site will require alteration or relocation. Specifically, 19 towers will be removed and replaced by 15 new towers of varying heights. An additional existing tower will be raised to accommodate Project-related grading and development of the internal circulation plan. The final engineering plans under preparation by SCE have not been completed and the full extent of modification to the towers is not known at this time.

Currently, existing electrical distribution circuitry extends to the outskirts of the electrical needs area. Initial stages of the Project would require extensions of the existing 16kV distribution circuitry to provide the electrical backbone for the interconnection of the proposed land uses.

Based on the anticipated Project requirements, SCE would require the extension of distribution circuitry for a short distance along the existing Ridge Route Road to reach the proposed Project. The initial stages of the Project would require extensions of the existing 16kV distribution circuitry from its current locations to the proposed Project perimeter such that the circuitry can be further extended within the Project site boundaries. The circuitry extension would occur within existing Ridge Route Road right-of-way.

Additionally, the local Elizabeth Lake Substation, located approximately 1 mile south of the Project site at 31526 Neely Street in Castaic, would be upgraded through installation of one 28 MVA 3-Phase transformer back, one 4.8 MVAR capacitor bank, and associated substation equipment as necessary to adequately and safely provide electrical service to the proposed Project. All of the proposed upgrades would occur within the existing footprint of the substation and on SCE property.

As an energy savings measure, the Project Applicant, or individual developers, will commit to the installation of a 3-kilowatt (kW) solar panel system on 50 percent of residential dwelling units.

5.4.7 ENVIRONMENTAL IMPACTS

Impact Analysis

Threshold 5.4-1 Would the project involve the inefficient use of energy resources (see Appendix F of the CEQA Guidelines)?

Short-Term Construction Impacts

Construction energy use could be considered wasteful, inefficient, or unnecessary if construction equipment is old or not well maintained such that its energy efficiency is lower than newer equipment; if equipment idles even when not in use; if construction trips utilize longer routes than necessary; or if excess electricity and water[1] are used during construction activities. As discussed in Section 5.1, Air Quality, pursuant to the *California Code of Regulations* (specifically, Title 13, Section 2485), all diesel-fueled commercial motor vehicles must not idle for more than five consecutive minutes at any location. This would reduce fuel use by construction vehicles.

Transportation energy use depends on the type and number of trips; vehicle miles traveled; fuel efficiency of vehicles; and travel mode. Transportation energy use during construction would come from the transport and use of construction equipment; from delivery vehicles and haul trucks; and from construction employee vehicles that would use diesel fuel and/or gasoline. The use of these energy resources fluctuate according to the phase of construction and would be temporary. Construction traffic is expected to access the Project site from I-5 at Lake Hughes Road, which leads to Ridge Route Road, which is the most direct and shortest route from the site to the regional freeway system. Table 5.4-1, quantifies anticipated energy use during construction activities.

1 Indirect energy use for the extraction, treatment, and conveyance of water.

TABLE 5.4-1
CONSTRUCTION-RELATED ENERGY USE

Source	HP-hrs	VMT	Diesel Fuel - gallons	Gasoline - gallons	MWh
Off-road Construction Equipment	39,860,413		1,993,021		
Worker commute		21,943,660		822,878	
Vendors		1,356,540	112,786		
On-road haul		80,000	13,140		
Water - dust control					1,377.31
Totals	**39,860,413**	**23,380,200**	**2,118,946**	**822,878**	**1377.31**
Source: Psomas 2015.					

Additionally, to the extent feasible and where electrical energy is currently available or would be available following installation of the proposed electrical infrastructure system, electricity would be used during construction from power lines and SCE connection, avoiding the use of generators that are less efficient than tying into SCE infrastructure.

As discussed in Section 5.12, Utilities and Service Systems, compliance with the County's Construction and Demolition Debris Recycling and Reuse Ordinance requires the recycling/reuse of at least 50 percent of non-hazardous construction/demolition debris by weight or volume. Additionally, in response to California's 75 Percent Initiative, at least 75 percent of all solid waste will be recycled or reused by 2020. This would indirectly reduce energy use from the production of building materials.

Thus, energy use during construction of the Project would not be considered inefficient, wasteful, or unnecessary. Impacts would be less than significant and no mitigation is required.

Long-Term Operational Impacts

Long-term energy use would be considered inefficient if alternative energy sources are not used when they are feasible/available, and if construction techniques and materials are not compliant with building code requirements for energy efficiency. The regulations, plans, and polices adopted for the purpose of maximizing energy efficiency that are directly applicable to the Project include (1) California's Title 24 Energy Efficiency Standards for Residential and Nonresidential Buildings; (2) the CALGreen Code; and (3) Title 31 of the County Code (the Los Angeles County Green Building Standards Code). Although compliance with these regulations, plans, and policies is required, implementation of MM 5.4-1 would further ensure compliance with energy conservation and efficiency standards or Title 24. Therefore, the Project would be consistent with the requirements of these energy-related regulations, as discussed in Section 5.7, Greenhouse Gas Emissions. Additionally, implementation of MM 5.4-2 would ensure that adequate energy resources and facilities are available to serve the proposed Project.

Analysis by the California Energy Commission concludes that the 2017 energy efficiency standards will be at least 28 percent more efficient than the current 2013 standards (CEC 2015b). Based on the CalEEMod, the electricity demand from the Project would be approximately 23.67 million kilowatt hours per year (kWh/yr) and the natural gas consumption would be approximately 64,539 million British Thermal Units per year (BTU/yr) or 512,000 therms per year. The electricity use associated with the Project water consumption is estimated to be approximately 10.4 million

kWh per year. Los Angeles County's total electrical and natural gas consumption in 2014 was approximately 70,000 million KWh and 2,860 million therms (CEC 2015). At full build-out, the Project's electricity use would be approximately 0.03 percent of the existing electricity use in Los Angeles County and natural gas use would be approximately 0.002 percent of the existing natural gas use in Los Angeles County. The proposed Project would not result in excessive long-term operational energy demand.

Transportation energy use would be associated with daily trips associated with the Project, (including internal trips to points within the Project site); local trips (including vehicular trips to local area destinations); and longer commuter trips to external employment areas. Based on the annual vehicle miles traveled (VMT), gasoline and diesel consumption rates were calculated using estimated miles per gallon factors based on Los Angeles County data for 2023 from EMFAC2014. It is estimated that the Project-generated traffic would use 969,000 gallons of diesel fuel and 4.5 million gallons of gasoline per year. Fuel consumption associated with vehicle trips generated by the proposed Project would not be considered inefficient, wasteful, or unnecessary. It is noted that EMFAC 2014 forecasts that 4.0 percent of the Los Angeles County passenger car and light truck VMT would be by electric vehicle.

Additionally, as discussed in Section 4.0, Project Description, the Project proposes an extensive greenbelt and trail system connecting schools, parks, amenities, and neighborhoods throughout the community and the Castaic Lake SRA (refer to Exhibit 4-6, Pedestrian Circulation and Trails). The creation of a walkable community with safe pedestrian connections to a variety of land uses would encourage pedestrian and other multi-modal travel within the Project site and the local area, thereby reducing the vehicle miles traveled and associated transportation energy use. The vehicular energy (i.e., gasoline and diesel) associated with long-term operation of the proposed Project would not be considered wasteful, inefficient, or unnecessary and the Project would not generate unnecessary vehicular travel.

Off-Site Impacts

Similar to the analysis discussed previously for short-term and long-term impacts, construction and use of the proposed driveway improvements and water line connection would result in minor energy demands that represent a fraction of what is anticipated for the proposed Project. Because the anticipated electricity and natural gas consumption would represent a fraction of a percentage of electricity and natural gas usage in Los Angeles County, the impacts associated with off-site improvements would not be considered inefficient, wasteful, or unnecessary.

Impacts would be less than significant. No mitigation is required.

Level of Significance without Mitigation: Less than significant.

Recommended SCVAP 2012 EIR Mitigation Measures: Although compliance with regulatory plans, policies and regulations would ensure that impacts related to the inefficient use of energy resources would not occur, implementation of the following measures would apply and would further ensure that a significant impact would not occur.

MM 5.4-1 The County shall review all development plans to guarantee that energy conservation and efficiency standards of Title 24 are met and are incorporated into the design of the proposed project prior to approval. (SCVAP 2012 EIR MM 3.17-7)

MM 5.4-2 The County shall review all development proposals to guarantee that sufficient energy resources and facilities are available to supply adequate energy to the

proposed project and associated uses prior to approval. (SCVAP 2012 EIR MM 3.17-6)

Level of Significance with SCVAP EIR Mitigation: Less than significant.

Recommended 1992 SP EIR Mitigation Measures: The 1992 SP EIR did not address energy; therefore, there are no impacts or mitigation measures to be carried forward.

Level of Significance with 1992 SP EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant.

Threshold 5.4-2 Would the proposed project create energy utility system capacity problems, or result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Short-Term Construction Impacts

Construction of the Project would create temporary demands for electricity and vehicle fuels compared to existing conditions and would result in short-term transportation energy use.

Electrical power used to run equipment during construction would be required. Although the majority of construction equipment during demolition and grading activities would be gas-powered or diesel-powered, later construction activities (including building interiors and architectural coatings) would require electricity. The electrical usage during construction would fluctuate as construction activities change and as the Project progresses towards completion. As discussed previously, on-site electrical infrastructure is currently limited. As part of the construction phasing, installation of utility infrastructure would occur prior to the majority of building construction. The utility infrastructure system has been designed to accommodate the anticipated electrical load demands for both Project-related construction and Project operation. The demand for electricity during construction would not require the development of new or expanded electrical infrastructure beyond what is proposed as part of the Project.

No natural gas demand is expected during construction since no natural-gas construction equipment or vehicles are expected to be used.

Impacts related to energy use during construction would be temporary and would not require expanded energy supplies or the construction of new infrastructure. There would be less than significant impacts and no mitigation is required.

Long-Term Operational Impacts

Operation of the Project would create additional demands for electricity and natural gas compared to existing conditions.

According to CalEEMod calculations, the Project would use 23.67 million kilowatt-hours (kWh) of electrical power per year for long-term operation. SCE delivered more than 88 billion kWh of electricity to over 14 million people in 2014 (SCE 2015). The Project's electrical power demand would represent less than 0.01 percent of SCE's power supply in 2014 and would not, therefore, create a significant effect on either peak or base load energy demands from SCE. Electrical

service would be provided by SCE through connections to existing off-site electrical lines located adjacent to and south of the Project site, and no new off-site infrastructure improvements are required.

According to CalEEMod calculations, the Project would use an estimated 64,539 million British Thermal Units (BTU) of natural gas per year. SoCalGas has 136 billion cubic feet (Bcf) of storage capacity, with 83 Bcf used for existing core customers, 4 Bcf for system balancing, and the remaining 49 Bcf available for other customers (SoCalGas 2015). The Project's natural gas demand is equal to 59,650 million BTU or less than 0.01 percent of SoCalGas' storage capacity for its natural gas supplies and would not, therefore, create a significant effect on either peak or base load energy demand. SoCalGas would provide natural gas service through connections to existing natural gas lines adjacent to and south of the Project site.

On-site energy use would be reduced through compliance with Title 24, the CalGreen Code (as adopted by the County into Title 31 of the County Code), and other energy conservation programs and policies. While additional energy supplies are needed from SCE and SoCalGas, the Project's electrical and natural gas demands would represent minor amounts of each utility company's total supplies; the Project would not require the development of new energy sources, nor would it create a need to upgrade existing facilities or infrastructure line capacities to serve the Project. The physical impacts resulting from the installation of on-site electrical power and natural gas lines would be within the defined Project impact area and are evaluated throughout this SEIR as part of the proposed Project.

Off-Site Impacts

Proposed off-site infrastructure improvements would have minor energy demands from the use of construction equipment and construction trips, and would have no energy demands (i.e., no off-site land uses) for long-term operation. Further, impacts related to the installation of off-site electrical distribution circuitry and upgrades to the Elizabeth Lake substation would occur within fully developed areas of Ridge Route Road and the existing substation development footprint, respectively. Impacts would be less than significant and no mitigation is required.

Level of Significance without Mitigation: Less than significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None.

Level of Significance with SCVAP 2012 EIR Mitigation: Less than significant.

Recommended 1992 SP EIR Mitigation Measures: None.

Level of Significance with 1992 SP EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant.

5.4.8 CUMULATIVE IMPACTS

Electrical power and natural gas service would be provided by SCE and SoCalGas on demand, consistent with CPUC requirements. The federal and State governments have enacted legislation to improve energy efficiency in vehicles, equipment, and appliances; to reduce vehicle miles traveled; and to develop alternative fuels or energy sources. Utility companies are also increasing their renewable energy sources to meet the RPS mandate of 33 percent renewable supplies by 2020.

On-site energy use would be reduced through compliance with Title 24, the CalGreen Code (as adopted by the County into Title 31 of the County Code), and other energy conservation programs and policies. Cumulative projects in the County would also comply with the same regulations.

Transportation energy use would increase with the Project and cumulative projects in the area. However, this transportation energy use would not represent a major amount of energy use in the County of Los Angeles or the region when compared to the amount of existing development and to total number of vehicle trips and vehicle miles traveled throughout the County and the region. Improved fuel economy in newer vehicles and alternative fuel vehicles are also expected to reduce transportation energy use.

As older appliances, equipment, and vehicles are replaced with newer ones, total energy use is expected to decrease over time. All future related projects would be subject to separate impact analyses to and would be subject to mitigation to reduce potential impacts, as appropriate. Thus, energy use from the Project and cumulative projects would not represent a substantial demand for energy and would not be considered inefficient, wasteful, or unnecessary. Cumulative impacts would be less than significant and no mitigation is required.

5.4.9 IMPACT CONCLUSION

Impacts on Energy would be less than significant through compliance with applicable plans, policies, and regulations; implementation of recommended mitigation measures would further ensure that a significant impact would not occur.

5.4.10 REFERENCES

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State Alternative Fuels Plan, Cal. Assemb. B. 1007, Chapter 371 (Cal. Stat. 2005).

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5.5 FIRE HAZARDS, EMERGENCY RESPONSE, AND ENVIRONMENTAL SAFETY

5.5.1 METHODOLOGY

This section of the Draft SEIR describes potential fire safety hazards relative to the proposed Project. Sources used as a technical guide and incorporated by reference include the following:

- Los Angeles County, Department of Regional Planning. 1992 (June). *NorthLake Specific Plan Draft Environmental Impact Report* (pages 4.3-1 through 4.3-4 [Fire Hazard] and 4.15-1 through 4.15-4 [Environmental Safety]). Los Angeles: the County. (On file with the County of Los Angeles Department of Regional Planning).
- County of Los Angeles Code, Title 32 (Fire Code) (On file with the County of Los Angeles Fire Department).
- The application of the County of Los Angeles Fire Department "Fuel Modification Plan Guidelines" from the Fuel Modification Unit of the Forestry Division (On file with the County of Los Angeles Fire Department, Forestry Division).

5.5.2 BACKGROUND INFORMATION

1992 NorthLake Specific Plan Environmental Impact Report

The following summary reflects conditions existing at the time the 1992 NorthLake Specific Plan Environmental Impact Report (1992 SP EIR), (which is incorporated by reference) was prepared and certified; it is included as background information to provide a context for the scope of this SEIR analysis. Adopted mitigation measures from the 1992 SP EIR relevant to fire hazard, emergency response, and environmental safety issues are included below in Section 5.5.6.

The following relevant fire hazard impacts were identified in the 1992 SP EIR:

- The proposed Project is located in Fire Zone 4 (now referred to as the Very High Fire Hazard Severity Zone).
- Additional personnel, equipment, and facilities will be needed to service the Project site.
- The Project site lies outside the Consolidated Fire District and will require annexation.

Implementation of the Project would increase the demand for fire services including personnel, equipment, and facilities as a result of the increased potential for structural fires and human-induced fires. Additionally, the Project site lies outside the service area of the Consolidated Fire District; this will thereby affect response times to the Project site.

The 1992 SP EIR identified several measures to mitigate for this impact, including the recommendation to provide a fire station site at one of two possible locations on the Specific Plan site.

It should be noted that the 1992 SP EIR did not specifically describe the preparation of a Fire Management Plan, as described below.

The 1992 SP EIR included a Circulation Plan and Landscaping Plan that would be implemented as part of site development. The Circulation Plan is required to depict emergency vehicle access in accordance with the requirements of the County of Los Angeles Fire Department. The Landscaping Plan emphasizes vegetation with a "low fuel potential" and requires that all vacant graded lots located within the tract be cleared of brush to reduce fire hazard. Prior to Project approval, the Applicant was required to submit an application for annexation to the Consolidated Fire Protection District of Los Angeles County.

Additionally, as standard conditions of approval for development in Los Angeles County, the following measures were required to reduce fire hazards. According to the 1992 SP EIR, the Project Applicant was required to pay to the Los Angeles County Fire Department (LACFD) a mitigation fee of $0.1784 per square foot of building space as "adopted by Resolution SYN #13 on July 12, 1990, in the amount in effect as of the Effective Date". This fee payment is in addition to the required conveyance of one fire station site in a location deemed mutually acceptable to the developer and the LACFD. As a standard condition of approval with the 1992 SP EIR, the Project shall comply with applicable requirements of the Fire Code (including Sections 32.903.4.2, 903.3, and 32.1118.7, for example), which establishes standards for fire hydrant spacing, adequate water main capacities, fire flows, and similar safety requirements. Roofing materials for all structures shall comply with the County of Los Angeles Department of Building and Safety requirements for structures within a Very High Fire Hazard Severity Zone classification, and homes shall be equipped with smoke detectors as required by the *2001 California Building Code*, Section 310.9.1, as adopted by the County.

The following relevant environmental safety impacts were identified in the 1992 SP EIR:

- Underground pipelines would be located in or adjacent to the NorthLake Boulevard right-of-way with a small portion passing through a single-family planning area.
- Two SCE transmission lines would be retained on-site, located primarily within the golf course and open space areas with a small portion located in either residential or industrial areas.
- The DWP overhead line would be retained on-site and be located adjacent to a proposed residential area.

Implementation of the Project would expose future residents and workers to hazards associated with the underground pipeline and overhead transmission lines. The 1992 SP EIR identified that existing guidelines regulating development in these areas would be observed and mitigation measures were also adopted to mitigate for potential impacts, including the adhering to setback standards, posting adequate signage, and compliance with existing regulations related to relocations and construction.

The 1992 SP EIR identifies two easements containing underground pipelines that traverse portions of the project site. The first is a 50-foot-wide easement to the Southern California Gas Company and it contains a 34-inch natural gas line. This easement crosses both the southern boundary of the project site near the industrial area and the western boundary near commercial, golf course and multi-family planning area. The second is a 20-foot easement to Four Corners Pipeline (ARCO) and it contains 10-inch and 14-inch crude oil pipelines. This easement crosses the project site from the northwestern to the southeastern boundaries.

In an effort to enhance the safety of future property owners within the project site, the 1992 SP EIR establishes the following guidelines:

- The easements will be adequately marked as to their location;
- Where economically feasible, the easements will be relocated wither in or adjacent to a public road right-of-way;
- In single-family planning areas, the easements will not be located within individual single-family lots; and
- As prohibited in the easements, no buildings will be constructed within the easement; however, within multi-family, commercial and industrial areas parking will be an acceptable use.

The 1992 SP EIR also contains a set of underground pipeline mitigation measures, as follows:

- All subsequent tentative maps shall clearly show the existing pipeline alignments or proposed realignment in relationship to building pads. All proposed realignments shall be approved by the controlling pipeline carrier prior to recordation of tentative tract maps;
- Pipeline relocations shall be conducted in conformance with the requirements of the pipeline carrier and appropriate local and state agencies;
- Signs shall be posted to clearly mark the location of pipelines and to provide safety warnings and emergency response numbers;
- Electrical transmission line setbacks shall be adhered to during subsequent onsite planning, should such setbacks be adopted by regulatory agencies; and
- Pipelines shall be constructed to the safety standards as established by the pipeline carrier and local and state agencies. Design features such as flexible pipe and shutoff valves shall be installed as required.

The 1992 SP EIR identifies three separate overhead electrical power lines that are either adjacent to or traverse the project site. The first transmission line, which carries 16 kilovolts, is contained within a 50-foot-wide easement to Southern California Edison and it traverses the project site from the western boundary to the southeastern boundary. The second transmission line, which carries 66 kilovolts, is contained within a 150-foot-wide parcel owned by Southern California Edison and traverses the project site from the western boundary to the southeastern boundary. The majority of the Southern California Edison lines is contained within the golf course and open space areas; a small portion of the lines is adjacent to multi-family and industrial areas. The third transmission line, which carries 230 kilovolts, is contained within a 300-foot-wide fee parcel owned by the Department of Water and Power and crosses a small portion of the eastern boundary of the project site adjacent to single-family housing.

Though various studies have failed to show conclusive proof that the electromagnetic fields produced by electrical transmission lines have any effect on human beings, the 1992 SP EIR acknowledges that a relationship may exist. In an effort to enhance the safety of future property owners within the project site, the following overhead electrical power line guidelines have been established:

- Both Southern California Edison and the Department of Water and Power restrict the construction of building within the easement fee parcel. As Northlake is constructed, this policy will be continued and enforced;

- Should conclusive evidence be found that establishes minimum setbacks for residential, industrial or commercial uses, then those guidelines will be incorporated into the planning of any subsequent tentative tract maps; and
- In single-family planning areas the power line easement will not be located within individual single-family lots.

This SEIR focuses on the impacts of implementing the *NorthLake Specific Plan* based on existing conditions at the time the Notice of Preparation (NOP) for this document, which was distributed in March 2015. The SEIR updates the existing conditions baseline information from the 1992 SP EIR where conditions in 2015 are new or different from the previous EIR.

2012 Santa Clarita Valley Area Plan Environmental Impact Report

The 2012 Santa Clarita Valley Area Plan (SCVAP 2012) Environmental Impact Report (2012 SCVAP 2012 EIR) acknowledges the area's risk of wildfires due to the presence of hilly terrain, dry weather conditions, native vegetation, and urban/wildland interface areas along its boundaries. Historical records kept by the U.S. Forest Service (USFS) indicate that wildfires occur regularly within the SCVAP 2012 planning area, with large fires occurring approximately every ten years (LACDRP 2012a). In addition to implementing the expansion of LACFD facilities, the SCVAP 2012 proposed several policies as preventative measures against the occurrence and/or spread of wildfires (S-3.2.1 through S-3.2.7) and emergency response (S-7.1.1 and S-7.1.3), which are listed below in Section 5.5.3. Collectively, the majority of these policies reflect land development standards to be ensured through the plan check or tract map review processes at the County level. The SCVAP 2012 EIR concluded that implementation of Policies S-3.2.1 through S-3.2.7 and S-7.1.1 and S-7.1.3 would reduce impacts related to wildfires and emergency response respectively to a less than significant level.

5.5.3 EXISTING CONDITIONS

Regional Fire Context

The Los Angeles metropolitan region is surrounded on three sides by mountains that create the Los Angeles Basin. Common weather patterns involve the movement of cool winds from the Pacific Ocean over the basin; however, a phenomenon known as the Santa Ana winds, which are hot, dry, high-velocity winds that blow from the eastern high desert regions over the mountains into the basin, occur multiple times each year. Months of warm summer weather with no precipitation provide the perfect environment for wildfires to start and proliferate through the parched brush of the Southern California hillsides. Wildfires are a natural and common occurrence in Southern California. Wildfires are critical to the native vegetative ecosystems of Southern California and allow for the removal of dead materials and the recycling of the nutrients back into the soil. Many native plant species depend on fire to reproduce (by releasing seeds from resinous coatings) and/or are adapted to survive wildfires (by sprouting new stems from trunks and/or root systems).

However, Southern California's propensity for annual wildfires presents hazards to people and structures as natural open spaces continue to be replaced by urban and suburban development. Southern California is one of the most rapidly developing areas of the country, and suburban development has expanded into forest and wildland areas in recent decades. This growing wildland-urban interface has exposed communities to zones that are highly vulnerable to wildfires, resulting in significant damage to property and loss of life in recent decades.

Local Fire Setting

The existing condition at the Project site is undeveloped, naturally vegetated land. Hillside Management Areas (HMAs) are considered to be especially prone to wildfires due to topography and relatively sparse development. The Project site includes HMA-designated areas and is within a Very High Fire Hazard Severity Zone (VHFHSZ, formerly Fire Zone 4 in Los Angeles County). Open space is located directly to the north and west; Castaic Lake State Recreation Area (SRA) is located to the east; and residential development is located to the south. The Angeles National Forest, which will remain as open space in perpetuity, is located to the east, north, and northwest of Castaic Lake, and is approximately.5 miles to the northwest of the northern edge of the Project site.

Santa Clarita Area Wildfire History

The Los Angeles County Fire Department Mapping Unit maintains a database of wildfires in Los Angeles County. Since 1960, there have been over 270 documented wildfires in the Santa Clarita Valley area (Lamas 2015). The year, name, and size of all wildfires that have occurred in the greater Santa Clarita area, defined as all or partially within a 15-mile radius of the City of Santa Clarita boundary, from 2004 through 2015 are presented in Table 5.5-1, Wildfires in the Santa Clarita Area (2004–2015).

TABLE 5.5-1
WILDFIRES IN THE SANTA CLARITA AREA (2004–2015)

Year	Fire Name	Acres Burned	Year	Fire Name	Acres Burned
2004	Crown	11,753	2010	Briggs	553
	Foothill	5,969		Calgrove	7
	Interstate	362		Crown	12,580
	Munz	267		Haskell	45
	Wayside	91		Newhall	34
2005	Munz	204		Oak	16
	Oak	134		River	3
	Quinn	136		Tampa	23
	Range	239	2011	Emma	29
	Topanga	23,395		Hughes	51
	Tovey	983		Lancaster	37
	Unnamed	1,146		Sierra	12
2006	Johnson Road	111		Wagon	299
	Cross	665	2012	Aliso	12
	Day	161,697		Martinez	4
2007	Buckweed	38,342		Five Mile	489
	Canyon	743		Tree	126
	Magic	2,825		Hillside	885
	Meadow Ridge	39		Tovey	72
	North	2,122		Mesa	11
	October	26	2013	Canyon	22
	Ranch (LAC)	58,402		Clarita	6
	Sesnon	30		Coltrane	15
	Soledad	44		Highway	49
	Y	22		Lake	660

TABLE 5.5-1
WILDFIRES IN THE SANTA CLARITA AREA (2004–2015)

Year	Fire Name	Acres Burned	Year	Fire Name	Acres Burned
2008	Crossover	25	2013	Lowridge	13
	Marek	4,574		Madison	6
	Sayre	11,370		Magic	145
	Sesnon	14,701		Marple	7
	South	132		Powerhouse	30,263
2009	Island	2,108		Woods	2
	Osito	13,105	2014	Clark	1
	Rancho RX	2,210		Valley	5
	Sloan	3,310	2015	Warm	300
	Station	6,440,264	2015	Remsen	16.5
	Tujunga	8,520			

Source: Lamas 2015[ab].

Santa Clarita Area Fire Department Resources

The Santa Clarita Valley area receives primary fire protection services from the LACFD as part of the Consolidated Fire Protection District. There are 416 fire stations within Los Angeles County, 170 of which are operated by LACFD (FireDepartment.net 2015). According to the SCVAP 2012, there were a total of 13 LACFD stations as of 2009 (including 3 temporary stations) serving the area with plans to build 15 new, permanent stations by 2016 (LACDRP 2012b). The Project site is approximately 2.7 miles from the nearest station, No. 149, located to the south at 31770 Ridge Route Road in the Community of Castaic. This station houses one engine company, one patrol unit and one squad unit (FireDepartment.net 2015). Other stations in the area include 3 stations in the City of Santa Clarita: Station 76 located at 27223 Henry Mayo Drive, Station 156 located at 24525 Copper Hills Drive, and Station 126 located at 26320 Citrus Street (FireDepartment.net 2015). Should a significant incident occur, the resources of the entire LACFD, not just the stations closest to the Project Site, would be used.

Wildfire response resources in the Santa Clarita area include the LACFD as well as the Fire Services mutual aid system, the California Division of Forestry, and the U.S. Forest Service (USFS). The combination of forces applied depend upon the severity of the wildfire, other wildfires in progress, and the availability of resources. Suppression efforts can involve fire equipment, heavy construction equipment, and air fire bombardment aircraft in addition to hand crews. In addition to the fire stations discussed above, the LACFD operates ten fire suppression camps assigned to the Air and Wildland Division. Fire suppression camps supply crews on a daily basis to assist in the suppression of wildland fires. They also perform storm-related functions, such as the filling of sandbags, and provide additional manpower at search and rescue incidents. Of the four camps located in the Santa Clarita Valley area, two are staffed with paid fire suppression aids, and the other two are staffed by a workforce comprised of adult male prisoners provided by the California Department of Corrections (CDC). This partnership with the CDC provides the Fire Department with a large labor pool. The closest fire suppression camp to the subject site is located at 35100 N. San Francisquito Canyon Road in Santa Clarita (CDCR 2015).

Wildland fire crews are used for fire protection, prevention, and suppression activities. The USFS operates five fire stations in the SCVAP 2012 planning area. Under the mutual aid agreement between the LACFD and the USFS, structure fires in the National Forest are the responsibility of

LACFD and non-structure fires are the responsibility of USFS; however, in practice, the agencies cooperate in fighting both wildland and structural fires during emergencies (LACDRP 2012b).

The Santa Clarita Emergency Communication Team operates a program called “Santa Clarita Fire Watch”, which is a program designed to prevent or reduce the number of fires in the area by activating patrols during “Red Flag Alert” days. These patrols are conducted by volunteers and are limited to the City of Santa Clarita, surrounding unincorporated areas of Los Angeles County, and the Angeles National Forest. Red Flag Alert days are determined by the local fire authorities and the National Weather Service, and the program includes mass media bulletins and increased patrols in designated areas to provide early detection and reporting of fires.

Water Supply, Pressure and Availability

The availability of sufficient on-site water pressure is a basic requirement of the LACFD. The Fire Department requires sufficient water capacity for fire flow at public hydrants in residential locations to provide adequate supply and pressure for different land uses. Fire flow requirements are specific to land use types and are increased when the land use is located within a VHFHS zone. Prior to issues of a building permit, the LACFD, Fire Prevention Division, requires that appropriate forms and verification of fire flow availability have been completed. Final fire flow rates are determined based upon the size of the buildings, the types of construction used, and the approved fire sprinkler system.

5.5.4 RELEVANT PLANS, POLICIES, AND REGULATIONS

Federal

Code of Federal Regulations: Pipeline Location and Pipe Movement

The Code of Federal Regulations addresses requirements for pipeline location (CFR Section 195.210) and pipe movement to ensure that safe practices are adhered to.

Section 195.210 Pipeline location

(a) Pipeline right-of-way must be selected to avoid, as far as practicable, areas containing private dwellings, industrial buildings, and places of public assembly.

(b) No pipeline may be located within 50 feet (15 meters) of any private dwelling, or any industrial building or place of public assembly in which persons work, congregate, or assemble, unless it is provided with at least 12 inches (305 millimeters) of cover in addition to that prescribed in Section 195.248.

Section 195.424 Pipe movement

(a) No operator may move any line pipe, unless the pressure in the line section involved is reduced to not more than 50 percent of the maximum operating pressure.

(b) No operator may move any pipeline containing highly volatile liquids where materials in the line section involved are joined by welding unless—

(1) Movement when the pipeline does not contain highly volatile liquids is impractical;

(2) The procedures of the operator under Section 195.402 contain precautions to protect the public against the hazard in moving pipelines containing highly volatile liquids,

including the use of warnings, where necessary, to evacuate the area close to the pipeline; and

(3) The pressure in that line section is reduced to the lower of the following:

(i) Fifty percent or less of the maximum operating pressure; or

(ii) The lowest practical level that will maintain the highly volatile liquid in a liquid state with continuous flow, but not less that 50 p.s.i. (345 kPa) gage above the vapor pressure of the commodity.

(c) No operator may move any pipeline containing highly volatile liquids where materials in the line section involved are not joined by welding unless—

(1) The operator complies with paragraphs (b) (1) and (2) of this section; and

(2) That line section is isolated to prevent the flow of highly volatile liquid.

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) of 1976 (15 *United States Code* [USC] 2601) gives the U.S. Environmental Protection Agency (USEPA) the ability to track 75,000 industrial chemicals currently produced or imported into the United States. The USEPA repeatedly screens these chemicals and requires reporting or testing of those that may pose an environmental or human health hazard. The USEPA also has the ability to ban the manufacture and import of chemicals that pose an unreasonable risk. The USEPA tracks thousands of new chemicals that are developed each year with either unknown or dangerous characteristics. The production, importation, use, and disposal of these toxic substances is regulated by the USEPA, as necessary, to protect human health and the environment.

Accidental Release Prevention Program

Title 40, Part 68 of the *Code of Federal Regulations* (CFR) is the federal Accidental Release Prevention Program that lists regulated toxic and flammable substances and sets requirements concerning the prevention of accidental releases. It sets threshold quantities of regulated substances at which owners or operators of a stationary source are required to prepare risk management plans. These risk management plans must contain an assessment of the risks for accidental release, prevention measures, emergency response procedures, employee training, record keeping, and incident investigations.

State

California Government Code

Section 51013.5 (a) of the California Government Code requires compliance with the Code of Federal Regulations to ensure sage relocation and replacement of pipelines and pipeline systems.

California Accidental Release Prevention Program

The California Accidental Release Prevention Program (CalARP) merged the Federal Accidental Release Prevention Program and California Risk Management and Prevention Program to eliminate the need for two separate programs addressing the prevention of accidental releases

of regulated toxic and flammable substances. Businesses using regulated substances exceeding a threshold quantity are evaluated under this program to determine the potential for and impacts of accidental releases. Depending on the potential hazards, business owners may be required to develop and submit a risk management plan.

Underground Utility Lines

The *California Code of Regulations* (Title 8; Section 1541, General Requirements) requires excavators to identify subsurface installations prior to opening an excavation and to ensure that the underground lines are marked. The excavators must receive a positive response from all known owners/operators of subsurface installations and lines; additionally, before starting the excavation, excavators must meet with owners/operators of high priority[1] subsurface installations that are located within ten feet of the proposed excavation. Only qualified persons (those meeting training and competency requirements) can perform subsurface installation locating activities. Excavators must be trained in notification and excavation activities (i.e., excavators must immediately notify the subsurface installation owner/operator of any damage discovered during or caused by excavating activities).

Sections 4216–4216.9 of the *California Government Code* require every owner/operator of a subsurface installation, except the Department of Transportation, to become a member of, participate in, and share in the costs of, a regional notification center. If the excavation will be conducted in an area that is known or that reasonably could to contain subsurface installations other than the underground facilities owned or operated by the excavator, the appropriate regional notification center must be contacted by the excavator at least 2 working days but not more than 14 calendar days prior to the start of excavation. The responsibilities of the excavator and regional notification center are in place to prevent undue hazards from accidental damage to underground utility lines and are outlined in the regulations.

California Strategic Fire Plan

In a collaborative effort between the State Board of Forestry and the California Department of Forestry and Fire Protection (CDF), the *2010 Strategic Fire Plan* (Fire Plan) was prepared to address the protection of lives and property from California wildfires while recognizing that wildfires are a natural phenomenon and can have beneficial effects, particularly on ecosystem health. The Fire Plan is a comprehensive update to the plan prepared in 1996, the first such statewide wildfire planning document. The overarching vision of the Fire Plan is to have "A natural environment that is more resilient and man-made assets which are more resistant to the occurrence and effects of wildland fire through local, state, federal and private partnerships" (CDF 2010). This vision is supported by seven goals and related objectives, and the application of adaptive management as a fundamental strategy of Fire Plan implementation.

California Building Code

Chapter 7A, "Materials and Construction Methods for Exterior Wildfire Exposure", of the 2013 California Building Code (CBC), adopted and amended in Title 26 "Building Code" of the Los Angeles County Code, applies to new and existing buildings located in any Fire Hazard Severity Zone or Wildland-Urban Interface (WUI) Fire Area designated by the Los Angeles County Fire Department and was effective in 2008. These codes establish minimum standards for materials and material assemblies that can provide a reasonable level of exterior wildfire exposure

[1] Examples of "high priority" subsurface installations include high pressure pipelines, natural gas/petroleum pipelines, and electrical lines greater than 60,000 volts.

protection for buildings through construction with ignition-resistant materials and design to resist the intrusion of flame or burning embers projected by a vegetation fire (i.e., wildfire exposure).

Local

County of Los Angeles Code of Ordinances

The Los Angeles County Code of Ordinances serves as the municipal code for the County. Title 32 of the County Code is the Los Angeles County Fire Code and identifies fire zones, brush clearance requirements, and structure requirements with respect to fire prevention and suppression. Within the Los Angeles County Code of Ordinances, requirements related to fire flow and fire hydrant placement are identified in the Chapter 20.16, Design and Construction in Division 1, Water of Title 20 - the Los Angeles County Utilities Code. Requirements related to building access are identified in Chapter 21.24 of the Los Angeles County Subdivisions Code.

Title 32 (Fire Code)

The LACFD provides fire services to the Project area. Regional Fire Prevention Unit Section II serves the areas of Los Angeles County designated as VHFHSZ, which includes the Santa Clarita area. This office inspects and approves all single-family dwelling units located in wildland areas.

The VHFHSZ is defined in Appendix M of the County of Los Angeles Code's Title 32 (Fire Code). Title 32 is intended to provide minimum standards to safeguard the public's safety and welfare, and Section 4908.1 describes requirements for fuel modification plans in VHFHSZs.

The LACFD's Forestry Division provides several environmental and vegetation management services, including fuel modification planning. The purpose of fuel modification is to provide defensible space between structures and wildlands. The "Fuel Modification Plan Guidelines" (2011) were created by the LACFD to help the public understand the process of fuel modification plan review and approval and to set forth landscape design criteria for applicable properties located in VHFHSZs. A fuel modification plan typically consists of sequential zones where combustible native or ornamental vegetation has been modified and/or partially or totally replaced with drought-tolerant, low-fuel-volume plant species. Fuel modification zones are designed to protect homes from wildfire by limiting and reducing the amount of fuel available for a wildfire. The reduction in available fuel affects the flame lengths and amount of heat produced by the fire and eliminates landscape areas where embers can ignite vegetation. Each zone should be designed so that the amount of fuel is reduced and the moisture in the plants is increased the closer to a structure. The details of fuel modification plans vary in complexity and reflect the fire history; the amount and type of vegetation; the arrangement of the fuels; topography; local weather patterns; and the construction, design and placement of structures. The following is a generalized fuel modification plan and associated zones:

- Zone A is a minimum 20-foot setback zone that is in closest proximity to the habitable structures and irrigated.
- Zone B is the irrigation zone/transition zone that provides defensible space for fire suppression forces. The irrigation zone may extend from the edge of Zone A up to 100 feet from structures.
- Zone C is the thinning zone and is designed to slow the rate of wildfire spread, reduce flame lengths, and minimize the intensity of the fires prior to reaching irrigated areas. The thinning zone may extend from the edge of Zone B up to 200 feet from structures.

Off-site fuel modification is generally not recommended by the LACFD due to problems inherent with enforcement of regulations on adjacent property and the potential for confusion regarding the responsibility for fuel-modification areas outside legal ownership. Consequently, the LACFD recommends the implementation of alternative modes of wildfire hazard protection, such as on-site alternative means and methods that can be implemented to attain a comparable level of wildfire protection. These alternatives may include, but are not limited to (1) increasing the width of the setback or irrigated zones to reduce thinning zone dimensions; (2) enhancing fire protection construction techniques (including indoor fire sprinkler systems); (3) placing structures in an effort to best slow down fire rate; and/or (4) constructing non-combustible fencing material.

Office of Emergency Management

Title 2, Administration, of the Los Angeles County Code addresses the establishment of the Office of Emergency Management (OEM). This code designates the OEM complete authority for organizing, directing, and coordinating the emergency organization of the County, including training, directing the development and approval of all multi-departmental emergency response plans, review and approval of all board-ordered departmental emergency response plans and all emergency preparedness activities.

County Fire Department Developer Fee Program

On July 12, 1990, the Los Angeles County Board of Supervisors adopted the County Developer Fee Program (California Government Code, Sections 66000–66006) to fund (1) the purchase of fire station sites; (2) the construction of new stations and facility improvements; and (3) the purchase of equipment. The County annually adjusts developer fees to reflect changing costs. The Applicant would pay fees as annually updated in the County Developer Fee Program for the purchase of land for fire station sites; the construction of fire stations; and the provision of certain equipment. As an alternative to fee payment, the Developer Fee Program allows the LACFD and the Applicant to agree on a program whereby the Applicant would provide land and would construct and equip some or all fire stations required for the Project.

Standardized Emergency Management System

In accordance with Section 2400 of the *California Code of Regulations*, the County of Los Angeles has adopted the Standardized Emergency Management System (SEMS). SEMS establishes organizational levels for managing emergencies, standardized emergency management methods, and standardized training from responders and managers. There are five levels at which SEMS activities occur: (1) field response, (2) local government, (3) operational areas, (4) Mutual Aid Regions, and (5) the state level. Additionally, the County has adopted an Operational Area Emergency Response Plan (OAERP). The OAERP describes the planned responses to emergencies associated with natural and man-made disasters and technological incidents.

Los Angeles County Code

Title 2, Administration, of the Los Angeles County Code addresses the establishment of the Office of Emergency Management (OEM). This code designates the OEM complete authority for organizing, directing, and coordinating the emergency organization of the County, including training, directing the development and approval of all multi-departmental emergency response plans, review and approval of all board-ordered departmental emergency response plans and all emergency preparedness activities.

Los Angeles County General Plan

The current General Plan requires the NorthLake development to address the following policies, as stated in Safety Element and Land Use Element. The Project's consistency with the following policies is presented in Section 5.9, Land Use.

Safety Element

- **Policy S 3.1:** Discourage high density and intensity development in VHFHSZs.
- **Policy S 3.2:** Consider climate change implications in fire hazard reduction planning for FHSZs.
- **Policy S 3.3:** Ensure that the mitigation of fire related property damage and loss in FHSZs limits impacts to biological and other resources.
- **Policy S 3.4:** Reduce the risk of wildland fire hazards through the use of regulations and performance standards, such as fire resistant building materials, vegetation management, fuel modification and other fire hazard reduction programs.
- **Policy S 3.5:** Encourage the use of low-volume and well-maintained vegetation that is compatible with the area's natural vegetative habitats.
- **Policy S 3.6:** Ensure adequate infrastructure, including ingress, egress, and peak load water supply availability for all projects located in FHSZs.
- **Policy S 3.7:** Site and design developments located within FHSZs, such as in areas located near ridgelines and on hilltops, in a sensitive manner to reduce the wildfire risk.
- **Policy S 3.12:** Support efforts to incorporate systematic fire protection improvements for open space, including facilitation of safe fire suppression tactics, standards for adequate access for firefighting, fire mitigation planning with landowners and other stakeholders, and water sources for fire suppression.

Land Use Element

- **Policy LU 11.6:** Ensure that subdivisions in VHFHSZs site open space to minimize fire risks, as feasible.

Table 5.9-2, County General Plan Consistency, in Section 5.9, Land Use, analyzes the consistency of the proposed Project with these policies.

Santa Clarita Valley Area Plan

The SCVAP 2012 requires the *NorthLake Specific Plan* to address the following policies from its Safety Element. The Project's consistency with the following policies is presented in Section 5.9, Land Use.

Safety Element

- **Policy S-3.1.1:** Coordinate on planning for new fire stations to meet current and projected needs.
- **Policy S-3.1.2:** Program adequate funding for capital fire protection costs and explore all feasible funding options to meet facility needs.

- **Policy S-3.1.3:** Require adequate fire flow as a condition of approval for all new development, which may include installation of additional reservoir capacity and/or distribution facilities.
- **Policy S-3.2.1:** Identify areas of the Santa Clarita Valley that are prone to wildland fire hazards and address these areas in fi re safety plans.
- **Policy S-3.2.2:** Enforce standards for maintaining defensible space around structures through clearing of dry brush and vegetation.
- **Policy S-3.2.3:** Establish landscape guidelines for fire-prone areas with recommended plant materials, and provide this information to builders and members of the public.
- **Policy S-3.2.4:** Require sprinkler systems, fire resistant building materials, and other construction measures deemed necessary to prevent loss of life and property from wildland fires.
- **Policy S-3.2.5:** Ensure adequate secondary and emergency access for fire apparatus, which includes minimum requirements for road width, surface material, grade, and staging areas.
- **Policy S-3.2.6:** For areas adjacent to the National Forest, cooperate with the United States Forest Service regarding land use and development issues.
- **Policy S-7.1.1:** Regularly update emergency preparedness and response plans that are consistent with State plans.
- **Policy S-7.1.3:** Ensure that evacuation routes are clearly posted throughout the Santa Clarita Valley.

Table 5.9-3, Santa Clarita Valley Area Plan Consistency, in Section 5.9, Land Use, analyzes the consistency of the proposed Project with these policies.

5.5.5 THRESHOLD CRITERIA

Thresholds Addressed in the Initial Study

The Initial Study prepared for the proposed Project (included in Appendix A) and circulated with the NOP, concludes that Project implementation would not result in significant impacts for the thresholds of significance listed below. Further analysis of these thresholds in this Draft SEIR is not required (a summary of the analysis presented in the Initial Study is provided in Section 7.1, Effects Determined Not to be Significant, of this Draft SEIR):

- Would the project create a significant hazard to the public or the environment through the routine transport, storage, production, use, or disposal of hazardous materials?
- Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of sensitive land uses?
- Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
- For a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?
- Does the proposed land use constitute a potentially dangerous fire hazard?

Thresholds Addressed in this Draft Supplemental Environmental Impact Report

The County of Los Angeles utilizes an Initial Study Questionnaire with Thresholds of Significance specific to the County. The Initial Study for the proposed Project concludes that additional analysis of the following thresholds of significance is required in this Draft EIR. The Project will be considered to have a significant effect related to hazards if the Project would:

- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or waste into the environment.
- Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.
- Result in inadequate emergency access.
- Expose people or structures to a significant risk of loss, injury or death involving fires, because the Project is located within a Very High Fire Hazard Severity Zone (Fire Zone 4).
- Expose people or structures to a significant risk of loss, injury or death involving fires, because the Project is located within a high fire hazard area with inadequate access.
- Expose people or structures to a significant risk of loss, injury or death involving fires, because the Project is located within an area with inadequate water and pressure to meet fire flow standards.
- Expose people or structures to a significant risk of loss, injury or death involving fires, because the Project is located within proximity to land uses that have the potential for dangerous fire hazard.

5.5.6 RELEVANT PROJECT CHARACTERISTICS

Project Design Features

As part of the Project, a total of 6 water tanks (5 new and 1 existing) with a combined capacity of approximately 13.35 million gallons (MG), would be located on a total of 3 water tank sites to serve the proposed Project. In addition to the tanks mentioned above, the Project will construct a water tank site for the benefit of the Newhall County Water District (NCWD). This water tank site, together with future improvements by NCWD, will improve the efficiency and reliability of the overall water system.

The existing oil line that currently traverses the Project site would be relocated, prior to grading activities, to an alignment east of the proposed development areas.

In order to address the potential for fire hazards, the Project Applicant will ensure that a fuel modification program be developed, approved by the Los Angeles County Fire Department, and implemented on all perimeter slopes adjacent to natural open space, also known as ‘transition slopes’ or ‘Fuel Modification’ slopes edges. Fuel modification slopes reduce wildland fire hazard through appropriate fuel management between structures and natural open space. The Fuel Modification Program is to establish different zone treatments that have varied landscaping requirements based on the distance from structures of concern. The total fuel zone width requirement shall be approximately 200 feet from residential rear yard setback and the width will

be dependent on the slope conditions within that range, or consistent with current LACFD requirements. There are locations present along the eastern edge of the Project site where the fuel modification zone may extend onto adjacent property. In these areas, a reduced zone with a comparable level of wildfire protection consistent with LACFD requirements may be implemented. A reduced fuel modification zone may also be implemented in localized areas to minimize intrusion into open space areas. The Fuel Modification Program will specify the type of vegetation that is permitted; the type of irrigation that must be installed; and the responsible parties for installation and long-term maintenance. All fuel modification zones will be permanently maintained by a Landscape Maintenance District or a Homeowners Association (HOA).

In conjunction with the fuel modification plan, the Applicant will develop and submit a Landscape Plan and an Irrigation Plan for approval prior to the issuance of a building permit. The Landscape Plan will emphasize vegetation with a "low fuel potential" and require that all vacant graded lots located within the tract be cleared of brush to reduce fire hazard.

As part of the Project, a Fire Management Program will be developed to assist Project developers and future residents in constructing and maintaining a fire-safe environment. The Fire Management Program will specify various techniques and methods for reducing the potential for vegetative fire hazards including but not limited to such practices as clearing brush and vegetative debris from fire-prone and developed areas as per the requirements of the County Fire Department in accordance with Section 4219 of the *California Public Resources Code*. The Fire Management Program would be detailed in the Landscape and Irrigation Plan, but implemented and maintained through the HOA.

Additionally, the main backbone road system will provide fire and emergency access in accordance with LACFD requirements. The LACFD will confirm the adequacy of emergency access routes as part of tract map review and, if determined to be inadequate, the LACFD would direct modifications to be implemented as a condition of approval.

5.5.7 ENVIRONMENTAL IMPACTS

Impact Analysis

Threshold 5.5-1 Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or waste into the environment?

Construction Impacts

The Project site includes two easements containing underground pipelines. As discussed in Section 4.0, Project Description, implementation of the proposed Project would involve the relocation of these pipelines to areas outside of the proposed development area. All proposed relocation activities would be performed in accordance with all applicable rules and regulations set forth by the State Fire Marshal and pursuant to *Code of Federal Regulations* (Title 49 and Part 195), which would ensure that potential impacts to those workers associated with the relocation effort would be less than significant. Further, the Project would comply with all requirements and procedures put forth by the California Division of Oil, Gas, and Geothermal Resources.

Operation Impacts

All relocation activities would occur prior to grading of the Project site, and thus prior to construction activities or occupation of the Project site. Additionally, the relocated pipe would be

subject to testing requirements pursuant to Section 51013.5(a) of the *California Code of Regulations*. Therefore, long-term impacts to the public would be negligible. Therefore, potential impacts associated with the onsite oil line would be less than significant.

Level of Significance without Mitigation: Less than significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None.

Level of Significance with SCVAP 2012 EIR Mitigation: Less than significant.

Recommended 1992 SP EIR Mitigation Measures: None.

Level of Significance with 1992 SP EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance After No Mitigation Incorporated: Less than significant.

Threshold 5.5-2 Would the project impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan? and

Threshold 5.5-3 Would the project result in inadequate emergency access?

Implementation of the proposed project would generate an increase in the amount and volume of traffic on local and regional roadway networks. However, the proposed Project Applicant would be required to design, construct, and maintain structures, roadways, and facilities to comply with applicable local, regional, State, and/or federal requirements related to emergency access and evacuation plans. Roadway design has been and will continue to be coordinated with the Los Angeles County Fire Department to ensure that minimum design standards are met, including roadway width, surface material, and grade requirements. Specifically, every building would be constructed to ensure accessibility by Los Angeles County Fire Department apparatus by way of access roadways with an all-weather surface of not less than the prescribed width. Additionally, the roadways would be extended to within 150 feet of all portions of exterior walls when measured by an unobstructed route around the exterior of the building. These design features would ensure that all likely anticipated emergency vehicles would be able to safely navigate the Project's internal roadway network.

The County of Los Angeles has adopted a Standardized Emergency Management System (SEMS). SEMS establishes organizational levels for managing emergencies, standardized emergency management methods, and standardized training from responders and managers. Additionally, Los Angeles County had adopted an Operational Area Emergency Response Plan (OAERP) that describes the planned responses to emergencies associated with natural and man-made disasters and technological incidents. During both the construction and operation of the proposed Project, the County and all emergency response and disaster agencies would comply with the requirements as set forth in the SEMS and AOERP, as well as any other applicable local, State, and federal emergency plans and procedures.

No local emergency response plans or evacuation plans are in place for the Project site. However, based on coordination with the LACFD, the proposed Project includes three separate access points. The first access point to the Project site would be from the northerly intersection of Ridge Route Road and NorthLake Boulevard. NorthLake Boulevard would form a loop road that travels the length of the Project site and loops back to a second, southerly intersection with Ridge Route

Road. This southerly intersection would provide a secondary point of access to the Project site. A third access point would be from the northwest, entering the site near the proposed North Ridge Route Park. From NorthLake Boulevard, a series of collector streets would branch off and lead into single-family and multi-family development clusters. Within the central portions of the Project site, numerous roadway connections are planned to provide multiple routes of access to all portions of the site. In addition to the collector streets, the circulation plan would include three private driveways/fire lanes providing additional emergency vehicle access. Therefore, the proposed Project design would comply with the requirements of the County of Los Angeles for emergency ingress and egress and will be subject to additional reviews by LACFD and Los Angeles County Department of Building and Safety. The proposed Project will also comply with all applicable requirements of Section 21.24.030 of the Los Angeles County Code, related to Wildland Access to the satisfaction of the Fire Chief, Los Angeles County Fire Department. Due to these design considerations and compliance with applicable code requirements, the project would not result in a significant impact related to emergency response or emergency access; a less than significant impact would occur.

Level of Significance without Mitigation: Less than significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None.

Level of Significance with SCVAP 2012 EIR Mitigation: Less than significant.

Recommended 1992 SP EIR Mitigation Measures: None.

Level of Significance with 1992 SP EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance After No Mitigation Incorporated: Less than significant.

Threshold 5.5-4 Would the project expose people of structures to a significant risk of loss, injury or death involving fires, because the project is located within a Very High Fire Hazard Severity Zone (Fire Zone 4)?

The development of the *NorthLake Specific Plan* would convert currently undeveloped land to residential, commercial, and light industrial land uses. The Project site is within a designated VHFHSZ area and would be essentially surrounded by undeveloped lands in the VHFHSZ category. Potential exposure to fire hazards is a concern due to the open space hillsides and history of wildfire in the region. A large portion of the Project site would be graded and developed with structures, roadways, and manufactured slopes. This development would eliminate the natural vegetation and wildfire “fuel” sources in the central portions of the Specific Plan site, and some of the manufactured slopes within the footprint of the Project site would be landscaped and regularly irrigated. Therefore, the outer fringes of the Project site would be the main interface of exposure to potential wildfire risks. Fire hazards on private property are increased when adjacent to non-irrigated natural vegetation that has not been modified to minimize potential fuel sources because the suburban development is a potential source of wildfire ignition.

Stringent requirements are placed on any development within VHFHSZ areas to ensure that preventative measures are taken to reduce the risk associated with wildland fires. These requirements, pursuant to Title 32 (Fire Code) of the Los Angeles County Code of Ordinances, include implementing fuel modification practices; using fire-resistant construction materials; and constructing adequate fire-prevention and suppression facilities for each structure (e.g., fire sprinklers designed and installed in compliance with the County of Los Angeles Building, Fire,

and Residential Codes; driveway access) and for use by the fire department (e.g., hydrant locations, fire flows and volumes, roadway access); and emergency response/evacuation plans.

As part of the Project, all VHFHSZ code and ordinance requirements would be met. Fuel modification would occur in naturally vegetated areas along the perimeter of the Project site and would be managed in accordance with the Fire Management Program developed as part of the original *NorthLake Specific Plan,* subject to review and approval by the LACFD. Appropriate maintenance of the fuel modification areas on the Project site would be part of the Fire Management Program requirements and would be enforced by the LACFD, as with all other private development projects. Reduction of fuel loads in accordance with the Specific Plan's Fire Management Program, which would incorporate all applicable State and County requirements, would reduce the ability of a wildfire to spread to the proposed structures near the wildland-urban interface of the proposed Project and would provide defensible space for firefighting activities.

Construction materials and design and fire prevention and suppression equipment for all structures would comply with all requirements for location within a VHFHSZ, as specified by and to the satisfaction of the County of Los Angeles Department of Building and Safety. The Project would also comply with all minimum requirements related to fire flow as set forth in the County of Los Angeles Fire Code. With application of the Fire Management Program specified in the *NorthLake Specific Plan,* which would require compliance with the County Fire Code and all other regulatory standards, impacts related to development within a VHFHSZ would be less than significant and no mitigation is required.

Level of Significance without Mitigation: Less than significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None.

Level of Significance with SCVAP 2012 EIR Mitigation: Less than significant.

Recommended 1992 SP EIR Mitigation Measures: None.

Level of Significance with 1992 SP EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant.

Impact 5.5-5 Would the Project expose people or structures to a significant risk of loss, injury or death involving fires, because the project is located within a high fire hazard area with inadequate access?

The LACFD also has a policy of permitting a maximum of 1,000 feet of roadway, or a cluster of 75 dwelling units, to be serviced by 1 point of access. Longer roadways or clusters of more than 75 dwelling units would be reviewed on a case-by-case basis for compliance with County standards. The proposed Project consists of 3,150 residential units. Application of the 75-dwelling unit criterion to the tract map indicates that there are no clusters of 75 dwelling units or more isolated along a single roadway. Therefore, the proposed Project would meet the County requirements. The proposed circulation plan includes an integrated roadway system that contains multiple points of access to the site. The first access point to the Project site would be from the northerly intersection of Ridge Route Road and NorthLake Boulevard. NorthLake Boulevard would form a loop road that travels the length of the Project site and loops back to a second, southerly intersection with Ridge Route Road. This southerly intersection would provide a secondary point of access to the Project site. A third access point would be from the northwest,

entering the site near the proposed North Ridge Route Park. From NorthLake Boulevard, a series of collector streets would branch off and lead into single-family and multi-family development clusters. Within the central portions of the Project site, numerous roadway connections are planned to provide multiple routes of access to all portions of the site. In addition to the collector streets, the circulation plan would include three private driveways/fire lanes providing additional emergency vehicle access. The light industrial lots that are located in the southern portion of the site would receive direct access from Ridge Route Road. Traffic to and from the Project site could exit the property either to the north or south via Ridge Route Road and would obtain access to I-5.

Upon development of the proposed Project, the roadways would not be traversing a wildland area that would be subject to extreme hazards from brush or forest fires. Property on the western and northern edges of NorthLake Boulevard would remain largely undeveloped and in its natural state, with the exception of grading activities required for road construction. However, NorthLake Boulevard would be largely buffered by development further west of the undeveloped areas, including Ridge Route Road and I-5, which would serve as buffers for the roadway. Similarly, Ridge Route Road would be largely surrounded by development and/or manufactured slopes adjacent to development, which would serve to further minimize wildfire hazards for the roadway. Additionally, the proposed Project would provide multiple access points that enable free flow of traffic into and out of the Project site, and would not hinder public evacuation or the deployment of fire-fighting and other emergency equipment in the event of a brush or forest fire. As previously discussed, the Project shall comply with all applicable requirements of Los Angeles County Fire Code. All new facilities would also conform to applicable local ordinances and would allow for adequate emergency access, which would include adequate turning radii for fire trucks and emergency vehicles to access.

The proposed Project would result in an increase in population and traffic daily trips, which may interfere with existing emergency response and evacuation planning. However, the proposed Project would result in roadway improvements in the area, specifically to Ridge Route Road, improving the efficiency for emergency response vehicles and evacuation access. With implementation of local ordinance emergency access requirements and proposed roadway improvements, the Project would not result in significant impacts to emergency access.

Level of Significance without Mitigation: Less than significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None.

Level of Significance with SCVAP 2012 EIR Mitigation: Less than significant.

Recommended 1992 SP EIR Mitigation Measures: None.

Level of Significance with 1992 SP EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant.

Threshold 5.5-6 Would the Project expose people of structures to a significant risk of loss, injury or death involving fires, because the project is located within an area with inadequate water and pressure to meet fire flow standards?

Due to the Project's location in a VHFHSZ, there would be increased demand for water supply in the vicinity of the Project area in order to ensure adequate water supply and pressure to meet fire protection and requirements. Water would be supplied to the Project site by the Newhall County Water District (NCWD). There are two existing water tanks (a 1.5-MG tank and a 3.0-MG tank) on the Project site. These existing tanks are visible on the aerial photograph of the Project boundary in Exhibit 3-3, Local Vicinity – Aerial View, in Section 3.0, Environmental Setting. However, the 1.5-MG tank has been abandoned by the NCWD and is not part of the water service plan for the proposed Project. The 3.0-MG tank alone would not provide adequate water supply or pressure for fire protection services and would, therefore, be supplemented to serve the proposed Project.

A total of 6 water tanks (5 new and 1 existing) with a combined capacity of approximately 13.35 million gallons (MG), would be located on a total of 3 water tank sites to serve the proposed Project. In addition to these tanks, the Project will construct a water tank site for the benefit of the Newhall County Water District (NCWD). This water tank site, together with future improvements by NCWD, will improve the efficiency and reliability of the overall water system. These on-site water system improvements and new or upgraded off-site improvements would be designed to meet all water supply and fire suppression needs for the proposed development and benefit fire protection services in the area. According to the Water Supply Assessment prepared for the proposed Project and discussed in more detail in Section 5.12, Utilities, the additional water storage in combination with the available water supply from the Newhall County Water District would provide more than adequate water supply and water pressure for fire protection services to the proposed Project. Final fire flows would be based on the type of buildings, sizes and types of construction. All water system improvements would be sized at the final engineering stage of development in compliance with applicable County standards and regulations. Additionally, the proposed Project would comply with applicable requirements of Title 32 of the Los Angeles County Code that establish standards for water mains, fire hydrant flows, hydrant spacing, access and design, and other hazard reduction programs for a VHFHSZ. Based on the site plan, fire hydrants would be spaced 600 feet apart for detached residential units and 300 feet apart for all other buildings. Final locations for fire hydrants would be determined during the tentative map review process. Therefore, potential impacts associated with water pressure for fire services would be less than significant.

Level of Significance without Mitigation: Less than significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None.

Level of Significance with SCVAP 2012 EIR Mitigation: Less than significant.

Recommended 1992 SP EIR Mitigation Measures: None.

Level of Significance with 1992 SP EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant.

Threshold 5.5-7 Would the Project expose people of structures to a significant risk of loss, injury or death involving fires, because the project is located within proximity to land uses that have the potential for dangerous fire hazard?

As detailed in Section 4.0, Project Description, the proposed Project consists of residential, commercial, industrial, parklands, and open space areas. These land uses do not constitute an unusually high or potentially dangerous fire hazard. Rather, development in the Project vicinity would decrease the possibility of wildfires on and near the site because it would:

- Provide greater fire service access to open space areas surrounding the site.
- Provide five new water tanks and utilize one existing tank to serve the Project site, thereby providing greater water access and increased water pressure in the Project area.
- Convey a 1.4-acre parcel for the future construction of a fire station on the Project site to ensure adequate fire protection for the proposed Project and surrounding areas.

Additionally, as discussed previously under Threshold 5.5-4, the Project would comply with the Fire Management Program specified in the *NorthLake Specific Plan,* which would require compliance with the County Fire Code and all other regulatory requirements, and impacts related to development within a VHFHSZ would be less than significant. The Project would also comply with California Fire Code California Code of Regulations Title 24, Part 9, Section 316.6 requiring that structure no be constructed within the utility easement beneath high-voltage (66 kilovolts or greater) transmission lines and County of Los Angeles Fire Department Regulation 27 requiring that any proposed construction or land use within feet of the drip line of High Voltage Transmission lines be subject to review by the Fire Marshal. Any potential for fire impacts related to land use would be reduced to a less than significant level as a result of the proposed Project.

Level of Significance without Mitigation: Less than significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None.

Level of Significance with SCVAP 2012 EIR Mitigation: Less than significant.

Recommended 1992 SP EIR Mitigation Measures: None.

Level of Significance with 1992 SP EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant.

5.5.8 CUMULATIVE IMPACTS

Introduction of residential development into VHFHSZs increases the risk of exposing people and property to wildland fires. The rapid growth of the Santa Clarita Valley region has resulted in considerable residential development within VHFHSZs. However, the rapid development of Santa Clarita and the surrounding areas also facilitates the urbanization of property in the vicinity of the Project site, thereby decreasing the amount of open space and fuel load that would be subject to wildfires. Additionally, all new and related projects in VHFHSZs, including the proposed Project, must comply with stringent State and County requirements related to fuel modification, construction materials and design, site access, and other components of fire prevention and, if needed, suppression and/or implementation of project evacuation plans. Consequently, the

proposed Project would not contribute to a cumulatively considerable risk of wildland fire exposure.

5.5.9 IMPACT CONCLUSION

With the implementation of the Regulatory Requirements, the potential impacts related to wildfires would be less than significant and no mitigation is required.

5.5.10 REFERENCES

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5.6 GEOTECHNICAL HAZARDS

5.6.1 METHODOLOGY

This section of the Supplemental Environmental Impact Report (SEIR) describes potential geotechnical hazards relative to the NorthLake Specific Plan Project and is based on information contained within the following technical studies prepared by G3 SoilWorks and which are included in their entirety as Appendix F:

- *Updated Geologic/Geotechnical Report and Response to County Review Comments NorthLake, Vesting Tentative Tract Map No. 73336 Los Angeles County, California* (prepared in February 10, 2016),
- *Response to Geologic and Soils Engineering Review Sheet Tentative Tract 73336, NorthLake Castaic, Los Angeles County, California* (prepared in April 18, 2016), and
- *Response to Geologic and Soils Engineering Review Sheet Tentative Tract 73336, NorthLake Castaic, Los Angeles County, California* (prepared in May 19, 2016).

As noted in the February 2016 G3SoilWorks report, the G3SoilWorks report is intended to supplement previous geotechnical studies, including the 2015 Petra report, and accepts the data and concurs with all conclusions and recommendations except as superseded in the G3SoilWorks reports. Therefore, where noted, information in this section is also based on the *Tentative Map Review, NorthLake Project, Castaic Area, Los Angeles County, California*, prepared by Petra Geosciences, Inc. in 2015.

These geotechnical reports were prepared for the proposed Project to evaluate existing geologic and soils conditions of the Project site and to assess the potential effects of the Project with respect to these conditions. The Report provides the basis for the evaluation of the geologic and soils-related impacts in the Draft SEIR section. The geotechnical reports included review of literature and maps pertaining to regional faulting, seismic hazards and soils and geologic conditions; review of site specific geotechnical studies; excavating several borings along the main ridgelines; laboratory testing of selected soil and bedrock samples collected as part of the drilling operations; engineering and geologic analyses of available data; evaluation of faulting and seismicity of the site and region, and the impact of seismicity on the site and the proposed construction; and preparation of the geotechnical reports, including preliminary findings, conclusions and recommendations for site grading and design of building foundation systems.

5.6.2 BACKGROUND INFORMATION

1992 NorthLake Specific Plan Environmental Impact Report

The following summary reflects conditions existing at the time of preparation and certification of the 1992 NorthLake Specific Plan EIR (1992 SP EIR), which is incorporated by reference and is included as background information to provide a context for the scope of this SEIR analysis. Adopted mitigation measures from the 1992 SP EIR relevant to geotechnical issues are included below in Section 5.6.6.

The following relevant geotechnical impacts were identified in the 1992 SP EIR:

- Minor landslides occur lateral to Grasshopper Canyon traversing the west-central portion of the Project site in planned open space and planning areas for residential development.
- Slope and bedding instabilities associated with artificial fill, alluvium deposits, and colluvium deposits occur on the Project site along and lateral to Grasshopper Canyon.

- Potential secondary earthquake hazards (e.g., liquefaction, landslides, seismically induced settlement, and ground lurching or cracking) are generally associated with relatively high intensities of ground shaking, shallow groundwater conditions, and presence of loose, sandy soils or alluvial deposits.
- Any grading operation within a landslide area or the introduction of man-made slopes in an existing unstable area is expected to impact future Project residents.
- Project site development may increase on-site levels of erosion through vegetation removal.

Implementation of the proposed Project may expose the NorthLake residents of the Project to geological hazards in the area such as earthquakes, seismic-related ground failure (liquefaction), landslides, soil erosion, and unstable and expansive soils. As required for all new developments in Los Angeles County, all grading activities will be conducted in conformance with the Los Angeles County Grading Ordinance and will adhere to the recommendations included in current and subsequent geotechnical reports.

2012 Santa Clarita Valley Area Plan Environmental Impact Report

The following summary reflects conditions existing at the time of preparation of the 2012 Santa Clarita Valley Area Plan (SCVAP 2012) EIR (which is incorporated by reference) and is included as further background information to provide a context for the scope of this SEIR analysis.

There are nine soil associations identified in the SCVAP 2012 EIR. The soil associations are susceptible to hazards that include erosion, shrink/swell potential, landslide, subsidence, and top-soil loss. Specifically, small portions are mapped as having the potential for landslides and liquefaction; however, mapping of these areas would provide decision makers with information to regulate new development in these areas. In addition, the geologic hazards located within the SCVAP 2012 are associated with surface rupture, groundshaking, liquefaction, dam inundation, and seiches. There are no designated Alquist-Priolo Fault Zones[1] within the SCVAP 2012; however, there are some lands that are located adjacent to the SCVAP 2012 that would potentially expose people and developed property to fault rupture hazards. Impacts related to expansive soils were also identified for areas underlain by fine-grained alluvial soils containing clay.

Implementation of the policies and mitigation measures from the SCVAP 2012 EIR would reduce potential soil, geologic, and seismic impacts to a less than significant level.

5.6.3 EXISTING CONDITIONS

The geologic structure, topography, soils, slope stability, and seismic conditions for the Project site are generally described in the 1992 SP EIR, and are more specifically detailed in the geotechnical reports. It should be noted that the geotechnical report was prepared to evaluate the entire NorthLake Specific Plan site and recommendations are applicable to both Phase 1 and Phase 2 of the proposed Project.

Geologic conditions are evaluated on both a regional basis as well as site-specific. Based on the geotechnical reports, the study area included the Project site and off-site areas that encompass

1 The Alquist-Priolo Earthquake Fault Zoning Act, administered by the California Geological Survey, was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy, which are defined as any structure used or intended for supporting or sheltering any use of occupancy that is expected to have a human occupancy rate of more 2,000 person-hours per year. The main purpose of the Act is to prevent the construction of buildings used for human occupancy on the surface trace of active faults.

Ridge Route Road at the project's main entrance and a portion of NorthLake Boulevard that extends through County of Los Angeles property along the Project's western edge.

Geologic Structure and Topography

The Project site is in the Transverse Ranges Geomorphic Province on the southern margin of the Ridge Basin. Mountains composed of a crystalline complex comprise the border of the Ridge Basin on the north and east; sedimentary rocks in the Soledad Basin border it on the south; and the San Gabriel Fault forms the western boundary of the Ridge Basin. The most prominent feature on the Project site is the northwest-trending Ridge Basin Syncline, which is located along the western property boundary. The majority of the site is located on the northeast limb of the Ridge Basin Syncline, which has a gentle (10- to 25–degree) southwestern dip (Petra 2105).

The Project site is characterized by a combination of steep topography and rolling hills. The Project site is located astride the north-south-trending Grasshopper Canyon (G3SoilWorks 2016a). The east side of the canyon has a relatively gentle stair-stepping topography with local plateaus and side canyon areas. The west side is characterized by a relatively steep natural slope that ascends to a northwest-trending ridgeline that is nearly parallel Interstate (I) 5. This area is also underlain by landslide complexes that vary from one hundred feet to several hundred feet in length and width, as discussed below. Drainage on the site flows to the southeast through Grasshopper Canyon and further downstream to Castaic Lagoon. The eastern ridgeline is the larger and taller of the two. Elevations range from approximately 2,300 feet above mean sea level (msl) in the northeast to approximately 1,250 feet above msl in the southeast of the Project site (Petra 2015).

Local Geology and Subsurface Conditions

The site is underlain by the marine Castaic Formation of late Miocene-age. This formation is comprised of silty to fine-grained sandstone, calcareous sandstone, siltstone, claystone, and mudstone. Deeper, unoxidized sandstones are commonly light to medium gray and weather to a light yellowish brown. Unoxidized siltstones and claystones are generally dark gray to olive gray and weather to brownish to light olive gray in near-surface exposures. A minor amount of matter containing carbon is common. In general, coarser-grained units (e.g. conglomerates and sandstones), are located in the southern portion of the site and are characterized by rugged distinct ridges with moderate to steep slopes. Finer grained units are located in the northern portion of the site and are characterized by gentler, more rolling slopes (Petra 2015).

Terrace deposits (Qt) were encountered topping local, relatively flat benches above Grasshopper Canyon (G3SoilWorks 2016a). These non-marine deposits of probable Pleistocene age are composed of fine- to coarse-grained sands to sandy clays; are light brown to reddish brown; are non- to moderately cemented; and contain pebble- to cobble-size rock fragments or clasts (Petra 2015).

Colluvium and Topsoil (Col) consists of medium to dark brown clayey to silty sand to silty clays. They were encountered throughout the site capping the bedrock and landslide deposits, especially in the low draws and gently sloping areas. These deposits are derived from weathering of the underlying earth materials and from minor creep, slope wash, and other erosional effects. In general these deposits range in thickness from very thin veneers to greater than 28 feet in thickness locally. They are mapped where the thickness exceeds approximately four feet in depth. In some cases, the colluvial deposits appear to have developed post-landsliding (i.e. at the base of landslides) (G3SoilWorks 2016a, Petra 2015).

Alluvium and older alluvium (Qal and Qalo) can be found along Grasshopper Canyon as local and isolated deposits, which consist of a mixture of sand, silt clay gravel cobbles, and boulders. The older alluvial deposits have been incised by the active channel of Grasshopper Canyon. The depth of alluvium ranges from a few feet to up to 20 feet where the gradient of the canyon is relatively low (G3SoilWorks 2016a, Petra 2015).

Artificial Fill (af) was found locally and generated for creation of access roads; a small pond located in the central portion of the site and other man-made features at the site. These materials consist of locally derived bedrock and other native earth materials. Except for creation of the small pond, the artificial fill deposits are relatively minor in thickness and are not identified on the geotechnical maps (Petra 2015).

Much of the Project site is underlain by landslides (map symbol: Qls) of various extent and origins (G3SoilWorks 2016a). The landslide materials are highly variable, from appearing similar to intact bedrock to a chaotic mixture of bedrock and native materials. Surface mapping along Grasshopper Canyon indicates large blocks of bedrock-like material that have various orientations that are not consistent with regional trends. Many of the westerly facing slopes in the east-central portion of the site are underlain by landslide complexes that vary from a hundred to several hundred feet in length and width. Other smaller landslides can be found on the flanks of the side canyons or near the bottom of Grasshopper Canyon. The majority of the landslides are translational block glide features, which have basal slide planes that are controlled by the underlying bedrock structure that generally dips gently to the southwest. It is estimated that the landslides are up to 100 feet in thickness. Several of the recent borings excavated encountered the basal rupture[2] plane at depths between 50 and 70 feet below the ground surface. Many secondary landslides[3] were encountered in the borings excavated with basal slide planes that were oriented differently than regional bedding. These are interpreted as due to local topographic variations and irregular bedding within landslide blocks or fluctuation of bedding due to local faulting and/or folding. As shown in the geotechnical reports, the limits of the landslides indicated are based on the limited borings, topographic expression, vegetation, and knowledge of similar features in the area. The landslides are interpreted to be of various ages. Many young and current landslides can be found near the bottom and side slopes of Grasshopper Canyon and are basically still active as a result of down cutting during heavy storm runoff and undercutting of the channel. The large landsides appear to be much older as they have significant soil and colluvium deposits that post-date the landslide event (G3SoilWorks 2016a, Petra 2015).

Faults/Seismicity

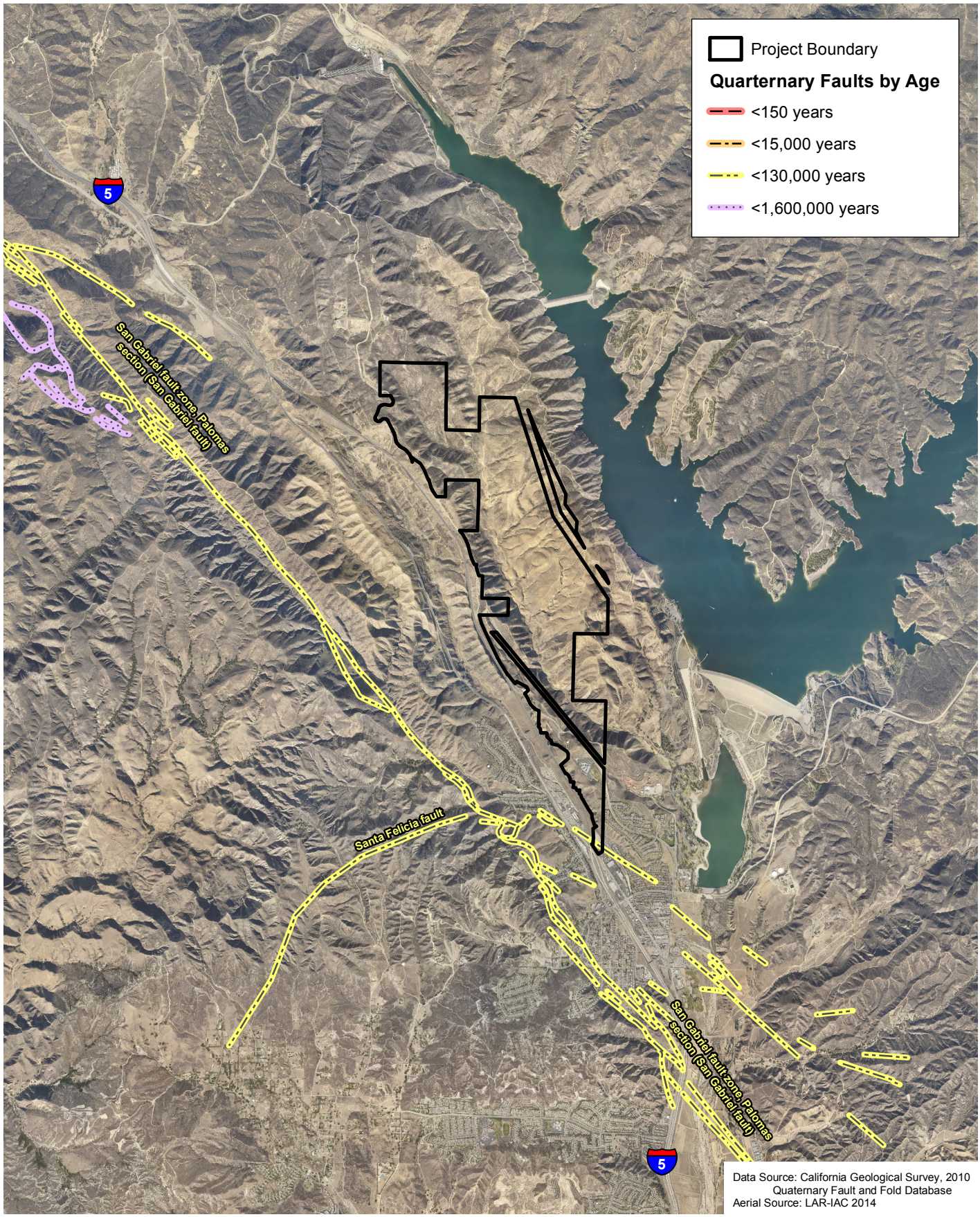
Based on review of published geologic maps, no mapped faults are known to cross through the Project site and no portion of the site lies within an Earthquake Fault Hazard Zone as designate by the State of California pursuant to the Alquist-Priolo Earthquake Zoning Act. As shown on Exhibit 5.6-1, Fault Locations, the nearest fault is the San Gabriel Fault, located approximately one mile from the Project site at its closest point. This major fault system is characterized as a right-lateral strike-slip fault that extends approximately 90 miles through the Transverse Range Geomorphic Province (Petra 2015).

Groundwater

The project site is located in the Castaic Canyon portion of the Santa Clara River Valley Groundwater Basin. The only water bodies onsite include intermittent drainages (primarily associated with Grasshopper Canyon), and a few small stock ponds (G3SoilWorks 2016a).

2 Basal rupture is the surface that the landslide moved on (i.e. the bottom of the landslide).

3 A secondary landslide is a landslide that failed as a result of an instability caused by a primary landslide. Secondary landslides commonly occur at the headward portion of the primary landslide.



Data Source: California Geological Survey, 2010 Quaternary Fault and Fold Database
Aerial Source: LAR-IAC 2014

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Fault Locations

Exhibit 5.6-1

NorthLake Specific Plan SEIR

N W E S

1 0.5 0 1 Miles

BonTerra PSOMAS

(Rev: 12-15-2015 JAZ) H:\Projects\Woodri (WCP)\J001\Graphics\SEIR\ex5.6-1_Faults.pdf

Groundwater/seepage was encountered in several borings excavated in this and previous phases of the Project, and generally at depths of 60 feet or greater. The seepage was typically minor and along fractures within the bedrock, or near the bottom of landslides (G3SoilWorks 2016a, Petra 2015).

5.6.4 RELEVANT PLANS, POLICIES, AND REGULATIONS

Federal

International Building Code

The International Building Code (IBC) is the national model building code providing standardized requirements for construction. The IBC replaced earlier regional building codes (including the Uniform Building Code) in 2000 and established consistent construction guidelines for the nation. The 2012 IBC is the most recent edition and was incorporated into the 2012 California Building Code that currently applies to all structures being constructed in California. The national model codes are therefore incorporated by reference into the building codes of local municipalities (e.g., the California Building Code discussed below). The California Building Code includes building design and construction criteria that take into consideration the State's seismic conditions.

State

California Building Code

The California Building Code (also known as the "California Building Standards Code" or CBC) is promulgated under the *California Code of Regulations* (CCR), Title 24 (Parts 1 through 12) and is administered by the California Building Standards Commission (CBSC). The national model code standards adopted into Title 24 apply to all occupancies in California except for modifications adopted by State agencies and local governing bodies. The current CBC is based on the 2012 IBC, discussed above. The California Building Code may be adopted wholly or with revisions by State and local municipalities, as with the Los Angeles County Building Code.

Title 24 establishes general standards for the design and construction of buildings, including provisions related to seismic safety. The CBC provides standards that must be met to safeguard life or limb, health, property, and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all buildings and structures in its jurisdiction. Chapter 18 of the California Building Code, Soils and Foundations, specifies the level of soil investigation required by law in California. Requirements in Chapter 18 apply to building and foundations systems and consider reduction of potential seismic hazards.

Local

County of Los Angeles Building Code

The County of Los Angeles Building Code (County Building Code) is promulgated under the Los Angeles County Code (Title 26 et. seq., "Building Code"). The County Building Code incorporates (and adopts by reference) the current CBC described above, which, in turn, incorporates the 2012 IBC. Section 101.3 of Title 26 (Chapter 1) states that, "The provisions of this Code [the County Building Code] shall apply to the construction, alteration, moving, demolition, repair, use of any building or structure, and grading within the unincorporated territory of the County of Los Angeles and to such work or use by the County of Los Angeles in any incorporated city". This would include the Project. Certain chapters or sections of the County

Building Code specifically pertain to construction in areas that present seismic risks and would apply to the Project. These requirements are described below.

- Chapter 1, Section 110.2, "Geotechnical Hazards", of the County Building Code restricts building and grading activities in areas where geotechnical hazards of landslide, settlement, and slippage may be activated or increased as a result of project activities. Project applicants are required to submit an Engineering Geology and/or Soils Engineering Report to indicate how the hazard will be eliminated or mitigated prior to the use or occupancy of the land.
- Chapter 1, Section 111, "Engineering Geology and Soils Engineering Reports", of the County Building Code empowers the Building Official to require an Engineering Geology Report, a Soils Engineering Report, or both in cases where such reports are considered essential for the evaluation of the site's safety . The Engineering Geology and/or Soils Engineering Reports must be prepared by a California-certified engineering geologist or California-licensed civil engineer, respectively, and must contain a finding regarding the safety of the site of the proposed work against hazard from landslide, settlement, or slippage and a finding regarding the effect that the proposed work will have on the geotechnical stability of the area outside the proposed work.
- Chapter 16, "Structural Design", of the County Building Code describes requirements for construction of structures based on earthquake loads, including modifications to requirements defined in ASCE 7[4]/current CBC Section 1613 related to Seismic Design Categories (formerly Seismic Zones[5]) to reflect County conditions. The Seismic Design Categories consider building location, building use, and underlying soil conditions while Seismic Zones considered only building location. These County-specific building requirements are in addition to all other requirements of the current CBC.
- Chapter 17, "Structural Tests and Special Inspections", of the County Building Code requires an applicant to "submit a statement of special inspections prepared by the registered design professional in responsible charge in accordance with Section 106.4.2, as a condition for permit issuance" when specified seismic conditions are met. Section 1709 includes requirements for use of the registered design professional responsible for the structural design, or another registered design professional, to perform structural observations for those buildings included in Seismic Design Category D, E, or F (as determined in Section 1613).

County of Los Angeles General Plan

The current General Plan requires the NorthLake development to address the following policies, as stated in Safety and Land Use Elements:

Safety Element

- **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.

Land Use Element

- **Policy LU 6.2:** Encourage land uses and developments that are compatible with the natural environment and landscape.

4 American Society of Civil Engineers (ASCE) 7-05 "Minimum Design Loads for Buildings and Other Structures"
5 Seismic Design Categories A through F have replaced Seismic Zones 0 through 4.

Santa Clarita Valley Area Plan

The SCVAP 2012 requires the *NorthLake Specific Plan* to address the following policies from its Safety Element:

Safety Element

- **Policy S-1.2.2:** Restrict the land use type and intensity of development in areas subject to fault rupture, landslides, or liquefaction, in order to limit exposure of people to seismic hazards.
- **Policy S-1.2.3:** Require soils and geotechnical reports for new construction in areas with potential hazards from faulting, landslides, liquefaction, or subsidence, and incorporate recommendations from these studies into the site design as appropriate.
- **Policy S-1.2.4:** Enforce seismic design and building techniques in the County Building Code.

5.6.5 THRESHOLD CRITERIA

Thresholds Addressed in the Initial Study

The Initial Study prepared for the proposed Project (included in Appendix A) and circulated with the NOP, concludes that Project implementation would not result in significant impacts for the thresholds of significance listed below. Further analysis of these thresholds in this SEIR is not required (a summary of the analysis presented in the Initial Study is provided in Section 7.1, Effects Determined Not to be Significant, of this Draft SEIR):

- Would the project have soils incapable of adequately supporting the use of onsite wastewater treatment systems where sewers are not available for the disposal of wastewater?
- Would the project conflict with the Hillside Management Area Ordinance (L.A. County Code, Title 22, Section 22.56.215) or hillside design standards in the County General Plan Conservation and Open Space Element?

Thresholds Addressed in this Draft Supplemental Environmental Impact Report

The County of Los Angeles utilizes an Initial Study Questionnaire with Thresholds of Significance specific to the County. The Initial Study for the proposed Project concludes that additional analysis of the following thresholds of significance is required in this Draft SEIR. The Project will be considered to have a significant effect related to geology and soils if the Project would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known active fault trace. Refer to Division of Mines and Geology Special Publication 42.
- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.
- Be located in an area subject to seismic-related ground failure, including liquefaction and lateral spreading.

- Be located on a geologic unit or soils 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.
- Be located in an area subject to landslides.
- Result in substantial soil erosion or the loss of topsoil.
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

5.6.6 RELEVANT PROJECT CHARACTERISTICS

Grading for the Project involves approximately 33 million cubic yards of earthwork (Refer to Exhibit 4-2, Grading Plan). The manufactured slopes on the Project site would be graded at a 2:1 (horizontal to vertical) slope ratio or flatter, with appropriate intervening terraces and drainage devices to satisfaction of Public Works. According to gross and surficial stability analyses and through application of standard grading techniques, the fill-and-cut slopes would be stable.

5.6.7 ENVIRONMENTAL IMPACTS

Impact Analysis

Threshold 5.6-1 **Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known active fault trace? Refer to Division of Mines and Geology Special Publication 42.**

As with most of Southern California, the Project site may experience strong ground shaking from a major earthquake on other active regional faults in the Southern California area. As previously discussed, the geotechnical reports concurred that there are no known mapped faults that cross the Project site and that the Project site is not included in an Alquist-Priolo Earthquake Fault Zone (G3SoilWorks 2016a, Petra 2015). The San Gabriel fault is located approximately one mile southwest of the site at its closest point. Although severe groundshaking can cause shallow ground rupture, the probability of occurrence of this type of ground failure would depend on the severity of the earthquake, distance from the causative fault, topography, subsoils and groundwater conditions. Since there are no known active or potentially active faults traversing the Project site, the potential for surface fault rupture of a known earthquake fault on the Project site is negligible (Petra 2015). Additionally, given that the site does not contain significant thicknesses of loose compressible soils and that these soils would be removed and replaced with compacted fill, the secondary effect of ground rupture is not considered to be a potential hazard for the Project site (G3SoilWorks 2016a, Petra 2015). A less than significant impact would occur and no mitigation is required.

Level of Significance without Mitigation: Less than Significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None.

Level of Significance with SCVAP 2012 EIR Mitigation: Less than significant.

Recommended 1992SP EIR Mitigation Measures: None.

Level of Significance with 1992 SP EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant.

Threshold 5.6-2 Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

Threshold 5.6-3 Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction and lateral spreading?

Threshold 5.6-4 Would the Project be located on a geologic unit or soils 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?

Because the Project site is located in a seismically active region, as is all of Southern California, the Project site would likely experience strong seismic related ground shaking during the life of the Project. Secondary effects of seismic ground-shaking that are typically considered as possible hazards to a particular site include several types of ground failure such as landsliding, lateral spreading, ground subsidence, ground lurching, shallow ground rupture, liquefaction, and soil strength loss. The probability of occurrence of each type of ground failure depends primarily on the severity of the earthquake; the distance from the causative fault; topography; subsoils; and groundwater conditions. Landslides are discussed below in Threshold 5.6-5.

The geotechnical reports recommend that design of structures may be determined in accordance with the current California Building Code (CBC). According to a slope stability analysis prepared for the proposed project, temporary backcut slopes would provide an acceptable minimum factor of safety and the proposed graded slopes would exhibit minimum factors of safety as well, provided that County of Los Angeles requirements are implemented (G3SoilWorks 2016a). Additionally, Site-specific design parameters, in compliance with the current CBC, are set forth in the geotechnical reports. Pursuant to County requirements established through the grading plan check process, preparation and building design specifications would incorporate the recommendations from the geotechnical reports and design-level supplemental geotechnical studies, which would be verified by the County of Los Angeles Department of Public Works as part of the grading plan check process. Therefore, MMs 3.9.1 through 3.9.7 of the SCVAP EIR and MMs 4.1.1 and 4.1.2 of the 1992 SP EIR are no longer applicable to the Project.

Given that the Project site does not contain significant thicknesses of loose compressible soils and that these soils would be removed and replaced with compacted fill, the secondary effects of liquefaction, lateral spreading, ground subsidence, and soil strength loss are not considered potential hazards on the Project site (Petra 2015). Pursuant to County requirements, loose compressible soils removal and fill placement would be conducted, as recommended in the geotechnical reports, which would eliminate the potential for liquefaction.

As previously stated, groundwater/seepage was encountered in several borings excavated on the Project site, and generally at depths of 60 feet or greater. The seepage was typically minor and along fractures within the bedrock or near the bottom of landslides. The geotechnical reports concur that the Project site is suitable for development, provided that it incorporates County of

Los Angeles requirements and all engineering recommendations from the geotechnical reports as part of the final Project design (G3SoilWorks 2016a, Petra 2015).

The Project would conform to the current CBC and County requirements,, which would require preparation of additional geotechnical studies and incorporation of all recommendations defined therein as part of final design related to seismic-related hazards, building code compliance, ground-shaking, liquefaction, and slope stability. Therefore, there would be less than significant impacts related to unstable soils.

Level of Significance without Mitigation: Less than significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None.

Level of Significance with SCVAP 2012 EIR Mitigation: Less than significant.

Recommended 1992 SP EIR Mitigation Measures: None.

Level of Significance with 1992 SP EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant.

Threshold 5.6-5 Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

As previously indicated, the Project site is underlain by numerous landslides of various extent and origins. The geotechnical reports indicate that, based on review of the Seismic Hazard Zone map for the Whittaker Peak 7.5-minute quadrangle, the Project site slopes lie within an area that has been mapped as potentially susceptible to earthquake-induced landslides. The geotechnical reports indicate that the Project site is suitable for development, provided that it incorporates County of Los Angeles requirements and all engineering recommendations from the geotechnical reports defined therein as part of the final Project design (G3SoilWorks 2016a, Petra 2015). Impacts associated with landslides would be less than significant.

Level of Significance without Mitigation: Less than Significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None.

Level of Significance with SCVAP 2012 EIR Mitigation: Less than significant.

Recommended 1992 SP EIR Mitigation Measures: None.

Level of Significance with 1992 SP EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant.

Threshold 5.6-6 Would the project result in substantial soil erosion or the loss of topsoil?

Ground disturbance on exposed soils includes grading activities and ground disturbance during construction activities of on-site soils and the exposure of uncovered soils to potential erosion impacts from wind, rain, and surface water runoff during both the construction phase and after site development. This ground disturbance could lead to erosion and topsoil loss during heavy rains. Development projects that are one acre or more are required to comply with the National Pollutant Discharge Elimination System (NPDES) Construction General Permit, discussed further in Section 5.8, Hydrology and Water Quality. The Project would be in compliance with the NPDES permit, and erosion potential during construction of the Project would be managed with Best Management Practices (BMPs) implemented on the Project site as part of a Storm Water Pollution Prevention Plan (SWPPP) during construction activities to minimize erosion impacts. Impacts related to soil erosion or the loss of topsoil would be less than significant. Because compliance with NPDES Permit requirements is required by State law and County code, MMs 3.9.9 and 3.9.10 of the SCVAP EIR of the 1992 SP EIR are no longer applicable to the Project.

Level of Significance without Mitigation: Less than Significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None.

Level of Significance with SCVAP 2012 EIR Mitigation: Less than significant.

Recommended 1992 SP EIR Mitigation Measures: None.

Level of Significance with 1992 SP EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant.

Threshold 5.6-7 Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Expansive soils are materials that, when subject to a constant load, are prone to expand when exposed to water. Foundations constructed on these soils are subject to uplifting forces caused by the swelling of expansive soils. The geotechnical reports indicate that, based on historical laboratory testing of site soils and based on the geotechnical engineer's experience with similar projects in the local area, most on-site soil and bedrock material are generally considered to have very low to medium potential for expansion potential. The geotechnical reports provide recommendations that are based on the soil conditions of the site (summarized above); implementation of these recommendations would reduce the effects of variability in composition and behavior within the site soils and long-term differential settlement (G3SoilWorks 2016a, Petra 2015). The Project would incorporate County of Los Angeles requirements and all engineering recommendations from the geotechnical reports defined therein as part of the final Project design.

Corrosion is a chemical process whereby buried construction materials in contact with certain types of soils are attacked by either oxidation, reduction, or other soil-induced chemical reactions. The geotechnical reports indicate that on-site soils are "extremely corrosive" to ferrous metals and copper and provides recommendations that any ferrous metal or copper components of the Project that are placed in direct contact with on-site soils would require protection against the corrosive soils pursuant to the corrosion engineer (G3SoilWorks 2016a, Petra 2015).

Soil and bedrock materials in the local area are typically considered to be corrosive to ferrous metals. Therefore, consistent with County of Los Angeles requirements, material samples from

the soils types designated for compacted fill should be tested for chemicals and properties to further evaluate the corrosion potential of the site and to identify specific design measures to address potential corrosive soil conditions (G3SoilWorks 2016a). The Project would incorporate County of Los Angeles requirements and all engineering recommendations from the geotechnical reports defined therein as part of the final Project design. Because the Project would comply with all established County code requirements, MM 4.1.2 of the 1992 SP EIR is no longer applicable to the Project.

Level of Significance without Mitigation: Less than Significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None.

Level of Significance with SCVAP 2012 EIR Mitigation: Less than significant.

Recommended 1992 SP EIR Mitigation Measures: None.

Level of Significance with 1992 SP EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant.

5.6.8 CUMULATIVE IMPACTS

Generally, geotechnical issues are site-specific and would be limited to areas within the development boundaries of the Project site.

Cumulative projects would be subject to varying risks associated with geotechnical hazards. The cumulative projects are located in Southern California, a seismically active region, and would therefore be subject to hazards during seismic events, including ground shaking, rupture, liquefaction, and subsidence. The CBC would require that structures be constructed to meet minimum seismic safety standards. However, depending on the location of each specific cumulative project, potential hazards could remain with implementation of CBC requirements.

Geotechnical issues and impacts are typically site-specific and the potential impacts of each cumulative project would be evaluated and mitigated on a project-by-project basis. It is expected that mitigation measures similar to those provided for the proposed Project would be required of cumulative projects, and would in most cases reduce impacts to less than significant levels. Therefore, the proposed Project, in combination with some or all of the identified cumulative projects, would not cause a significant cumulative impact. Moreover, any of the proposed Project's incremental contributions to soils and geological impacts are not considered cumulatively considerable because the proposed Project would comply with the all applicable State and local requirements. These requirements would avoid any cumulative geotechnical impacts that may occur on the Project site. Cumulative impacts would be less than significant.

5.6.9 IMPACT CONCLUSION

The proposed Project involves the development of single-family and multi-family residential homes, commercial, industrial, and public land uses on the Project site, which would comply with all applicable State and local requirements and regulations. Therefore, all geotechnical impacts would be considered less than significant.

5.6.10 REFERENCES

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5.7 GREENHOUSE GAS EMISSIONS

This section addresses potential impacts related to the proposed NorthLake Specific Plan (SP) project's generation of greenhouse gas (GHG) emissions either directly or indirectly, and the potential to conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. The analysis of this section is based on information from the *Greenhouse Gas Technical Report, NorthLake Specific Plan Project, Los Angeles County, California* (Ramboll Environ 2017), included as Appendix G to the SEIR. Emissions of criteria air pollutants and toxic air contaminants (TACs) from construction and operation of the project are addressed in Section 5.1 Air Quality, of this SEIR.

5.7.1 METHODOLOGY

The Project's estimated construction and operational GHG emissions were calculated by using the California Emissions Estimator Model (Version 2016.3.1 (CalEEMod™). CalEEMod™ is a statewide program designed to calculate both criteria and GHG emissions from development projects in California. This model was developed under the auspices of the SCAQMD and received input from other California air districts, and is currently supported by several lead agencies for use in quantifying the emissions associated with development projects undergoing environmental review. CalEEMod™ utilizes widely accepted models for emission estimates combined with appropriate default data that can be used if site-specific information is not available. These models and default estimates use sources such as the USEPA AP-42 emission factors, CARB's on road and off-road equipment emission models such as the EMission FACtor model (EMFAC) and the Off-Road Emissions Inventory Program model (OFFROAD), and studies commissioned by California agencies such as the California Energy Commission (CEC) and CalRecycle.

CalEEMod™ is based upon the CARB-approved Off-Road and On-Road Mobile-Source Emission Factor models (OFFROAD and EMFAC, respectively), and is designed to estimate construction and operational emissions for land use development projects and allows for the input of project specific information. OFFROAD is an emissions factor model used to calculate emission rates from off-road mobile sources (e.g., construction equipment, agricultural equipment). EMFAC is an emissions factor model used to calculate emissions rates from on-road vehicles (e.g., passenger vehicles, haul trucks). The off-road diesel emission factors used by CalEEMod™ are based on the CARB OFFROAD2011 program.

CalEEModTM provides a simple platform to calculate both construction emissions and operational emissions from a land use project. It calculates both the daily maximum and annual average for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions. The model also provides default values for water and energy use. Specifically the model aids the user in the following calculations:

- Short term construction emissions associated with demolition, site preparation, grading, building, coating, and paving from off-road construction equipment, on-road mobile equipment associated with workers, vendors, and hauling, and fugitive dust associated with grading, demolition, truck loading, and roads, and volatile emissions of reactive organic gases (ROG) from architectural coating and paving. Fugitive dust from windblown sources such as storage piles are not quantified in CalEEModTM, which is consistent with approaches taken in other comprehensive models.
- Operational emissions associated with the fully built out land use development, such as on-road mobile vehicle traffic generated by the land uses, fugitive dust associated with roads, volatile emissions of ROG from architectural coating, off-road emissions from

landscaping equipment, volatile emissions of ROG from consumer products and cleaning supplies, wood stoves and hearth usage, natural gas usage in the buildings, electricity usage in the buildings, water usage by the land uses, and solid waste disposal by the land uses.

- One-time vegetation sequestration changes, such as permanent vegetation land use changes and new tree plantings.

Mitigation impacts to both short-term construction and operational emissions as described in California Air Pollution Control Officers Association (CAPCOA)'s Quantifying Greenhouse Gas Mitigation Measures. In addition, CalEEModTM contains default values and existing regulation methodologies to use in each specific local air district region. Appropriate statewide default values can be utilized if regional default values are not defined. Default factors for Los Angeles – South Coast County area that is within the SCAQMD jurisdiction were used for the GHG emission inventory, unless otherwise noted in Appendix G.

This analysis directly or indirectly relied on emissions estimation guidance from government-sponsored organizations, government-commissioned studies of energy use patterns, energy surveys by other consulting firms, Project specific resource management studies (e.g., Traffic study, Water Supply Assessment, and Signage Energy Consumption Analysis), and emission estimation software as described above. In cases as noted below, third-party studies were also relied upon to support analyses and assumptions made outside of the approach described above.

5.7.2 BACKGROUND INFORMATION

Global Climate Change

Climate change is a recorded change in the Earth's average weather measured by variables such as wind patterns, storms, precipitation, and temperature. Historical records show that global temperature changes have occurred naturally in the past, such as during previous ice ages. The year 2014 ranks as Earth's warmest year since 1880, and the 10 warmest years in the instrumental record, with the exception of 1998, have now occurred since 2000. The average global temperature has risen about 1.4 degrees Fahrenheit (°F) (0.8 degrees Celsius [°C]) since 1880 (NASA 2015).

The global atmospheric concentration of CO_2 has increased from a pre-industrial (roughly 1750) value of about 280 parts per million (ppm) to a peak of 403.26 ppm and a seasonally adjusted 400.57 ppm in April 2015, primarily due to fossil fuel use, with land use change providing a significant but smaller contribution. The annual CO_2 concentration growth rate during the ten-year period between 1995 and 2005 was larger than the growth rate from the beginning of continuous direct measurements in 1960 to 2005 (ESRL 2015).

Greenhouse Gases

GHGs are global pollutants and are therefore unlike criteria air pollutants such as ozone (O_3), particulate matter (PM10 and PM2.5), and toxic air contaminants (TACs), which are pollutants of regional and local concern (see Section 5.1, Air Quality, of this SEIR). While pollutants with localized air quality effects have relatively short atmospheric lifetimes (generally on the order of a few days), GHGs have relatively long atmospheric lifetimes, ranging from one year to several thousand years. Long atmospheric lifetimes allow for GHGs to disperse around the globe. Therefore, GHG effects are global, as opposed to the local and/or regional air quality effects of criteria air pollutant and TAC emissions.

GHGs, as defined under California's Assembly Bill (AB) 32, include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). GHGs vary widely in the power of their climatic effects; therefore, climate scientists have established a unit called global warming potential (GWP). The GWP of a gas is a measure of both potency and lifespan in the atmosphere as compared to CO_2. For example, since CH_4 and N_2O are approximately 25 and 298 times (respectively) more powerful than CO_2 in their ability to trap heat in the atmosphere, they have GWPs of 25 and 298, respectively (CO_2 has a GWP of 1) (IPCC 2007). Carbon dioxide equivalent (CO_2e) is a quantity that enables all GHG emissions to be considered as a group despite their varying GWP. The GWP of each GHG is multiplied by the prevalence of that gas to produce CO_2e.

General Environmental Effects of Global Climate Change

Executive Order S-3-05 mandates the preparation of biennial science assessment reports on climate change impacts and adaptation options for California. Executive Order S-13-08 directs the California Natural Resources Agency (CNRA) to develop a State Climate Adaptation Strategy and to provide State land use planning guidance related to sea level rise and other climate change impacts. Current reports resulting from these directed actions are the *Climate Action Team Report to the Governor and Legislature* and the *California Climate Adaptation Strategy* (CalEPA 2010; CNRA 2009b). These studies report that global warming in California is anticipated to impact resources including, but not limited to, those discussed below:

- **Public Health.** Many Californians currently experience the worst air quality in the nation, and climate change is expected to make matters worse. Higher temperatures would increase the frequency, duration, and intensity of conditions conducive to air pollution formation. If global background ozone (O_3) levels increase as predicted under some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by more frequent wildfires, which emit fine particulate matter that can travel long distances. Rising temperatures and more frequent heat waves would increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress. Climate change may also increase asthma rates and the spread of infectious diseases and their vectors, as well as challenge food and water supplies. Children, the elderly, people with chronic heart or lung disease, outdoor workers, people who exercise outdoors and the economically disadvantaged would be particularly vulnerable to these changes. In addition, more frequent extreme weather events could also result in increased injuries and deaths from these phenomena.
- **Energy.** Increasing mean temperature and more frequent heat waves will drive up demand for cooling in summer; this new energy demand will only be partially offset by decreased demand for heating in winter. Hydropower, which currently provides 15 percent of in-state generation, would be threatened by declining snowpack, which serves as a natural reservoir for hydropower generation in the spring and summer. Winter storms, earlier snowmelt, and greater runoff may combine to cause flooding, which could, in turn, damage transmission lines and cause power outages.
- **Water Resources.** Rising temperatures, less precipitation, and more precipitation falling as rain instead of snow could severely diminish snowpack. Because the Sierra Nevada snowpack provides most of California's available water, this potential loss would increase the risk of summer water shortages and would hamper water distribution and hydropower generation. The diminished snowpack would also nearly eliminate all skiing and other snow-related recreation. Rising sea levels would push saltwater into California's estuaries, wetlands, and groundwater aquifers, threatening the water quality and reliability in the Sacramento/San Joaquin River Delta—a major California freshwater supply. Extreme precipitation and flooding could also damage water quality by creating sudden increases

in runoff. Moreover, warming would increase evapotranspiration rates from plants, soil, and open water surfaces, which would result in greater demand for irrigation. Overall, climate change would reduce California's water supplies even as its growing population requires additional resources.

- **Sea Level and Flooding.** Sea level at California's coasts is expected to rise by 11 to 18 inches above 2000 levels by 2050 and by 23 to 55 inches by 2100. If realized, these increases would create more frequent and higher storm surges; would erode some coastal areas; and would increase pressure on existing levees. These increases would create a greater risk of flooding in previously untouched inland areas. Consequently, continued development in vulnerable coastal areas would put more people and infrastructure at risk.
- **Agriculture.** Although higher CO_2 levels can stimulate plant production and increase plant water-use efficiency, in the long-term, climate change would reduce the quantity and quality of agricultural products statewide. As temperatures rise, farmers will face greater water demand for crops and a less reliable water supply, as well as increased competition from urban water users. Sea level rise may cause saltwater intrusion in the Delta region, making it difficult to raise certain crops. Rising temperatures will likely aggravate O_3 pollution, interfering with plant growth and making plants more susceptible to disease and pests. In addition, warming would reduce the number of colder hours needed for fruit and nut production; would shift pest and weed ranges; would alter crop-pollinator timing; and would increase the frequency of droughts, heat waves, and floods. Higher average temperatures would also increase mortality and decrease productivity in livestock.
- **Forestry.** California timber production has declined over the past few decades due, in part, to warming and increased wildfires. While further warming may increase production for some species in some locations, climate change is expected to reduce overall forest growth. Increasing average temperatures and drought frequency would result in more wildfires and greater burned areas, while less frequent and more intense rainfall would increase soil erosion and landslides. Higher temperatures and less water would force many tree species to shift their ranges; those that run out of livable habitat may die out. Pests, diseases, and invasive species may also colonize new areas, further challenging forest health and biodiversity.
- **Ecosystems.** Rising average temperatures would subject plants and animals to greater thermal stress, causing some species to adapt or shift their ranges, while others may face extinction. Invasive species may also shift their ranges, threatening native species. Changing temperatures would also alter the timing of plant flowering and insect emergence, damaging species' ability to reproduce. Changing precipitation patterns would impact aquatic and riparian ecosystems by reducing snow pack, stream flow, and groundwater, while increasing the frequency of droughts, floods, and wildfires. As sea levels rise, some coastal habitats may be permanently flooded or eroded, and saltwater intrusion into freshwater resources may threaten terrestrial species. Changes in ocean circulation and temperature, ocean acidification, and increased runoff and sedimentation would threaten pelagic species. In sum, continued global warming would alter natural ecosystems and threaten California's biological diversity

Global, National, State, and Regional Contributions to GHG Emissions

Table 5.7-1 compares the magnitude of GHG emissions on the global, national, State, and regional (i.e., Los Angeles County) scales.

TABLE 5.7-1
COMPARISON OF WORLDWIDE GHG EMISSIONS

Area and Data Year	Annual GHG Emissions ($MMTCO_2e$)
World (2012)	46,049
United States (2014)	6,870
California (2014)	441.5
Los Angeles County, Unincorporated (2013)	5.6
$MMTCO_2e$: million metric tons of carbon dioxide equivalent Source: WRI 2015; USEPA 2016; CARB 2016a; LACDRP 2014a.	

The U.S. contributes approximately 14.5 percent of worldwide GHG emissions per year; California contributes approximately 1.0 percent; and the unincorporated portion of the County contributes approximately 0.01 percent. The most common GHG is CO_2, which constitutes approximately 84 to 85 percent of all GHG emissions in the U.S. and California. The primary contributors to California GHG emissions are (1) transportation; (2) electric power production from both in-state and out-of-state sources; and (3) industrial uses.

1992 NorthLake Specific Plan Environmental Impact Report

The 1992 NorthLake Specific Plan EIR (1992 SP EIR) did not include a GHG emissions analysis. Therefore, no specific greenhouse gas emission impacts or mitigation measures relevant to greenhouse gas emissions were previously identified.

2012 Santa Clarita Valley Area Plan Environmental Impact Report

The following summary reflects the Global Climate Change impacts analysis from the 2012 Santa Clarita Valley Area Plan (SCVAP), also known as the One Valley One Vision (OVOV) Plan EIR (which is incorporated by reference), and is included as background information to provide context for the scope of this SEIR analysis. The climate change summary presented here is from pages 3.4-1 through 3.4-139 of the 2012 SCVAP Draft EIR. Adopted mitigation measures from the 2012 SCVAP relevant to global climate change issues are included below in 5.7.7 and are implemented through project design features.

The following relevant global climate change impacts were identified in the 2012 SCVAP EIR:

The goals, objectives, and policies of the One Valley One Vision (OVOV) project would be consistent with the AB 32 Climate Change Scoping Plan and the measures and strategies recommended by CARB. In addition to demonstrating consistency with these measures and strategies, the OVOV project would achieve real and quantifiable reductions in GHG emissions from business as usual (BAU) conditions so that it would not impede or conflict with the State's goal outlined in AB 32—that is, achieving 1990 levels of GHG emissions by 2020.

The 2012 SCVAP would be consistent with the following plans and policies adopted for the purpose of reducing GHG emissions:

- California 2006 Climate Action Team Report recommended measures.
- California Office of Planning and Research (OPR) suggested measures.
- California Attorney General's Recommended General Plan Mitigation Measures

The 2012 SCVAP policies are designed to directly and indirectly reduce greenhouse gas emissions, and to sequester carbon dioxide. Implementation of these policies would reduce potential Area Plan air quality impacts under this criterion. However, given the level of the calculated increase in GHG emissions from existing conditions, impacts are considered potentially significant.

The existing General Plan and the OVOV General Plan and Area Plan incorporate goals, objectives and policies that would reduce GHG emissions through effective land use planning, or in the case of OVOV, implementation of Greenhouse Gas policies that would further reduce impacts. However, both Plans would potentially increase the level of GHG emissions from existing conditions by substantial margins. As a result, impacts are considered potentially significant.

Based on the quantitative GHG analysis, the OVOV proposed Area Plan and General Plan could potentially impede or conflict with the State's goal of meeting AB 32 given the increase in GHG emissions. However, the OVOV proposed Area Plan and General Plan would be consistent with project design features and mitigation measures recommended by CARB, OPR, the California Climate Action Team, and the Office of the Attorney General, and would achieve reductions in GHG emissions from business-as-usual conditions. Nonetheless, the project would result in a potentially significant impact on global climate change.

5.7.3 EXISTING CONDITIONS

The Project site is currently undeveloped except for the Northlake Hills Elementary School, some sections of Ridge Route Road, and a water tank. Existing GHG emissions from the Northlake Hills Elementary School are not quantified because the school is not a part of the Project and is not included in the analysis of total project emissions. Therefore, the existing conditions baseline GHG emissions are zero.

5.7.4 RELEVANT PLANS, POLICIES, AND REGULATIONS

Federal

U.S. Environmental Protection Agency Findings

On December 7, 2009, the U.S. Environmental Protection Agency (USEPA) Administrator signed two distinct findings regarding GHGs under section 202(a) of the Clean Air Act. The findings state:

- **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases—carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)—in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, this action is a prerequisite to finalizing the USEPA's proposed greenhouse gas emission standards for light-duty vehicles (USEPA 2010a).

Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards

The USEPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) have been working together on developing a National Program of regulations to reduce GHG emissions and to improve the fuel economy of light-duty vehicles. On April 1, 2010, the USEPA and NHTSA announced a joint Final Rulemaking establishing standards for 2012 through 2016 model year vehicles. This was followed up on October 15, 2012, when the agencies issued a Final Rulemaking with standards for model years 2017 through 2025. The rules require these vehicles to meet an estimated combined average emissions level of 295 grams of CO_2 per mile by 2012, decreasing to 250 grams per mile by 2016, and finally to an average industry fleet-wide level of 163 grams per mile in model year 2025. The 2016 standard is equivalent to 35.5 miles per gallon (mpg) and the 2025 standard is equivalent to 54.5 mpg if the levels were achieved solely through improvements in fuel efficiency. The agencies expect, however, that a portion of these improvements will occur due to air conditioning technology improvements (i.e., they will leak less) and due to the use of alternative refrigerants, which would not contribute to fuel economy. These standards would cut GHG emissions by an estimated 2 billion metric tons and 4 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2017–2025). The combined USEPA GHG standards and NHTSA Corporate Average Fuel Economy (CAFE) standards resolve previously conflicting requirements under both federal programs and the standards of the State of California and other states that have adopted the California standards (USEPA 2010b; USEPA and NHTSA 2012).

State

California has adopted various administrative initiatives and also enacted a variety of legislation relating to climate change, much of which sets aggressive goals for GHG emissions reductions within the state. However, none of this legislation provides definitive direction regarding the treatment of climate change in environmental review documents prepared under CEQA. In particular, the amendments to the CEQA Guidelines do not require or suggest specific methodologies for performing an assessment or thresholds of significance, and do not specify GHG reduction mitigation measures. Instead, the CEQA amendments continue to rely on lead agencies to choose methodologies and make significance determinations based on substantial evidence, as discussed in further detail below (CNRA 2009a). In addition, no state agency has promulgated binding regulations for analyzing GHG emissions, determining their significance, or mitigating any significant effects in CEQA documents. Thus, lead agencies exercise their discretion determining how to analyze GHGs.

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 in California. There are numerous State plans, policies, regulations, and laws related to GHGs and global climate change. Following is a brief discussion of the plans, policies, and regulations most relevant to the Project (presented in approximate chronological order).

Clean Car Standards (Assembly Bill 1493)

Assembly Bill (AB) 1493, adopted September 2002, also known as Pavley I, requires the development and adoption of regulations to achieve the maximum feasible reduction of GHGs emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the State. Although setting emissions standards on automobiles is solely the responsibility of the USEPA, the Federal Clean Air Act allows California to set State-specific emission standards on automobiles if the State first obtains a waiver from the USEPA.

The USEPA granted California that waiver on July 1, 2009. The emission standards become increasingly more stringent through the 2016 model year. California is also committed to further strengthening these standards beginning in 2017 to obtain a 45 percent GHG reduction from 2020 model year vehicles (CARB 2009).

Executive Order S-3-05

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05, which proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce snowpack in the Sierra Nevada Mountains; could further exacerbate California's air quality problems; and could potentially cause a rise in sea levels. In an effort to avoid or reduce the impacts of climate change, Executive Order S-3-05 calls for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

The California Global Warming Solutions Act of 2006 (Assembly Bill 32)

The California Legislature adopted the public policy position that global warming is "a serious threat to the economic well-being, public health, natural resources, and the environment of California" (*California Health and Safety Code,* Section 38501). Further, the State Legislature has determined that:

> the potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra Nevada snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious disease, asthma, and other human health-related problems.

The State Legislature also states that:

> Global warming will have detrimental effects on some of California's largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry. It will also increase the strain on electricity supplies necessary to meet the demand for summer air-conditioning in the hottest parts of the State (*California Health and Safety Code,* Section 38501).

These public policy statements became law with the enactment of AB 32, the California Global Warming Solutions Act of 2006, signed by Governor Arnold Schwarzenegger in September 2006. AB 32 is now codified as Sections 38500 through 38599 of the *California Health and Safety Code.*

AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction is to be accomplished through an enforceable statewide cap on GHG emissions to be phased in starting in 2012. AB 32 directs CARB to establish this statewide cap based on 1990 GHG emissions levels; to disclose how it arrived at the cap; to institute a schedule to meet the emissions cap; and to develop tracking, reporting, and enforcement mechanisms. Emissions reductions under AB 32 are to include carbon sequestration projects and best management practices that are technologically feasible and cost effective. As of the date of this Draft SEIR, CARB has not promulgated GHG emissions or reporting standards that are directly applicable to the Project.

Senate Bill 97 and Amendments to the California Environmental Quality Act Guidelines

Senate Bill (SB) 97 directed the California Natural Resources Agency (CNRA) to adopt amendments to the California Environmental Quality Act (CEQA) Guidelines that require evaluation of GHG emissions or the effects of GHG emissions by January 1, 2010. The CNRA has done so, and the amendments to the CEQA Guidelines, in a new Section 15064.4, entitled Determining the Significance of Impacts from Greenhouse Gas Emissions, provide that:

a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of greenhouse gas emissions resulting from a project.

b) A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:

    1) The extent to which the project may increase or reduce greenhouse gas 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 greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions.

The amendments also add a new Section 15126.4(c), Mitigation Measures Related to Greenhouse Gas Emissions. Generally, this State CEQA Guidelines section requires lead agencies to consider feasible means—supported by substantial evidence and subject to monitoring or reporting—of mitigating the significant effects of GHG emissions. Potential measures to mitigate the significant effects of GHG emissions are identified, including those outlined in Appendix F, Energy Conservation, of the State CEQA Guidelines.

California Air Resources Board Scoping Plan

In 2008, CARB approved a *Climate Change Scoping Plan* as required by AB 32. The *Climate Change Scoping Plan* proposes 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 *Climate Change Scoping Plan* has a range of GHG reduction actions which include 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 regulation to fund the program.

The *Climate Change Scoping Plan* calls for a "coordinated set of solutions" to address all major categories of GHG emissions. Transportation emissions will be addressed through a combination of higher standards for vehicle fuel economy; implementation of the Low Carbon Fuel Standard (LCFS); and greater consideration for reducing trip length and generation through land use planning and transit-oriented development. Buildings, land use, and industrial operations will be encouraged and, sometimes, required to use energy more efficiently. Utility energy supplies will

change to include more renewable energy sources through implementation of the Renewables Portfolio Standard. This will be complemented with emphasis on local generation, including rooftop photovoltaics and solar hot water installations. Additionally, the *Climate Change Scoping Plan* emphasizes 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" (CARB 2008).

The *Climate Change Scoping Plan* identifies a number of specific issues relevant to the Project, including those listed below:

- The potential of using the green building framework as a mechanism that could enable GHG emissions reductions in other sectors (e.g., electricity, natural gas), noting that green buildings "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 increasing the supply and utilization of green power and lower carbon intensity energy sources. Broadly defined, this includes implementation of the utility-based Renewables Portfolio Standard (RPS), which requires that, by 2017, 20 percent of the available energy supplies are from renewable energy sources, such as use of solar hot water heating; support for the Million Solar Roofs Program; and increased use of combined heat and power.
- 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 $^{1}/_{5}$ of statewide electricity.
- Encouragement of local governments to set quantifiable emissions 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.

First Update to the Climate Change Scoping Plan

In 2014, CARB approved the First Update to the Climate Change Scoping Plan (First Update or 2013 Update) (CARB 2014). The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments; defines CARB's climate change priorities for the next five years; and sets the groundwork to reach California's long-term climate goals set forth in Executive Order S-3-05 (CARB 2014).

The First Update states that California is on-track to meet the near-term 2020 GHG limit and is well-positioned to maintain and continue reductions beyond 2020 as required by AB 32. The set of actions the State is taking is driving down greenhouse emissions and moving the State steadily in the direction of a cleaner energy economy.

The First Update identifies nine sectors and corresponding sector-specific actions. The sectors are energy; transportation, land use fuels, and infrastructure; agriculture; water; waste management; natural and working lands; short-lived climate pollutants; green buildings; and cap-and-trade regulation.

As previously discussed, in the 2008 Scoping Plan, CARB established the 1990 Statewide GHG emissions level, which is also the 2020 GHG emissions target at 427 million metric tons of carbon dioxide equivalent ($MMTCO_2e$) and forecasted 2020 business-as-usual (BAU) emissions to be 596 $MMTCO_2e$. Based on new information and analysis, the First Update recalculated the 2020 BAU condition at 509 $MMTCO_2e$ and the 1990 emissions level at 431 $MMTCO_2e$.[1] Thus, under the First Update, achieving the recalculated 1990 emissions level of 431 $MMTCO_2e$ will require a reduction of 78 $MMTCO_2e$ or approximately a 15.3 percent reduction (compared to a 28.5 percent reduction as set forth in the 2008 Scoping Plan). Table 5.7-2 shows the expected reductions to meet the 2020 emissions target.

TABLE 5.7-2
MEETING THE 2020 EMISSIONS TARGET

Category	2020 ($MMTCO_2e$)
AB 32 Baseline 2020 Forecast Emissions (2020 BAU)	509
Expected Reductions from Sector-Based Measures	
Energy	25
Transportation	23
High-GWP	5
Waste	2
Cap-and-Trade Reductions	23*
2020 Limit	431

$MMTCO_2e$: million metric tons of carbon dioxide equivalent; AB: Assembly Bill; BAU: business as usual; GWP: global warming potential.

* Cap-and-Trade emission reductions depend on the emission forecast

Source: CARB 2014.

As shown in Table 5.7-2, the cap-and-trade reduction is flexible. The estimated emission reductions attributed to the Cap-and-Trade Program depend on the emissions forecast. For example, if the emissions forecast increases, the reductions associated with the Cap-and-Trade Program will increase.

Second Update to the Climate Change Scoping Plan

CARB is moving forward with a second update to the Scoping Plan to reflect the 2030 target established in Executive Order B-30-15, discussed below. Following a series of public workshops, the *2030 Target Scoping Plan Concept Paper*, was published for public review and comment in June 2016 (CARB 2016b). A Draft Scoping Plan for public review and comment will be published in the Fall of 2016. The first Board hearing on the Draft Scoping Plan is planned for November 2016, with a second Board hearing planned for Spring 2017.

Senate Bill 375

Signed September 30, 2008, SB 375 provides for a new planning process to coordinate land use planning and regional transportation plans and funding priorities in order to help California meet the GHG reduction goals established in AB 32. SB 375 requires Metropolitan Planning Organizations, including the Southern California Association of Governments (SCAG), to incorporate a Sustainable Communities Strategy (SCS) in their regional transportation plans that will achieve GHG emission reduction targets set by CARB. There are two mutually important

1 In 2013, CARB revised GHG calculations to use the GWP values from the IPCC Fourth Assessment Report (AR4). Previous calculations used the GWPs from the Second Assessment Report (SAR).

facets to SB 375: reducing vehicle miles traveled (VMT) and encouraging more compact, complete, and efficient communities for the future. SB 375 also includes provisions for exemptions from or streamlined CEQA review for projects classified as transit priority projects (SCAG 2012).

Renewable Portfolio Standards (SB 1078, SB 107 and SBX1-2)

Established in 2002 under SB 1078, and accelerated in 2006 under SB 107 and again in 2011 under SBX1-2, California's Renewable Portfolio Standards (RPS) requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020 (SB 1078, SB 1368, AIR). The 33 percent standard is consistent with the RPS goal established in the Scoping Plan (CARB 2008). As interim measures, the RPS requires 20 percent of retail sales to be sourced from renewable energy by 2013, and 25 percent by 2016. Initially, the RPS provisions applied to investor-owned utilities, community choice aggregators, and electric service providers. SBX1-2 added, for the first time, publicly owned utilities to the entities subject to RPS.

Executive Order B-30-15 (Statewide Interim GHG Targets)

California EO B-30-15 (April 29, 2015) set an "interim" statewide emission target to reduce greenhouse emissions to 40 percent below 1990 levels by 2030, and directed state agencies with jurisdiction over greenhouse gas emissions to implement measures pursuant to statutory authority to achieve this 2030 target and the 2050 target of 80 percent below 1990 levels. Specifically, the Executive Order directed CARB to update the Scoping Plan to express this 2030 target in metric tons.

Title 24, Part 6, Energy Efficiency Standards

The Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24, Part 6 of the *California Code of Regulations* [CCR]) were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The California Energy Commission (CEC) adopted the 2008 changes to the Building Energy Efficiency Standards in order to (1) "Provide California with an adequate, reasonably-priced, and environmentally-sound supply of energy" and (2) "Respond to Assembly Bill 32, the Global Warming Solutions Act of 2006, which mandates that California must reduce its greenhouse gas emissions to 1990 levels by 2020". Title 24 Part 6 of the 2013 California Building Standards Code, the 2013 California Energy Code, went into effect on July 1, 2014, and includes energy efficiency updates. The 2016 California Energy Code was published on July 1, 2016, and became effective as of January 1, 2017 (CBSC 2016).

Title 24, Part 11, Green Building Standards

The California Green Building Standards Code (24 CCR Part 11) is a code with mandatory requirements for new residential and nonresidential buildings (including buildings for retail, office, public schools and hospitals) throughout California. The code is Part 11 of the California Building Standards Code in Title 24 of the *California Code of Regulations,* and is also known as the CALGreen Code (CBSC 2015).

The development of the CALGreen Code is intended to (1) cause a reduction in greenhouse gas emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. In short, the code is established to reduce construction waste, make buildings more efficient in the use of materials and energy, and reduce environmental impact during and after construction.

The CALGreen Code contains requirements for construction site selection; storm water control during construction; construction waste reduction; indoor water use reduction; material selection; natural resource conservation; site irrigation conservation; and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency.

The CALGreen Code provides standards for bicycle parking, carpool/vanpool/electric vehicle spaces, light and glare reduction, grading and paving, energy efficient appliances, renewable energy, graywater systems, water efficient plumbing fixtures, recycling and recycled materials, pollutant controls (including moisture control and indoor air quality), acoustical controls, storm water management, building design, insulation, flooring, and framing, among others. Implementation of the CALGreen Code measures reduces energy consumption and vehicle trips and encourages the use of alternative-fuel vehicles, which reduces pollutant emissions.

Beyond the mandatory standards, the CALGreen Code specifies voluntary measures for energy and water efficiency, material conservation, and other design features. The levels of participation are classified as Tier 1 and Tier 2. An example of Tier 1 requirements is 15 percent less energy use in residential construction than required by existing regulations. Tier 2 requires 30 percent less energy use in residential construction.

The current applicable 2013 Code was effective January 1, 2014, and supplements were effective July 1, 2015. The 2016 CALGreen Code became effective January 1, 2017 (CBSC 2016).

Clean Cars

In January 2012, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model year 2017 through 2025. The program combines the control of smog, soot and GHGs with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, the new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions. The program also requires car manufacturers to offer for sale an increasing number of zero-emission vehicles (ZEVs) each year, including battery electric, fuel cell, and plug-in hybrid electric vehicles.

In December 2012, CARB adopted regulations allowing car manufacturers to comply with California's GHG emissions requirements for model years 2017-2025 through compliance with the EPA GHG requirements for those same model years (CARB 2012).

Senate Bill 350

SB 350, signed October 7, 2015, is the *Clean Energy and Pollution Reduction Act of 2015*. SB 350 implements some of the goals of EO B-30-15. The objectives of SB 350 are as follows:

(1) To increase from 33 percent to 50 percent, the procurement of our electricity from renewable sources.

(2) To double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation (California Legislative Information 2016a).

The text of SB 350 sets a December 31, 2030, target for 50 percent of electricity to be generated from renewable sources. The California Public Utilities Commission and the California Energy Commission are responsible for implementing the Renewables Portfolio Standard set for by SB

350. California Public Utilities Code 399.15 (b)(2)(B) defines interim targets for achieving 50 percent renewable energy procurement by 2030. The interim targets are:

(1) 40 percent by December 31, 2024; and

(2) 45 percent by December 31, 2027;

Senate Bill X7-7 (Water Conservation Act of 2009)

The Water Conservation Act of 2009 sets an overall goal of reducing per-capita urban water use by 20 percent by December 31, 2020. The state is required to make incremental progress toward this goal by reducing per-capita water use by at least 10 percent by December 31, 2015. This is an implementing measure of the Water Sector of the AB 32 Scoping Plan. Reduction in water consumption directly reduces the energy necessary and the associated emissions to convene, treat, and distribute the water; it also reduces emissions from wastewater treatment.

The Department of Water Resources adopted a regulation on February 16, 2011 that sets forth criteria and methods for exclusion of industrial process water from the calculation of gross water use for purposes of urban water management planning. The regulation would apply to all urban retail water suppliers required to submit an Urban Water Management Plan, as set forth in the Water Code, Division 6, Part 2.6, Sections 10617 and 10620.

Senate Bill 32 and Assembly Bill 197

On September 8, 2016, the Governor signed SB 32 to implement the GHG reduction goals of EO B-30-15. Under SB 32, in "adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions," CARB must ensure that statewide greenhouse gas emissions are reduced to 40 percent below the 1990 level by 2030. SB 32's findings state that CARB will “achieve the state’s more stringent greenhouse gas emission reductions in a manner that benefits the state’s most disadvantaged communities and is transparent and accountable to the public and the Legislature.” This goal is expected to keep the State on track to meeting the goal set by EO S-3-05 of reducing GHG emissions by 80 percent below 1990 levels by 2050 (California Legislative Information 2016b).

AB 197 was signed at the same time and will make sure that the SB 32 goals are met by requiring CARB to provide annual reports of GHGs, criteria pollutants, and TACs by facility, City and subcounty level, and sector for stationary sources and at the County level for mobile sources. It also requires the CARB to prioritize specified emission reduction rules and regulations and to identify specified information for emission reduction measures (e.g., alternative compliance mechanism, market-based compliance mechanism, and potential monetary and nonmonetary incentive) when updating the Scoping Plan (California Legislative Information 2016c).

California Air Pollution Control Officers Association

The California Air Pollution Control Officers Association (CAPCOA) is the association of Air Pollution Control Officers representing all 35 local air quality agencies throughout California. CAPCOA is not a regulatory body, but has been an active organization in providing guidance in addressing the CEQA significance of GHG emissions and climate change as well as other air quality issues.

The August 2010 CAPCOA publication, *Quantifying Greenhouse Gas Mitigation Measures, A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures* provides guidance on the quantification of project-level mitigation of GHGs associated with land use, transportation, energy use, and other related project areas (CAPCOA 2010). The

guidance includes detailed procedures about the approaches to assessing and calculating the GHG emissions reductions associated with project design features and mitigation measures. This publication's methods are used to calculate GHG emissions reductions for some mitigation measures in the CalEEMod computer model.

Regional

Southern California Association of Governments

As previously discussed, SB 375 specifically required MPOs, including SCAG, to incorporate an SCS in their RTPs that will achieve GHG emission reduction targets set by CARB. SCAG's first-ever SCS is included in its *2012–2035 Regional Transportation Plan Sustainable Communities Strategy* (RTP/SCS). In June 2012, CARB accepted SCAG's determination that the 2012–2035 RTP/SCS would meet the region's GHG reduction target. SCAG's SCS is now included in its 2016–2040 RTP/SCS that was adopted by SCAG on April 7, 2016. The goals and policies of the RTP/SCS that reduce VMT focus on transportation and land use planning that include building infill projects; locating residents closer to where they work and play; and designing communities so there is access to high-quality transit service. The 2016–2040 RTP/SCS is expected to reduce per capita transportation emissions by 8 percent by 2020 and by 18 percent by 2035 (SCAG 2016). On June 28, 2016, CARB accepted SCAG's determination that the Final RTP/SCS would meet the region's GHG reduction target.

South Coast Air Quality Management District

The Project site lies within the boundaries of the SCAQMD. The SCAQMD is bound by the Ventura County/Los Angeles County border to the northwest, the Mojave Desert Air Basin to the north, the Riverside County border to the east and the San Diego County-Riverside County border the south.

The portion of the Project site under the jurisdiction of the SCAQMD lies within the South Coast Air Basin (SoCAB). The mission of the SCAQMD is to undertake all necessary steps to protect public health from air pollution, with sensitivity to the impacts of its actions on the community and businesses through a comprehensive program of planning, regulation, compliance assistance, enforcement, monitoring, technology advancement, and public education (SCAQMD 2015).

Beginning in April 2008, the SCAQMD convened a Working Group to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. The Working Group is scheduled to meet once per month. On December 5, 2008, the SCAQMD Governing Board adopted its staff proposal for an interim CEQA GHG significance threshold of 10,000 metric tons of CO_2 equivalent per year ($MTCO_2e$/yr) for industrial projects where the SCAQMD is the lead agency. The policy objective for establishing this significance threshold is to capture projects that represent approximately 90 percent of GHG emissions from new sources and to avoid EIR-level analysis for relatively small impacts (SCAQMD 2008).

In September 2010, the Working Group proposed extending the 10,000 $MTCO_2e$/yr screening threshold currently applicable to industrial projects where the SCAQMD is the lead agency, described above, to other lead agency industrial projects. For all other projects, SCAQMD staff proposed a multiple tier analysis to determine the appropriate threshold to be used. The draft proposal suggests the following tiers: Tier 1 is any applicable CEQA exemptions, Tier 2 is consistency with a GHG reduction plan, Tier 3 is a screening value or bright line, Tier 4 is a performance based standard, and Tier 5 is GHG mitigation offsets. According to the presentation given at the September 28, 2010 Working Group meeting, SCAQMD staff proposed a Tier 3 draft threshold of 1,400 to 3,500 $MTCO_2e$/year depending on if the project was commercial, mixed use

or residential. For the Tier 4 draft threshold, SCAQMD staff presented a percent emission reduction target option but did not provide any specific recommendation for a percent emission reduction target; instead it referenced the San Joaquin Valley Air Pollution Control District (SJVAPCD) approach. The percent reduction target is based on consistency with AB 32 as it was based on the same numeric reductions calculated in the Scoping Plan to reach 1990 levels by 2020. The second Tier 4 option is to assess the early implementation of applicable AB 32 scoping plan measures. The third Tier 4 option is to utilize an efficiency target for 2020 of 4.8 $MTCO_2e$ per year per service population (SP) for project level thresholds where SP is project residents plus employees and 6.6 $MTCO_2e$ per year per SP for plan-level threshold (SCAQMD 2010). The Working Group has not convened since the fall of 2010. As of March 2017, the proposal has not been considered or approved for use by the SCAQMD Board.

Local

Countywide Energy and Environmental Policy

The Countywide Energy and Environmental Policy (Policy) was adopted by the Los Angeles County Board of Supervisors on January 16, 2007 to provide guidelines for the development and enhancement of energy conservation and environmental programs within County departments. The Policy was also the County's response for the need for energy conservation and reduction in GHG emissions. It directs the County to track its GHG emissions with the California Climate Action Registry, and to reduce its facilities' energy consumption by 20 percent by the year 2015. Under this policy, the Los Angeles County Energy Program (LACEP) provides financing for energy efficiency or solar improvements, and the County's Capital Project Program requires all new County buildings (i.e., greater than 10,000 square feet) to be Leadership in Energy and Environmental Design (LEED™) Certified at the Silver Level (CCAR 2009).

Additionally, the County has pledged to be a "Cool County" by establishing a GHG emissions footprint; developing a GHG mitigation plan; working with local entities to reduce regional GHGs by 80 percent by 2050; and supporting federal legislation to raise CAFE standards. In addition, the County has implemented various internal programs on energy conservation; water conservation; waste reduction and recycling; green purchasing and contracting; and alternative fuel vehicle purchasing. On January 13, 2009, the County created an action plan for developing a Comprehensive Renewable Energy Program to develop renewable energy projects on existing County facilities and properties.

Los Angeles County Green Building Standards Code (Title 31)

In November 2013, the Board of Supervisors adopted the Los Angeles County Green Building Standards Code (Title 31) in response to the mandates set forth in the CALGreen Code (2010 Green Building Standards Code). Title 31 became effective on January 1, 2014. Title 22 (Planning and Zoning Code) Green Building and Drought Tolerant Landscaping requirements are now found in Title 31. The purpose of Title 31 is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts that have a reduced negative impact, or positive environmental impact, and that encourage sustainable construction practices in planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental air quality (Title 31 of the Los Angeles County Code). Notably, Title 31 requires non-residential buildings that are equal to greater than 25,000 square feet (sf) to comply with the CALGreen Code (specifically, Section A5.601.2.4, Voluntary measures for CALGreen Tier 1). These measures include, but are not limited to requirements for energy efficiency, parking for fuel-efficient vehicles, cool roofs, reduction of indoor potable water use, recycled content of construction materials, reduction in construction and demolition waste, and thermal insulation (DRP 2016a).

The County's drought-tolerant landscaping requirements establish minimum standards for the design and installation of landscaping using drought-tolerant plants and native plants that require minimal use of water. These requirements include the following: (1) a minimum of 75 percent of total landscaped area must utilize non-invasive drought-tolerant plant and tree species appropriate for the climate zone region; (2) a maximum of 25 percent of landscaped areas may be turf grass; and (3) hydrozoning irrigation techniques shall be incorporated into the landscape design. Title 31 also establishes development standards for new construction that would conserve water, energy, and natural resources; divert waste from landfills; minimize impacts to existing infrastructure; and promote a healthier environment (County of Los Angeles County 2016a)

Los Angeles County Tree Planting Ordinance (Title 22)

On March 29, 2016, the Board of Supervisors adopted the Tree Planting Ordinance that does the following (DRP 2016b):

- Amended Title 22 (Planning and Zoning) of the Los Angeles County Code ("County Code") to establish tree planting requirements for new projects and
- Amended Title 21 (Subdivisions) and Title 22 (Planning and Zoning) of the County Code to repeal drought tolerant landscaping and green building requirements that are now found in Title 31.

The Tree Planting Ordinance, effective April 28, 2016, includes the following requirements:

a. For projects that are primarily residential with 3 or fewer units per lot, a minimum of 2 trees shall be planted on each lot;
b. For projects that are primarily residential with 4 or more units per lot, a minimum of 1 tree shall be planted for every 5,000 square feet of building footprint per lot; and
c. For projects that are nonresidential or mixed-use, a minimum of 3 trees shall be planted for every 10,000 square feet of developed lot area.

Trees planted must (1) provide adequate shade; (2) be resistant to local pests and diseases; (3) be non-invasive species; and (4) be appropriate for the planting location (DRP 2016).

Los Angeles County Community Climate Action Plan

The *Final Unincorporated Los Angeles County Community Climate Action Plan 2020* (CCAP) is part of the County General Plan and was adopted along with the General Plan on October 6, 2015. The County acknowledges the consensus among leading scientists that without action to reduce GHG emissions, climate change due to global warming will pose a considerable threat to the environment and to human health and society (LACDRP 2015b).

To reduce the impacts of climate change, the CCAP sets a target to reduce GHG emissions from community activities in the unincorporated areas of Los Angeles County by at least 11% below 2010 levels by 2020. The CCAP describes the County's plan for achieving this goal, including specific strategy areas for each of the major emissions sectors, and provides details on the 2010 and projected 2020 emissions in the unincorporated areas. The actions in the CCAP are priority actions and intended for near-term implementation, such that the County can achieve its GHG reduction goal for 2020 for the unincorporated areas of Los Angeles County.

The CCAP includes 26 local actions to reduced GHG emissions and are grouped into the following five strategy areas:

- Green Building and Energy;
- Land Use and Transportation;
- Water Conservation and Wastewater;
- Waste Reduction, Reuse, and Recycling; and
- Land Conservation and Tree Planting.

The County considers many of the local actions to be cost effective, particularly in the green building and energy strategy area. In addition to reducing GHG emissions, all local actions have many co-benefits, such as improved public health, improved air quality, energy savings, increased mobility, and enhanced community well-being.

CEQA guidelines specify that CEQA project evaluation of GHG emissions can "tier off" a programmatic analysis of GHG emissions, provided that the programmatic analysis (or climate action plan) meets the following requirements specified in CEQA Guidelines Section 15183.5.

- Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area.
- Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable.
- Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area.
- Specify measures or a group of measures, including performance standards that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level.
- Monitor the plan's progress.

Adopt the GHG Reduction Strategy in a public process following environmental review.

The CCAP meets CEQA Guidelines Section 15183.5 listed above by: (1) quantifying all primary sectors of GHG emissions within the unincorporated areas for 2010 and 2020; (2) including a reduction target of at least 11 percent below 2010 levels, which is consistent with the recommendations in the AB 32 Scoping Plan for municipalities to support the overall AB 32 reduction targets; (3) analyzing community emissions for the unincorporated areas as a whole and including predicted growth expected by 2020; (4) including specific measures to achieve the overall reduction target; (5) including periodic monitoring of plan progress; and (6) submitting the CCAP to be adopted in a public process following compliance with CEQA. Therefore, project-specific environmental documents that incorporate applicable CCAP actions can "tier off" the Environmental Impact Report (EIR) certified for the County General Plan and CCAP to meet project-level CEQA evaluation requirements for GHG emissions. The CCAP states that projects that demonstrate consistency with applicable CCAP actions can be determined to have a less than significant cumulative impact on GHG emissions and climate change (notwithstanding substantial evidence that warrants a more detailed review of project-level GHG emissions).

Los Angeles County General Plan

Land Use Element

- **Policy LU 11.1**: Encourage new development to employ sustainable energy practices, such as utilizing passive solar techniques and/or active solar technologies.
- **Policy LU 11.2**: Support the design of developments that provide substantial tree canopy cover, and utilize light-colored paving materials and energy-efficient roofing materials to reduce the urban heat island effect.
- **Policy LU 11.3**: Encourage development to optimize the solar orientation of buildings to maximize passive and active solar design techniques.
- **Policy LU 11.4**: Encourage subdivisions to utilize sustainable design practices, such as maximizing energy efficiency through lot configuration; preventing habitat fragmentation; promoting stormwater retention; promoting the localized production of energy; promoting water conservation and reuse; maximizing interconnectivity; and utilizing public transit.

Air Quality Element

- **Policy AQ 3.4**: Participate in local, regional and state programs to reduce greenhouse gas emissions.
- **Policy AQ 3.5**: Encourage energy conservation in new development and municipal operations.
- **Policy AQ 3.6**: Support rooftop solar facilities on new and existing buildings.

Santa Clarita Valley Area Plan

Conservation and Open Space Element

- **Policy CO-4.1.5:** Promote the use of low-flow and/or waterless plumbing fixtures and appliances in all new non-residential development and residential development of five or more dwelling units.
- **Policy CO-8.2.5:** Support installation of photovoltaic and other renewable energy equipment on public facilities, in concert with significant energy conservation efforts.
- **Policy CO-8.2.6:** Promote use of solar lighting in parks and along paseos and trails, where practical.
- **Policy CO-8.2.7:** Support the use of sustainable alternative fuel vehicles for machinery and fleets, where practical, by evaluating fuel sources, manufacturing processes, maintenance costs, and vehicle lifetime use.
- **Policy CO-8.2.9:** Reduce heat islands through installation of trees to shade parking lots and hardscapes, and use of light-colored reflective paving and roofing surfaces.
- **Policy CO-8.2.10:** Support installation of energy-efficient traffic control devices, street lights, and parking lot lights.
- **Policy CO-8.2.11:** Implement recycling in all public buildings, parks, and public facilities, including for special events.
- **Policy CO-8.2.13:** Support trip reduction strategies for employees as described in the Circulation Element.

- **Policy CO-8.3.1:** Evaluate development proposals for consistency with the ordinances developed through the County's Green Building Program.
- **Policy CO-8.3.2:** Promote construction of energy efficient buildings through the certification requirements of the ordinances developed through the County's Green Building Program.
- **Policy CO-8.3.4:** Encourage new residential development to include on-site solar photovoltaic systems, or pre-wiring, in at least 50% of the residential units, in concert with other significant energy conservation efforts.
- **Policy CO-8.3.5:** Encourage on-site solar generation of electricity in new retail and office commercial buildings and associated parking lots, carports, and garages, in concert with significant energy conservation efforts.
- **Policy CO-8.3.6:** Require new development to use passive solar heating and cooling techniques in building design and construction, which may include but are not be limited to building orientation, clerestory windows, skylights, placement and type of windows, overhangs to shade doors and windows, and use of light colored roofs, shade trees, and paving materials.
- **Policy CO-8.3.7:** Encourage the use of trees and landscaping to reduce heating and cooling energy loads, through shading of buildings and parking lots.
- **Policy CO-8.3.8:** Encourage energy-conserving heating and cooling systems and appliances, and energy-efficiency in windows and insulation, in all new construction.
- **Policy CO-8.3.12:** Reduce extensive heat gain from paved surfaces through development standards wherever feasible.
- **Policy CO-8.4.4:** Promote commercial and industrial recycling, including recycling of construction and demolition debris.
- **Policy CO-8.4.5:** Develop and implement standards for refuse and recycling receptacles and enclosures to accommodate recycling in all development.
- **Policy CO-8.4.6:** Introduce and assist with the placement of receptacles for recyclable products in public places, including at special events.
- **Policy CO-8.4.7:** Provide information to the public on recycling opportunities and facilities, and support various locations and events to promote public participation in recycling.

5.7.5 THRESHOLD CRITERIA

Thresholds Addressed in this Supplemental Environmental Impact Report

Until the passage of AB 32, CEQA documents generally did not evaluate GHG emissions or impacts on global climate change. Rather, the primary focus of air pollutant analysis in CEQA documents was the emission of criteria pollutants, or those identified in the California and federal Clean Air Acts as being of most concern to the public and government agencies (e.g., toxic air contaminants). With the passage of AB 32 and SB 97, CEQA documents now contain a more detailed analysis of GHG emissions. However, the analysis of GHGs is different from the analysis of criteria pollutants. Since the half-life of CO2 is approximately 100 years, GHGs affect the global climate over a relatively long timeframe. Conversely, for criteria pollutants, significance thresholds/impacts are based on daily emissions; and the determination of attainment or non-attainment are based on the exceedance of applicable ambient air quality standards (e.g., 1-hour and 8-hour exposures). Also, the scope of criteria pollutant impacts is local and regional, while the scope of GHG impacts is global.

CEQA Guidelines

The amendments add no additional substantive requirements; rather, the Guidelines merely assist lead agencies in complying with CEQA's existing requirements. Modifications address those issues where analysis of GHG emissions may differ in some respects from more traditional CEQA analysis. Other modifications clarify existing law that may apply both to an analysis of GHG emissions as well as more traditional CEQA analyses.

Section 15064.4 of the CEQA Guidelines was adopted to assist lead agencies in determining the significance of the impacts of GHGs. Consistent with developing practice, this section urges lead agencies to quantify GHG emissions of projects where possible and includes language necessary to avoid an implication that a "life-cycle" analysis is required. In addition to quantification, this section recommends consideration of several other qualitative factors that may be used in the determination of significance (i.e., extent to which the project may increase or reduce GHG emissions; 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).

Section 15064.4 does not establish a threshold of significance. Lead agencies are called on to establish significance thresholds for their respective jurisdictions in which a lead agency may appropriately look to thresholds developed by other public agencies, or suggested by other experts, such as CAPCOA, so long as any threshold chosen is supported by substantial evidence [see CEQA Guidelines Section 15064.7(c)]. The CEQA Guidelines amendments also clarify that the effects of GHG emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impact analysis, as required by CEQA Guidelines Section 15130(f)).

Although GHG emissions can be quantified, CARB, SCAQMD and the County of Los Angeles, have yet to adopt quantitative project-level significance thresholds for GHG emissions that would be applicable to the Project. Rather, the County of Los Angeles utilizes an Initial Study Questionnaire with Thresholds of Significance specific to the County. The Initial Study for the proposed Project concludes that additional analysis of the following thresholds of significance is required in this Draft SEIR. The Project will be considered to have a significant effect related to greenhouse gas emissions if the Project would:

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

These criteria are consistent with the two questions relating to the effects of GHGs that were added to the CEQA Guidelines, Appendix G (Environmental Checklist) as a result of the amendments to the CEQA Guidelines.

As indicated above, the CEQA Guidelines were amended in response to Senate Bill 97. In particular, the CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction plan renders a cumulative impact less than significant.

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 plans [and] plans or regulations for the reduction of greenhouse gas emissions." Put another way, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with regulatory programs adopted for the purpose of reducing GHG emissions.

Executive Orders S-3-05 and B-30-15, SB 375, SCAG's 2016-2040 Sustainable Communities Strategy, CCAP and the Los Angeles County Green Building Standards Code all apply to the Project and are all intended to reduce GHG emissions to meet the statewide targets set forth in AB 32. Thus, in the absence of any adopted, quantitative threshold, the Project would not have a significant effect on the environment if it is found to be consistent with the applicable regulatory plans and policies to reduce GHG emissions: Executive Orders S-3-05 and B-30-15; SB 375; SCAG's 2016-2040 Sustainable Communities Strategy; CCAP; and the Los Angeles County Green Building Standards Code.

5.7.6 RELEVANT PROJECT CHARACTERISTICS

The proposed Project site is a mixed-use area that contains residential, recreational, retail, commercial, and industrial uses. In addition, the following project design features are proposed to be implemented as part of the Project:

- The Project will commit to the equivalent of installing 3-kilowatt (kW) solar panel systems on 50 percent of residential dwelling units;
- The Project will install 135 electric vehicle (EV) chargers[2] at non-residential parking spaces within the community;
- The Project will ensure that 100 percent of residences will be pre-wired for an EV charging station and that at least 10 percent of residences will have an EV charging station;
- The Project will feature the following Transportation Demand Management (TDM) measures, including:
    - Expanding the local transit network by adding existing transit service to enhance the service near the Project site;
    - Providing shuttles to major employment center;
    - Ensuring that pedestrian facilities, such as sidewalks, and community regional, and local trails are provided throughout the Project site;
    - Ensuring that roads with adjacent trails for pedestrian and bicycle use are provided throughout the Project site connecting the community;
    - Providing off-site pedestrian facility improvements connecting to existing elementary school;
    - Including land for the provision of off-site bicycle trails linking the facility to designated bicycle commuting routes;

2 Assumed to be Level 2 chargers that can provide enough electricity to provide a 25 mile driving range per hour spent charging.

- At least two of the following:
  - Constructing off-site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on-site improvements, such as bicycle paths;
  - Including bicycle parking facilities, such as bicycle lockers and racks;
  - Including showers for bicycling employees' use;
- At least two of the following:
  - Constructing off-site pedestrian facility improvements, such as overpasses, wider sidewalks;
  - Constructing on-site pedestrian facility improvements, such as building access which is physically separated from street and parking lot traffic and walk paths;
  - Including showers for pedestrian employees' use;
- Including traffic calming measures for on-site roadways and intersections.

5.7.7 ENVIRONMENTAL IMPACTS

As discussed above, CEQA guidelines specify that CEQA project evaluation of GHG emissions can "tier off" a programmatic analysis of GHG emissions, provided that the programmatic analysis (or climate action plan) meets requirements specified in CEQA Guidelines Section 15183.5. The CCAP meets those requirements. The CCAP states

> "Tiering from the General Plan EIR potentially eliminates the need to prepare a quantitative assessment of project level GHG emissions. Rather, project-specific environmental documents that rely on the CCAP can qualitatively evaluate GHG impacts by identifying all applicable CCAP actions and describing how those actions have been incorporated into the project design and/or identified as mitigation. This type of "tiered" analysis can reduce project costs and streamline the County permit process." And
>
> "projects that demonstrate consistency with applicable CCAP actions can be determined to have a less than significant cumulative impact on GHG emissions and climate change (notwithstanding substantial evidence that warrants a more detailed review of project-level GHG emissions)."

Therefore, the primary analysis of the Project's climate change/GHG emissions impact is the evaluation of consistency with the CCAP. While the CCAP consistency analysis is sufficient for a significance determination, this impact analysis also includes a quantitative disclosure of the Project's estimated GHG emissions and analysis of consistency with the GHG emissions-related goals and policies of the 2012 SCVAP and the SCAG 2016-2040 RTP/SCS.

Impact Analysis

Threshold 5.7a Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Indirect Greenhouse Gas Emissions

Indirect GHG emissions are emissions that are a result of activities at the Project, but occur at another location. Indirect GHG emissions from the Project are created as a result of electricity use in buildings, electricity used to convey, treat, and distribute water and wastewater, and emissions from waste that is disposed at a landfill. The following regulatory measures, incorporated in the Project's emissions inventory, reduce indirect GHG emissions:

- The CO_2e intensity for the Project will include a 45 percent Renewable Portfolio Standard interim goal for 2027 per California Public Utilities Code Section 399.15(b)(2)(B);
- The Project will meet CalRecycle's 2020 statewide goal of 75 percent solid waste diversion, by reducing, recycling, and composting all generated waste;
- Residential and non-residential buildings will meet the 2016 Title 24 part 6 building code;
- The Project will reduce potable water use levels through the use of water saving fixtures and or flow restrictors consistent with the California Green Building Code; and
- The Project will reduce outdoor water use by using water-efficient irrigation systems consistent with the California Green Building Code.

To further reduce indirect GHG emissions, the Project will implement the following project design features:

- The Project will commit to installing the equivalent of a 3-kilowatt (kW) solar panel system on 50 percent of residential dwelling units;

Details regarding the methodology for calculating indirect GHG emissions are included in Appendix G. Emissions are presented in Table 5.7-3.

Direct Greenhouse Gas Emissions

Direct GHG emissions are emissions that are released directly from the Project. This category includes emissions from area sources, natural gas for energy use, mobile sources, construction, vegetation loss, and planting of new trees. The emission sources are described in greater detail below.

Area Sources

Area source emissions consist of emissions from natural gas fireplaces and landscape maintenance equipment. Natural gas combustion from sources other than fireplaces are not included in this category, as they are included in emissions associated with building energy use.

Natural Gas for Energy Use

The use of natural gas in buildings for energy purposes results in direct GHG emissions. Energy use rates are based on the California Commercial End Use Survey and Residential Appliance Saturation Survey. Natural gas consumption is dependent on land use type.

Mobile Sources

Mobile source emissions consist of emissions associated with on-road mobile sources operated by residents, workers, customers, and vendors visiting the land use types in the Project. GHG emissions associated with on-road mobile sources include running, idling and starting exhaust emissions.

Construction

Construction-related GHG emissions consist of emissions from construction equipment as well as emissions from worker, vendor, and hauling vehicle trips associated with construction activities. Emissions are a one-time occurrence and are amortized over a 30-year project lifespan.

Vegetation Loss

Vegetation loss involves permanent vegetation changes that occur as a result of project development and constitute a one-time change in the carbon sequestration capacity of a project. Emissions are a one-time occurrence and are amortized over a 30-year project lifespan.

Planting of New Trees

The planting of new trees is considered to result in a one-time carbon-stock change. Trees sequester CO_2 while they are actively growing. Emissions are a one-time occurrence and are amortized over a 30-year project lifespan.

The following regulatory standards, incorporated in the Project emissions inventory, reduce direct GHG emissions:

- Residential and non-residential buildings will meet the 2016 Title 24 part 6 building code;
- Pavley I regulation mandating higher fuel efficiency standards for cars and light-duty vehicles and the Advanced Clean Cars Program are included in vehicle emissions estimate for the Project;[3]

To further reduce direct GHG emissions, the Project will include the following design features:

- The Project will install 135 electric vehicle (EV) chargers[4] at non-residential parking spaces within the community;
- The Project will ensure that 100 percent of residences will be pre-wired for an EV charging station and that at least 10 percent of residences will have an EV charging station;
- The Project will implement Transportation Demand Management strategies.

Detailed calculation methodology for direct GHG emissions can be found in Appendix G. Emissions are presented in Table 5.7-3.

3 The analysis does not incorporate the potential emission reductions from the USEPA/NHTSA advanced fuel economy and GHG standards for medium and heavy-duty trucks for model years 2014-2018 as part of this analysis. If incorporated, it would reduce the estimated emissions further. Available at: http://www.epa.gov/otaq/climate/documents/420f11031.pdf. Accessed: February 2017.

4 Assumed to be Level 2 chargers that can provide enough electricity to provide a 25 mile driving range per hour spent charging.

TABLE 5.7-3
NORTHLAKE SPECIFIC PLAN GREEHOUSE GAS EMISSION ESTIMATES

GHG Source	Emissions $MTCO_2e$
	Project
Indirect	
Electricity	4,796
Solid Waste	331
Water	2,164
Direct	
Area Source	245
Mobile Source	53,863
Natural Gas	3,797
Construction	961
Vegetation Loss	58
New Trees	-131
Sub-Total, No Project Design Features	**66,083**
Project Design Features	
Residential Solar Commitment	-1,562
Residential EV Chargers	-2,777
Non-Residential EV Chargers	-3,676
TDM Strategies	-1,346
Total with Project Design Features	**56,722**

In the absence of any adopted, quantitative threshold, the Project would not have a significant effect on the environment if it is found to be consistent with the applicable regulatory plans and policies to reduce GHG emissions. This aspect of the Project is discussed in the next section.

Threshold 5.7b Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Consistency with the Los Angeles County Community Climate Action Plan (CCAP)

The Project's consistency with the CCAP is shown in Table 5.7-4, NorthLake Specific Plan Compliance with Los Angeles Community Climate Action Plan (CCAP). The CCAP builds on existing programs, and adds new actions, as shown in the table.

TABLE 5.7-4
NORTHLAKE SPECIFIC PLAN COMPLIANCE WITH LOS ANGELES COUNTY COMMUNITY CLIMATE ACTION PLAN

Existing Initiatives and New Actions	NorthLake Specific Plan Implementation Actions
CATEGORY 1: GREEN BUILDING AND ENERGY	
Existing County Initiatives	
Energy Upgrades to Existing Structures provides rebates and incentives for energy retrofit efficiency projects.	**Not Applicable**. The Project does not include any existing structures.
Los Angeles County Code (Title 31) requires implementation of sustainable policies for new building design.	**Consistent.** The Project would comply with the County's Green Building Standards Code (Title 31) through planning and design of Project elements, implementation of energy efficiency measures, implementation of water efficiency and conservation measures, material conservation and resource efficiency, and reduction of potential air quality impacts. The proposed project will implement sustainable concepts as required by Title 31. The following sustainable design features would be incorporated into the project: • Low-impact development, including but not limited to minimized impervious areas; streets, sidewalks, and parking lot aisles will be constructed to the minimum widths in compliance with regulations for the Americans with Disabilities Act and safety requirements; and vegetation that requires less watering and chemical application. • Landscape design, including but not limited to limited turf areas; use of invasive drought-tolerant plant and tree species appropriate for the climate zone; and hydrozoning irrigation techniques. • Water conservation, including but not limited to tankless water heaters, low flow shower heads, and piping for recycled water. • Construction waste reduction, disposal and recycling, including recycling a minimum of 75 percent percent of the non-hazardous construction and demolition debris.
Commercial Building Performance Partnership provides financial mechanisms for energy conservation upgrades to existing buildings.	**Not Applicable**. The Project does not include any existing structures.
Renewable Energy and Clean Fuels Program implements projects to accelerate the use of compressed natural gas as an alternative fuel.	**Not Applicable**. This is a County action.
New CCAP Actions	
BE-1: Green Building Development. Promote and incentivize at least Tier 1 voluntary standards within CALGREEN for all new residential and nonresidential buildings. Develop a heat island reduction plan and facilitate green building development by removing regulatory and procedural barriers	**Consistent.** The Project will comply with the Los Angeles County Green Building Program, which consists of the County's Green Building Standards Code and third-party certifications as required; all Mandatory Measures of the 2016 California Green Building Standards Code; the Los Angeles County's Healthy Design Ordinance; the SCVAP 2012 and applicable Castaic Area Community Design Standards. The Project will also meet or exceed all 2016 CALGreen Residential Mandatory measures in

TABLE 5.7-4
NORTHLAKE SPECIFIC PLAN COMPLIANCE WITH LOS ANGELES COUNTY COMMUNITY CLIMATE ACTION PLAN

Existing Initiatives and New Actions	NorthLake Specific Plan Implementation Actions
	Chapter 4, Divisions 4.1 through 4.5 and Chapter 7 as applicable; 2016 CALGreen Tier 1 Prerequisite Measures and required minimum Tier 1 Elective Measures for Residential Uses. The Project will use tree canopy cover and light colored paving and roofing materials to reduce the potential heat island effect.
BE-2: Energy Efficiency. Conduct energy efficiency retrofits for at least 25% of existing commercial buildings over 50,000 square feet and at least 5% of existing single-family residential buildings.	**Not Applicable**. The Project does not include any existing buildings, so this measure is not applicable.
BE-3: Solar Installations. Promote and incentivize solar installations for new and existing homes, commercial buildings, carports and parking areas, water heaters, and warehouses. .	**Consistent.** The Project is committing to the equivalent of installing solar power equivalent to 3 kW per residential dwelling unit for 50 percent of the residential dwelling units. Additionally, MM 5.7-14 requires developers to provide educational information to each homeowner on the capabilities of buildings to support solar electricity generation and/or solar water heating and the use of solar heating, automatic covers, and efficient pumps and motors for pools and spas. MM 5.7-15 requires developers to provide educational information to each nonresidential owner or tenant on the capabilities of buildings to support solar electricity generation and/or solar water heating.
BE-4: Alternative Renewable Energy Programs. Implement pilot projects for wind, geothermal, and other currently viable forms of alternative renewable energy.	**Not Applicable**. The implementation approaches for this emissions reduction strategy are primarily dependent on the ability of the County's Internal Services Department (ISD) to: (i) develop an Alternative Energy Development Plan that identifies the allowable and appropriate alternative energy facility types in the County, and (ii) adopt the Renewable Energy Ordinance via an amendment to Title 22 (Planning and Zoning) of the County's Municipal Code to support new renewable energy technologies. (CCAP, p. C-5.). The County's Board of Supervisors held a public hearing on the Renewable Energy Ordinance on July 14, 2015; during the hearing, the Board indicated its intent to approve the Ordinance with a ban on utility-scale wind projects. (See http://planning.lacounty.gov/energy.) Moreover, the Project site does not have hydropower or geothermal resources However, as discussed above, the project includes several features to promote solar as an alternate energy source for homes on the Project Site.
BE-5: Wastewater Treatment Plant Biogas. Encourage renewable bio-gas projects.	**Not Applicable**. The Project does not include a wastewater treatment plant. Implementation of this emission reduction strategy will be achieved through the Los Angeles County ISD's partnerships with the operators of wastewater treatment facilities. (CCAP, p. C-5.)
BE-6: Energy Efficiency Retrofits of Wastewater Equipment. Encourage the upgrade and replacement of wastewater treatment and pumping equipment.	**Not Applicable**. The Project does not include a wastewater treatment plant. Implementation of this emission reduction strategy will be achieved through the

TABLE 5.7-4
NORTHLAKE SPECIFIC PLAN COMPLIANCE WITH LOS ANGELES COUNTY COMMUNITY CLIMATE ACTION PLAN

Existing Initiatives and New Actions	NorthLake Specific Plan Implementation Actions
	Los Angeles County ISD's partnerships with the operators of wastewater treatment facilities. (CCAP, p. C-6.)
BE-7 Landfill Biogas. Partner with the owners and operators of landfills with at least 250,000 tons of waste-in-place to identify incentives to capture and clean landfill gas to beneficially use the biogas to generate electricity, produce biofuels, or otherwise offset natural gas or other fossil fuels.	**Not Applicable**. The Project does not include a landfill. Implementation of this emission reduction strategy will be achieved through the Los Angeles County ISD's partnerships with the operators of landfills. (CCAP, p. C-6.)
CATEGORY 2: LAND USE AND TRANSPORTATION	
Existing County Initiatives	
Healthy Design Ordinance .The HDO promotes (1) better walking environments with wider sidewalks, shade trees, and pedestrian thru-way connections; (2) more bicycling with short- and long-term bicycle parking; (3) improved access to healthy foods through farmers' markets and allowing community gardens as legally-permitted uses; an	**Consistent.** The Project encourages community participation and interaction by providing enhanced connections to recreational amenities, open spaces, and regional destinations. The Project will include a variety of TDM measures, including construction of bicycle facility improvements such as trails, paths, parking facilities, and showers. Additionally, a variety of community-based events, including farmer's markets would be an allowed and encouraged use onsite. Specifically, MM 5.7-17 requires plans for a weekly farmers' market to be sponsored by the homeowners' association or similar entity.
Bicycle Master Plan promotes bicycle ridership and bike-friendly designs throughout the County.	**Consistent.** The Project will include a total of 91,150 linear feet of multi-use and neighborhood and pedestrian trails linking proposed land uses and connecting to the off-site regional trail system. Class I bike lanes will be provided along portions of NorthLake Boulevard and Ridge Route Road and Class III Shared Bike Lanes will be provided along Ridge Route Road North. The Project will include a variety of TDM measures, including construction of bicycle facility improvements such as trails, paths, parking facilities, and showers.
Sustainable Transportation Programs to increase the efficiency of the transportation network.	**Consistent.** The Project includes a mix of uses, including residential, commercial, industrial, and recreational uses that would be proximate to each other and connected by a network of trails to reduce reliance on automobile use and offsite commuting. The Project will include a variety of TDM measures, including provision of a shuttle system to major employment centers. The project would provide substantial bicycle trails and support facilities as described above.
New CCAP Actions	
***LUT-1: Bicycle Programs and Supporting Facility improvements*.** Construct and improve bicycle infrastructure to increase biking and bicyclist access to transit and transit stations/hubs. Increase bicycle parking and "end-of-trip" facilities. Construct and improve bicycle infrastructure to increase bicyclist access to transit and transit stations/hubs	**Consistent.** Class I bike lanes will be provided along portions of NorthLake Boulevard and Ridge Route Road and Class III Shared Bike Lanes will be provided along Ridge Route Road North. Bicycles will be able to use approximately 91,150 linear feet of multi-use trails. The Project will also include a variety of TDM measures, including construction of bicycle facility improvements such as trails, paths, parking facilities, and showers.

TABLE 5.7-4
NORTHLAKE SPECIFIC PLAN COMPLIANCE WITH LOS ANGELES COUNTY COMMUNITY CLIMATE ACTION PLAN

Existing Initiatives and New Actions	NorthLake Specific Plan Implementation Actions
LUT-2: Pedestrian Network improvements. Construct and improve pedestrian infrastructure to increase walking and pedestrian access to transit and transit stations/hubs. Program the construction of pedestrian projects toward the goal of completing 15,000 linear feet of new pedestrian improvements/amenities per year.	**Consistent.** The Project will include a total of 91,150 linear feet of multi-use and neighborhood and pedestrian trails linking proposed land uses and connecting to the off-site regional trail system for a safe walkable healthy community. Sidewalks, on-street parking, tree canopies, curbs and gutters, narrower intersections with smaller radii are some of the Project's healthy walkable street features. Over 50 acres of parks plus hundreds of acres of open space throughout the Project provide opportunities for outdoor activity.
LUT-3: Transit Expansion. Work with Los Angeles County Metropolitan Transportation Authority (LA Metro) on a transit program that prioritizes transit by creating bus priority lanes, improving transit facilities, reducing transit-passenger time, and providing bicycle parking near transit stations. Construct and improve bicycle, pedestrian and transit infrastructure to increase bicyclist and pedestrian access to transit and transit stations/hubs.	**Consistent.** The proposed mobility plan would minimize vehicular trips through the linkage of land use areas and site elements via a multi-modal system including bike lanes, bus routes, and pedestrian connections. The Transportation Management Association would include a program to extend Santa Clarita Valley Transit into the project site. Bus stops would be added with the development of the Project and the Castaic Middle school. Implementation of bus priority lanes, improving transit facilities, reducing transit-passenger time, and providing bicycle parking near transit stations is the responsibility of and directed to the County of Los Angeles. The Project will include a variety of TDM measures, including provision of a shuttle system to major employment centers.
LUT-4: Travel Demand Management. Encourage ride- and bike-sharing programs and employer-sponsored vanpools and shuttles. Encourage market-based bike sharing programs that support bicycle use around and between transit stations/hubs. Implement marketing strategies to publicize these programs and reduce commute trips	**Consistent.** The Project would include a mix of complementary uses that would reduce the need for vehicle trips. The Project would also provide preferential parking for carpools, vanpools, and alternative fuel vehicles. The Project will include a variety of TDM measures, including provision of a shuttle system to major employment centers, substantial bicycle trails and support facilities, and expanding the local transit network, as described above.
LUT-5: Car-Sharing Program. Implement a car-sharing program to allow people to have on-demand access to a shared fleet of vehicles on an as-needed basis.	**Not Applicable**. The action is applicable to large employers or at the City or County level. However, The Project will include a variety of TDM measures, including provision of a shuttle system to major employment centers.
LUT-6: Land Use Design and Density. Promote sustainability in land use design, including diversity of urban and suburban developments.	**Consistent.** The Project includes a balanced mix of housing, employment, and community uses including schools, retail, industrial, recreational and public service uses, to reduce off-site trips and vehicle miles travelled. The Project design also encourages pedestrian and bicycle use, and includes a diverse range of housing types. Moreover, the Project would preserve nearly 300 acres of undisturbed open space. As noted above, the Project is well served by transit with a minimum of 13 bus stops. Additionally, MM 5.7-17 requires plans for a weekly farmers' market to be sponsored by the homeowners' association or similar entity.
LUT-7: Transportation Signal Synchronization Program Improve the network of traffic signals on the major streets throughout Los Angeles (LA) County.	**Consistent.** The Project includes the installation of traffic signals for mitigation of traffic impacts. These signals will be synchronized for maximum traffic efficiency.

TABLE 5.7-4
NORTHLAKE SPECIFIC PLAN COMPLIANCE WITH LOS ANGELES COUNTY COMMUNITY CLIMATE ACTION PLAN

Existing Initiatives and New Actions	NorthLake Specific Plan Implementation Actions
LUT-8: Electric Vehicle Infrastructure. Install EV charging facilities at County-owned public venues and ensure that at least one-third of these charging stations will be available for visitor use	**Not Applicable**. The Project does not include County-owned public venues. However, it is noted that the Project would provide 135 EV charging facilities at non-residential parking spaces within the community.
LUT-9: Idling Reduction Goal. Encourage idling limits of 3 minutes for heavy-duty construction equipment as feasible within manufacturer's specifications.	**Consistent.** MM 5.7-16 requires grading and building contractors to encourage equipment operators to limit unnecessary idling to 3 minutes.
LUT-10: Efficient Goods Movement Support regional efforts to maximize the efficiency of the goods movement system throughout the unincorporated areas.	**Not Applicable**. This emission reduction strategy would primarily be implemented by Los Angeles County's Department of Public Works (DPW) by supporting efforts to evaluate zero and/or near-zero emission freight corridors and working with appropriate agencies and partners to identify and replace at-grade railroad crossings to reduce freight delay and vehicle idling (CCAP, p. C-13).
LUT-11: Sustainable Pavements Program. Reduce energy consumption and waste generation associated with pavement maintenance and rehabilitation.	**Not Applicable**. The action applies to maintaining and rehabilitating aging roadways throughout the County.
LUT-12: Electrify Construction and Landscaping Equipment. Utilize electric equipment wherever feasible for construction projects. Reduce the use of gas-powered landscaping equipment.	**Consistent.** MM 5.1-3 requires a Construction Management Plan that includes using electric-powered construction equipment where feasible. MM 5.1-16 requires all buildings that would have exterior landscaping to have exterior electrical receptacles to promote the use of electric-powered landscaping equipment. The Project shall also prioritize the use of landscaping contractor(s) with electric-powered equipment where available and feasible.
Part 3: Water Conservation and Wastewater	
Existing County Initiatives	
Conservation rebates, smart gardening workshops and storm water controls.	**Not Applicable**. This measure does not apply to new communities.
New CCAP Actions	
WAW-1: Per Capita Water Use Reduction Goal. Meet the State established per capita water use reduction goal as identified by Senate Bill (SB) X7-7 for 2020. The State goal is a 20% reduction in per capita water use compared to baseline levels.	**Not Applicable.** This action is to be achieved at the water supplier level, not at the Specific Plan/Project level. The Project's water conservation measures will include SmartSense appliances, low flow fixtures, and high-efficiency dishwashers. The use of recycled and graywater systems is described in WAW-2 below.
WAW-2: Recycled Water, Water Supply Improvement Programs, and Stormwater Runoff. Promote the use of wastewater and gray water to be used for agricultural, industrial, and irrigation purposes consistent with the appropriate provisions of Title 22 and approval of the California Department of Health Services. Manage stormwater, reduce potential treatment, and protect local groundwater supplies.	**Consistent.** Although recycled water is not available for use at this time, the Project will enter into an agreement with the Newhall County Water District and other participating agencies to provide fair-share funding of a regional recycled water facility. The proposed Project will install recycled water pipelines throughout the Project site in anticipation of future recycled water availability MM 5.12-23 requires promotion of the installation of graywater systems. The Project would have an extensive stormwater management system and would implement Best Management Practices for water quality control.

TABLE 5.7-4
NORTHLAKE SPECIFIC PLAN COMPLIANCE WITH LOS ANGELES COUNTY COMMUNITY CLIMATE ACTION PLAN

Existing Initiatives and New Actions	NorthLake Specific Plan Implementation Actions
Part 4: Waste Reduction, Reuse and Recycling	
Existing Initiatives	
Recycling programs for community waste and construction and demolition waste that divert 50% of solid wastes to recycling or re-use instead of landfills	**Consistent.** The Project will meet CalRecycle's 2020 statewide goal of 75 percent solid waste diversion, by reducing, recycling, and/or composting all generated waste.
New CCAP Action	
SW-1: Waste Diversion Goal. For the County's unincorporated areas, adopt a waste diversion goal to comply with all state mandates to divert at least 75% of waste from landfill disposal by 2020.	**Consistent.** The Project will meet CalRecycle's 2020 statewide goal of 75 percent solid waste diversion, by reducing, recycling, and/or composting all generated waste.
Part 5: Land Conservation and Tree Planting	
Existing Initiatives	
Implementation of the urban forestry plan and oak woodlands conservation management plan.	**Consistent.** Although the Project does contain any oak woodlands that would require a conservation management plan, approximately 627 acres of open space will remain undeveloped. It is anticipated that more than 6,000 new trees will be planted.
New CCAP Actions	
LC-1: Develop Urban Forests. Support and expand urban forest programs within the unincorporated areas.	**Consistent.** The Project includes the preservation of nearly 300 acres of undeveloped natural land as undisturbed open space and an additional 327 acres of open space as manufactured slopes. The project would plant approximately 5,550 new trees in accordance with the County Tree Planting Ordinance.
LC-2: Create New Vegetated Open Space. Restore and revegetate previously disturbed land and/or unused urban and suburban areas.	**Consistent.** Although the Project does not have disturbed land to restore, approximately 627 acres of open space will remain undeveloped. It is anticipated that approximately 5,550 new trees will be planted.
LC-3: Promote the Sale of Locally Grown Foods and/or Products. Establish local farmers markets and support locally grown food.	**Consistent.** MM 5.7-17 requires plans for a weekly farmers' market to be sponsored by the homeowners' association or similar entity.
LC-4: Protect Conservation Areas. Encourage the protection of existing land conservation areas.	**Not Applicable.** There are no areas within the Project site that are considered to be land conservation areas. The Project would not conflict with or impede the County's ability to implement this strategy for existing land conservation areas.

As shown in Table 5.7-4, the Project would be consistent will all applicable policies of the CCAP.

The CCAP also recognizes the importance of ongoing implementation of statewide GHG reduction statutory mandates, including:

- STATE-1: Renewable Portfolio Standard, which requires California utilities to generate 50% of the state's electricity from renewable sources by 2030.
- STATE-2: CalGreen Building Code Standards (Title 24), which reduces GHG emissions through energy and water efficiency standards to be implemented in Commercial and Residential Buildings.

- STATE-3: Pavley/Advanced Clean Cars fuel efficiency standards, and Low Carbon Fuel Standards for on-road transportation, to reduce GHG emissions from fossil fuel use in transportation.
- STATE 4: Low Carbon Fuel Standard for Offroad Equipment and Vehicles, to reduce GHG emissions from fossil fuel use in construction equipment and other off-road equipment and vehicles.
- STATE 5: California Cap-and-Trade Program, to reduce GHG from stationary sources like factories and power plants, and from fossil fuel use.

These statewide mandates apply to NorthLake Specific Plan-related buildings and activities, and will further reduce project-related GHG emissions.

Relationship to State Policies

The California Legislature adopted the public policy position that global warming is "a serious threat to the economic well-being, public health, natural resources, and the environment of California" (*California Health and Safety Code,* Section 38501). Further, the State Legislature has determined that:

> The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra Nevada snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious disease, asthma, and other human health-related problems.

These public policy statements became law with the enactment of AB 32 in September 2006. AB 32 is now codified as Sections 38500–38599 of the *California Health and Safety Code*. Thus, the principal State plan and policy adopted for the purpose of reducing GHG emissions is AB 32. The quantitative goal of AB 32 is to reduce statewide GHG emissions to 1990 levels by the year 2020. As discussed in Section 5.7.4, many other Statewide plans, policies, and regulations to reduce GHG emissions preceded and followed AB 32, such as GHG emissions standards for vehicles, the Low Carbon Fuel Standard, RPS requirement, EO S-3-05 and EO B-30-15 are being implemented, but compliance by individual land use projects is not addressed in these regulations. Therefore, the proposed Project would not conflict with these State plans, policies and regulations.

Consistency Analysis with the 2012 SCVAP

The Project's consistency with the 2012 SCVAP GHG-related goals and policies that are applicable at the Specific Plan/Project level is shown in Table 5.7-5.

TABLE 5.7-5
CONSISTENCY WITH 2012 SCVAP'S GHG-RELATED GOALS AND POLICIES

2012 SCVAP Goal/Policy	Project Consistency
Goal CO-8: Greenhouse Gas Reduction Development designed to improve energy efficiency, reduce energy and natural resource consumption, and reduce emissions of greenhouse gases.	Consistency with Goal CO-8 is addressed at the policy level.
Objective CO-8.1: Comply with the requirements of State law, including AB 32, SB 375, and implementing regulations, to reach targeted reductions of greenhouse gas (GHG) emissions.	Consistency with Objective CO-8.1 is addressed at the policy level
Policy CO-8.1.3: Implement the ordinances developed through the County's Green Building Program.	**Consistent.** The Project would comply with the Green Building Program ordinances including but not limited to Title 22 and Title 31.
Objective CO-8.2: Reduce energy and materials consumption and greenhouse gas emissions in public uses and facilities.	Consistency with Objective CO-8.2 is addressed at the policy level
Policy CO-8.2.4: Establish maximum lighting levels for public facilities, and encourage reduction of lighting levels to the level needed for security purposes after business hours, in addition to use of downward-directed lighting and use of low-reflective paving surfaces.	**Consistent.** Consistent with the Lighting Design Guidelines of the NorthLake Specific plan, Project lighting would be minimized consistent with required levels for safety and security.
Policy CO-8.2.5: Support installation of photovoltaic and other renewable energy equipment on public facilities, in concert with significant energy conservation efforts.	**Consistent.** The Project does not include County-owned public venues. However, it is noted that the Project would provide 135 EV charging facilities at non-residential parking spaces within the community. Further, the Project is committing to the equivalent of installing solar power equivalent to 3 kW per residential dwelling unit for 50 percent of the residential dwelling units..
Policy CO-8.2.6: Promote use of solar lighting in parks and along paseos and trails, where practical.	**Consistent.** The proposed Project does not preclude the use of solar lighting in parks and along paseos and trails throughout the Project site. To the extent feasible, solar lighting would be installed on all public facilities, including park buildings and along trails.
Policy CO-8.2.7: Support the use of sustainable alternative fuel vehicles for machinery and fleets, where practical, by evaluating fuel sources, manufacturing processes, maintenance costs, and vehicle lifetime use.	**Consistent.** MM 5.1-3 requires that all off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 3 off-road emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB or equivalent. Further, all off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, where available. Other than construction equipment, the Project would not involve uses requiring machinery or fleets; however, it is noted that the Project would provide 135 EV charging facilities at non-residential parking spaces within the community.
Policy CO-8.2.9: Reduce heat islands through installation of trees to shade parking lots and hardscapes, and use of light-colored reflective paving and roofing surfaces.	**Consistent.** The proposed Project would be developed consistent with the Design Guidelines of the NorthLake Specific Plan, including requirements for adequate shade trees throughout the Project's circulation system; minimum landscape requirements according to the land use; and use of light-colored paving materials, including brick pavers
Policy CO-8.2.10: Support installation of energy-efficient traffic control devices, street lights, and parking lot lights.	**Consistent.** The proposed project would comply with efficient lighting (including LEDs) for traffic, street, and other outdoor lighting purposes, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program.

TABLE 5.7-5
CONSISTENCY WITH 2012 SCVAP'S GHG-RELATED GOALS AND POLICIES

2012 SCVAP Goal/Policy	Project Consistency
Policy CO-8.2.11: Implement recycling in all public buildings, parks, and public facilities, including for special events.	**Consistent.** According to Section 5.12, Utilities, the Project would comply with the State Model Ordinance implemented in accordance with AB 1327 and require all commercial, industrial, and multifamily residential development to provide for collection of recyclable materials. Additionally, the independent waste hauler serving the proposed Project would provide recycling receptacles and pick-up service for single-family residential units. The Project will meet CalRecycle's 2020 statewide goal of 75 percent solid waste diversion, by reducing, recycling, and/or composting all generated waste.
Policy CO-8.2.13: Support trip reduction strategies for employees as described in the Circulation Element.	**Consistent.** The proposed mobility plan would reduce vehicular trips through the linkage of land use areas and site elements via a multi-modal system including bike lanes, bus routes, and pedestrian connections. The Project includes a mix of uses including residential, commercial, industrial, recreational and institutional/public uses would be proximate to each other and connected by a network of trails to reduce reliance on automobile use and offsite commuting. The provision of residential, commercial, industrial, and recreational opportunities will provide opportunities for employment on-site and implementation of wireless technology would support opportunities for telecommuting and a reduced dependence on the private automobile for commuting. The Project will include a variety of TDM measures, including provision of a shuttle system to major employment centers, substantial bicycle trails and support facilities, and expanding the local transit network, as described above
Policy CO-8.2.14: Reduce extensive heat gain from paved surfaces through development standards wherever feasible.	**Consistent.** The proposed Project would be developed consistent with the Design Guidelines of the NorthLake Specific Plan, including requirements for adequate shade trees throughout the Project's circulation system; minimum landscape requirements according to the land use; and use of light-colored paving materials, including brick pavers.
Objective CO-8.3: Encourage green building and sustainable development practices on private development projects, to the extent reasonable and feasible.	Consistency with Objective CO-8.3 is addressed at the policy level.
Policy CO-8.3.2: Promote construction of energy efficient buildings through the certification requirements of the ordinances developed through the County's Green Building Program.	**Consistent.** The Project would comply with the Green Building Program ordinances including but not limited to Title 22 and Title 31.
Policy CO-8.3.4: Encourage new residential development to include on-site solar photovoltaic systems, or pre-wiring, in at least 50% of the residential units, in concert with other significant energy conservation eff orts.	**Consistent.** The Project is committing to the equivalent of installing solar power equivalent to 3 kW per residential dwelling unit for 50 percent of the residential dwelling units.
Policy CO-8.3.5: Encourage on-site solar generation of electricity in new retail and office commercial buildings and associated parking lots, carports, and garages, in concert with significant energy conservation efforts.	**Consistent.** The Project is committing to the equivalent of installing solar power equivalent to 3 kW per residential dwelling unit for 50 percent of the residential dwelling units. Additionally, the Project would provide 135 EV charging facilities at non-residential parking spaces within the community.

TABLE 5.7-5
CONSISTENCY WITH 2012 SCVAP'S GHG-RELATED GOALS AND POLICIES

2012 SCVAP Goal/Policy	Project Consistency
Policy CO-8.3.6: Require new development to use passive solar heating and cooling techniques in building design and construction, which may include but are not be limited to building orientation, clerestory windows, skylights, placement and type of windows, overhangs to shade doors and windows, and use of light colored roofs, shade trees, and paving materials.	**Consistent.** The proposed Project would be developed consistent with the Design Guidelines of the NorthLake Specific Plan, including requirements for adequate shade trees throughout the Project's circulation system; minimum landscape requirements according to the land use; and use of light-colored paving materials, including brick pavers.
Policy CO-8.3.7: Encourage the use of trees and landscaping to reduce heating and cooling energy loads, through shading of buildings and parking lots.	**Consistent.** The proposed Project would be consistent with the Landscape Concept as detailed in Section IV.C. of the NorthLake Specific Plan, including a variety of trees along streetscapes and trails throughout the Project site.
Policy CO-8.3.8: Encourage energy-conserving heating and cooling systems and appliances, and energy-efficiency in windows and insulation, in all new construction.	**Consistent.** The Project would comply with the Green Building Program ordinances including but not limited to Title 22 and Title 31.
Policy CO-8.3.9: Limit excessive lighting levels, and encourage a reduction of lighting when businesses are closed to a level required for security.	**Consistent.** Consistent with the Lighting Design Guidelines of the NorthLake Specific plan, Project lighting would be minimized consistent with required levels for safety and security.
Policy CO-8.3.12: Reduce extensive heat gain from paved surfaces through development standards wherever feasible.	**Consistent.** The proposed Project would be developed consistent with the Design Guidelines of the NorthLake Specific Plan, including requirements for adequate shade trees throughout the Project's circulation system; minimum landscape requirements according to the land use; and use of light-colored paving materials, including brick pavers.
Objective CO-8.4 Reduce energy consumption for processing raw materials by promoting recycling and materials recovery by all residents and businesses throughout the community.	Consistency with Objective CO-8.4 is addressed at the policy level.
Policy CO-8.4.2: Adopt mandatory residential recycling programs for all residential units, including single-family and multi-family dwellings.	**Consistent.** According to Section 5.12, Utilities, the Project would comply with the State Model Ordinance implemented in accordance with AB 1327 and require all commercial, industrial, and multifamily residential development to provide for collection of recyclable materials. Additionally, the independent waste hauler serving the proposed Project would provide recycling receptacles and pick-up service for single-family residential units. The Project will meet CalRecycle's 2020 statewide goal of 75 percent solid waste diversion, by reducing, recycling, and/or composting all generated waste.
Policy CO-8.4.3: Allow and encourage composting of greenwaste, where appropriate.	**Consistent.** The proposed Project does not preclude small-scale composting of greenwaste by individual residents. The Project will meet CalRecycle's 2020 statewide goal of 75 percent solid waste diversion, by reducing, recycling, and/or composting all generated waste.
Policy CO-8.4.4: Promote commercial and industrial recycling, including recycling of construction and demolition debris.	**Consistent.** The Project will meet CalRecycle's 2020 statewide goal of 75 percent solid waste diversion, by reducing, recycling, and/or composting all generated waste.
Policy CO-8.4.5: Develop and implement standards for refuse and recycling receptacles and enclosures to accommodate recycling in all development.	**Consistent.** The NorthLake Specific Plan provides for design guidelines for refuse receptacles (Section IV. Design Guidelines). These same design guidelines would apply to recycling receptacles. MM 5.7-14 and MM 5.7-15 would provide residential and nonresidential owners and tenants information on recycling.
Policy CO-8.4.6: Introduce and assist with the placement of receptacles for recyclable products in public places, including at special events.	

TABLE 5.7-5
CONSISTENCY WITH 2012 SCVAP'S GHG-RELATED GOALS AND POLICIES

2012 SCVAP Goal/Policy	Project Consistency
Policy CO-8.5.7: Provide information to the public on recycling opportunities and facilities, and support various locations and events to promote public participation in recycling.	**Consistent.** MM 5.7-14 and MM 5.7-15 would provide residential and nonresidential owners and tenants information on recycling. Also, it is anticipated that the Project's independent waste hauler would provide information regarding recycling opportunities to its customers on a regular basis.
Source (goals and policies): LADRP 2012.	

Consistency with the SCAG 2016-2040 RTP/SCS

The Project's consistency with the SCAG 2016-2040 RTP/SCS GHG-related goals and policies is shown in Table 5.7-6.

TABLE 5.7-6
CONSISTENCY WITH SCAG RTP/SCS GHG-RELATED GOALS AND POLICIES

RTP/SCS Goal/Policy	Project Consistency
Goal 6: Protect the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking).	**Consistent.** The Project includes a mix of housing, employment, and community uses including schools, retail, industrial, recreational, and public services, to reduce off-site trips. The Project design also encourages pedestrian and bicycle use, and includes a diverse range of housing types. As discussed in Section 4.0, Project Description, the proposed Project would incorporate an extensive greenbelt and trail system connecting schools, parks, amenities, and neighborhoods throughout the community and the Castaic Lake Recreation Area. The Project's multi-use trails and neighborhood pedestrian trails would also be designed with the potential for future connections to the off-site Regional Trail system.
Goal 7: Actively encourage and create incentives for energy efficiency, where possible.	**Consistent.** MM 5.7-14 requires developers to provide educational information to each homeowner on (1) water conservation; (2) energy conservation, including the use of energy-efficient lighting and the limiting of outdoor lighting; (3) the capabilities of buildings to support solar electricity generation and/or solar water heating; (4) mobile source emission reduction techniques, such as use of alternative modes of transportation and zero- or low-emission vehicles; (5) the use of solar heating, automatic covers, and efficient pumps and motors for pools and spas; and (6) recycling to all homeowners prior to individual purchase of property and again annually. MM 5.7-15 requires developers to provide educational information to each owner or tenant on (1) water conservation; (2) energy conservation, including the use of energy-efficient lighting and the limiting of outdoor lighting; (3) the capabilities of buildings to support solar electricity generation and/or solar water heating; (4) mobile source emission reduction techniques, such as use of alternative modes of transportation and zero- or low-emission vehicles; and (5) recycling to all homeowners prior to individual purchase of property and again annually. As discussed in Section 5.4, Energy, the regulations, plans, and polices adopted for the purpose of maximizing energy efficiency that are directly applicable to the Project include (1) California's

TABLE 5.7-6
CONSISTENCY WITH SCAG RTP/SCS GHG-RELATED GOALS AND POLICIES

RTP/SCS Goal/Policy	Project Consistency
	Title 24 Energy Efficiency Standards for Residential and Nonresidential Buildings; (2) CALGreen Code; and (3) Title 31 of the County Code (the Los Angeles County Green Building Standards Code)."
Goal 8: Encourage land use and growth patterns that facilitate transit and non-motorized transportation.	**Consistent.** The Project includes a mix of housing, employment, and community uses including schools, retail, industrial, recreational, and public services, to reduce off-site trips. The Project design also encourages pedestrian and bicycle use, and includes a diverse range of housing types. As discussed in Section 4.0, Project Description, the proposed Project would incorporate an extensive greenbelt and trail system connecting schools, parks, amenities, and neighborhoods throughout the community and the Castaic Lake Recreation Area. The Project's multi-use trails and neighborhood pedestrian trails would also be designed with the potential for future connections to the off-site Regional Trail system
Source (goals and policies): SCAG 2016.	

Level of Significance Without Mitigation: Less Than Significant Impact.

Recommended 2012 SCVAP EIR Mitigation Measures:

MM 5.7-1 Prior to the issuance of building permits, the applicant shall provide evidence of green building practices and design elements that reduce GHG emissions, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (SCVAP MM 3.4-1)

MM 5.7-2 Prior to the issuance of building permits, the applicant shall provide evidence of energy- efficient designs, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards, such as those found in the Leadership in Energy and Environmental Design ("LEED") Green Building Ratings and/or comply with Title 24, Part 11, the California Green Building Standards Code.

MM 5.7-3 Prior to the issuance of building permits, the applicant shall provide evidence of energy efficient lighting, heating and cooling systems, appliances, equipment, and control systems, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards.

MM 5.7-4 Prior to the issuance of building permits, the applicant shall provide evidence of light colored "cool" roofs and cool pavements, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards.

MM 5.7-5 Prior to the issuance of building permits, the applicant shall provide evidence of efficient lighting (including LEDs) for traffic, street, and other outdoor lighting purposes, in accordance with the requirements of the ordinances adopted

pursuant to the County's Green Building Program and other applicable State and County standards.

MM 5.7-6 Prior to the issuance of building permits, the applicant shall provide evidence of efficient pumps and motors for pools and spas, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards.

MM 5.7-7 Prior to the issuance of building permits, the applicant shall provide evidence of the ability to install solar, and solar hot water heaters, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards.

MM 5.7-8 Prior to the issuance of building permits for, the applicant shall provide evidence of water-efficient landscapes, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards.

MM 5.7-9 Prior to the issuance of building permits, the applicant shall provide evidence of water efficient irrigation systems and devices, such as soil-based irrigation controls and use water-efficient irrigation methods, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards.

MM 5.7-10 Prior to the issuance of building permits, the applicant or their contractor shall submit a site construction management plan for the reuse and recycle construction and demolition (including soil, vegetation, concrete, lumber, metal, and cardboard) to the Department of Public Works for review and approval in accordance with the requirements of the ordinances developed pursuant to the County's Green Building Program and other applicable State and County standards.

MM 5.7-11 Prior to the issuance of building permits, the applicant shall provide evidence of reuse and recycling receptacles in residential, industrial, and commercial projects, in accordance with the requirements of the ordinances developed pursuant to the County's Green Building Program and other applicable State and County standards.

MM 5.7-12 Prior to the issuance of building permits, the applicant shall provide evidence of consistency with "smart growth" principles to reduce GHG emissions (i.e., ensure mixed- use, infill and higher density projects provide alternatives to individual vehicle travel and promote efficient delivery of goods and services).

MM 5.7-13 Prior to implementing project approval, the applicant shall preserve existing trees, to the extent feasible and consistent with mitigation measures, encourage the planting of new trees consistent with the final landscape palettes, and create open space where feasible.

The following recommended 2012 SCVAP MMs from Section 5.1, Air Quality are relevant to this analysis:

MM 5.1-1 Prior to implementing project approval, applicants shall develop a Construction Traffic Emission Management Plan to minimize emissions from vehicles including, but not limited to, scheduling truck deliveries to avoid peak hour traffic conditions, consolidating truck deliveries, and prohibiting truck idling in excess of 5 minutes. (SCVAP MM 3.3-1)

MM 5.1-3 Prior to grading permit issuance, applicants shall develop a Construction Equipment Exhaust Emission Management Plan to minimize construction-related exhaust emissions. The Construction Equipment Exhaust Emission Management Plan shall require the following elements: (SCVAP MM 3.3-2 exhaust emission measures)

- Scheduling truck deliveries to avoid peak hour traffic conditions, consolidating truck deliveries, and prohibiting truck idling in excess of 5 minutes.
- Schedule construction activities that affect traffic flow to off-peak hours (e.g., between 7:00 PM and 6:00 AM, and between 10:00 AM and 3:00 PM).
- Use of diesel-powered construction equipment shall use ultra-low sulfur diesel fuel.
- Use electric welders to avoid emissions from gas or diesel welders when such equipment is commercially available.
- Use electricity or alternate fuels for on-site mobile equipment instead of diesel equipment when such equipment is commercially available.
- Use on-site electricity or alternative fuels rather than diesel-powered or gasoline powered generators when such equipment is commercially available.
- Maintain construction equipment by conducting regular tune-ups according to the manufacturers' recommendations.
- Minimize idling time either by shutting equipment when not in use or reducing the time of idling to 5 minutes as a maximum.
- Limit, to the extent feasible, the hours of operation of heavy duty equipment and/or the amount of equipment in use.
- Retrofit large off-road construction equipment that will be operating for significant periods. Retrofit technologies such as particulate traps, selective catalytic reduction, oxidation catalysts, air enhancement technologies, etc., shall be evaluated. These technologies will be required if they are certified by CARB and/or the US EPA, and are commercially available and can feasibly be retrofitted onto construction equipment.
- The project applicant shall require all on-site construction equipment to meet US EPA Tier 4 or higher emissions standards according to the following:
    - April 2010 through December 31, 2011: All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet

Tier 2 off-road emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 2 or Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.

- January 1, 2012 through December 31, 2014: All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 3 off-road emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.
- Post-January 1, 2015: All off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. A copy of each unit's certified tier specification, BACT documentations, and CARB, SCAQMD, or ICAPCD operating permit shall be provided at the time of mobilization of each applicable unit of equipment.

- The contractor shall utilize low-VOC content coatings and solvents that are consistent with applicable SCAQMD and ICAPCD rules and regulations.
- Consideration shall be given to use of other transportation methods to deliver materials to the construction sites (for example, trains or conveyors) if it would result in a reduction of criteria pollutant emissions.

MM 5.1-7 Prior to final building inspection, the applicant shall provide preferential parking spaces for carpools and vanpools at major commercial and office locations. The spaces shall be clearly identified on plot plans and may not be pooled in one location (SCVAP MM 3.3-6).

MM 5.1-8 New residential developments shall allow only natural gas-fired hearths and shall prohibit the installation of wood-burning hearths and wood-burning stoves (SCVAP MM 3.3-7).

Level of Significance with 2012 SCVAP EIR Mitigation: Less Than Significant impact

Recommended 1992 EIR Mitigation Measures:

The following recommended 1992 EIR MM from Section 5.1, Air Quality is relevant to this analysis:

MM 5.1-9 A commuter computer program shall be developed for the NorthLake residents in an attempt to reduce commuter vehicle trips generated by the proposed projects.

Level of Significance with 1992 EIR Mitigation: Less Than Significant impact.

Recommended Project Specific Mitigation Measures:

MM 5.7-14 Prior to the issuance of each residential occupancy permit, the Applicant or successor developer shall submit for approval to the County the plan for the applicable future homeowners association(s) to provide educational information to each homeowner on (1) water conservation; (2) energy conservation, including the use of energy-efficient lighting and the limiting of outdoor lighting; (3) the capabilities of buildings to support solar electricity generation and/or solar water heating; (4) mobile source emission reduction techniques, such as use of alternative modes of transportation and zero- or low-emission vehicles; (5) the use of solar heating, automatic covers, and efficient pumps and motors for pools and spas; and (6) recycling to all homeowners prior to individual purchase of property and again annually

MM 5.7-15 Prior to the issuance of each nonresidential occupancy permit, the Applicant or successor developer shall submit for approval to the County the plan to provide educational information to each owner or tenant on (1) water conservation; (2) energy conservation, including the use of energy-efficient lighting and the limiting of outdoor lighting; (3) the capabilities of buildings to support solar electricity generation and/or solar water heating; (4) mobile source emission reduction techniques, such as use of alternative modes of transportation and zero- or low-emission vehicles; and (5) recycling to all homeowners prior to individual purchase of property and again annually.

MM 5.7-16 Prior to the issuance of each grading and building permit, the applicant/developer shall require in contract specifications, that contractors set goals to limit unnecessary construction equipment idling to 3 minutes and include methods to encourage equipment operators to achieve the 3-minute goal.

MM 5.7-17 Prior to the issue of the occupancy permit for the 1,000th residential unit, the master developer shall provide the County with plans for a weekly farmers' market to be sponsored by the homeowners' association or similar entity.

The following project specific MMs from Section 5.1, Air Quality are relevant to this analysis:

MM 5.1-13 Once constructed, the Applicant shall ensure that the tenants/operators of non-residential uses include the following features and procedures. Proof of compliance shall be provided to the County within one month following the issuance of each occupancy permit.

- Post signs requiring that trucks shall not be left idling for prolonged periods (i.e., in excess of 5 minutes, as required by State law).
- Post both bus and Metrolink schedules in conspicuous areas.
- Configure the employee work schedules around the local bus schedule to the extent reasonably feasible.

Net Level of Significance: The analysis above demonstrates that the Project would be consistent with the Los Angeles County CCAP, the 2012 SCVAP, the 2016-2040 RTP/SCS, SB 375, EO S-3-05 and EO B-30-15, and would incorporate mitigation measures that would reduce GHG emissions. The impact would be Less than Significant.

5.7.8 EVALUATION OF GREENHOUSE GAS REDUCTIONS

The efficacy of the Project's design features to reduce GHG emissions as well as the reductions achieved through compliance with all applicable regulatory plans to reduce GHG emissions were evaluated by comparing the Project's GHG emissions (i.e. "Project scenario") to a BAU scenario, as defined by the AB 32 Scoping Plan. In this analysis, the BAU scenario includes only those regulations which were in place at the adoption of the 2008 Scoping Plan and consistent with those assumptions by CARB. Additional information regarding this analysis is provided in Appendix G.

Ultimately, the Project scenario takes into account the Project's commitments and changes due to implementation of the Renewables Portfolio Standard of 45 percent, the Pavley regulation mandating higher fuel efficiency standards for light-duty vehicles, and the Advanced Clean Cars program. With these adjustments, the Project achieves a 40.1 percent reduction from the BAU scenario. Table 5.7-7 shows total GHG emissions for construction and operation of the Project and the BAU scenario.

TABLE 5.7-7
NORTHLAKE SPECIFIC PLAN GREEHOUSE GAS EMISSION ESTIMATES

GHG Source	Emissions $MTCO_2e$	
	BAU	**Project**
Indirect		
Electricity	7,136	4,796
Solid Waste	663	331
Water	3,724	2,164
Direct		
Area Source	245	245
Mobile Source	77,696	53,863
Natural Gas	4,365	3,797
Construction	961	961
Vegetation Loss	58	58
New Trees	-131	-131
Sub-Total, No Project Design Features	**94,716**	**66,083**
Project Design Features		
Residential Solar Commitment	--	-1,562
Residential EV Chargers	--	-2,777
Non-Residential EV Chargers	--	-3,676
TDM Strategies	--	-1,346
Total with Project Design Features	**94,716**	**56,722**
Percent Difference from BAU		**-40.1%**

5.7.9 CUMULATIVE IMPACTS

Because the magnitude of global GHG emissions is extremely large when compared with the emissions of typical development projects, it is accepted as very unlikely that any individual development project would have GHG emissions of a magnitude to directly impact global climate change. The CCAP states that projects that demonstrate consistency with applicable CCAP actions can be determined to have a less than significant cumulative impact on GHG emissions and climate change. This statement is consistent with a statement by the CNRA, "Due to the global nature of GHG emissions and their potential effects, GHG emissions will typically be addressed in a cumulative impacts analysis" (CNRA 2009c). Previously, CAPCOA's CEQA and Climate Change Report states, "GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective" (CAPCOA 2008). Therefore, because the Project is consistent with the Los Angeles County CCAP, the 2012 SCVAP, the 2016-2040 RTP/SCS, SB 375, EO S-3-05 and EO B-30-15, and would incorporate mitigation measures that would reduce GHG emissions as demonstrated above, it is concluded that the GHG emissions impact would be cumulatively less than significant.

5.7.10 IMPACT CONCLUSION

With implementation of the recommended mitigation measures, the Project's impact on GHG emissions would be less than significant.

5.7.11 REFERENCES

California Air Pollution Control Officers Association (CAPCOA). 2010 (August). *Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures*. Sacramento, CA: CAPCOA. http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.

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5.8 HYDROLOGY AND WATER QUALITY

5.8.1 METHODOLOGY

This section of the Draft SEIR describes potential hydrology hazards and water quality impacts relative to the proposed Project and is based on information contained within the following technical sources:

- Sikand. 2017 (April). *Drainage Concept for Vesting TTM No. 073336 (NorthLake Phase 1)*. (Included as Appendix H-1.)
- Geosyntec. 2015 (September). *NorthLake Specific Plan Water Quality Technical Report, NorthLake Specific Plan.* (Included as Appendix H-2.)

The analysis of construction and post-development (operational) phase water quality impacts, including hydromodification impacts, takes into account the best management practices (BMPs) selected for compliance with the Municipal Separate Storm Sewer System (MS4) Permit and County Low Impact Development (LID) Manual requirements and incorporated into the Project's design. A more detailed description of the impact analysis methodology for surface water and groundwater quality is provided in Section 4 and Section 6 of the Water Quality Technical Report (WQTR) provided in Appendix H-2 of this Draft EIR.

5.8.2 BACKGROUND INFORMATION

1992 NorthLake Specific Plan Environmental Impact Report

The following summary reflects conditions existing at the time of preparation and certification of the 1992 NorthLake Specific Plan EIR (1992 SP EIR, which is incorporated by reference) and is included as background information to provide context for the scope of this SEIR analysis. Adopted mitigation measures from the 1992 SP EIR relevant to hydrological issues are included below in Section 5.8.6. Because no significant impacts relevant to water quality were identified in the 1992 SP EIR, no mitigation measures relevant to water quality issues were adopted in 1992.

The following relevant hydrological and water quality impacts were identified in the 1992 SP EIR:

- Issues pertaining to placing people or housing within a 100-year flood hazard area were determined to be less than significant at the conceptual analysis level because no portion of the project site is located within areas designated as floodway or floodplain. The entire NorthLake site is classified as Zone C—an area of minimal flooding.
- The proposed installation of debris basins, storm drains, streets, and catch basins over the developed project site would reduce existing drainage flows. Drainage facilities would reduce site runoff contributions to Castaic Lagoon by removal of sediment and debris. This reduction would not significantly impact the lagoon as a groundwater recharge reservoir.
- Development of the site and the associated increase in impervious cover may result in increased flood hazards.
- The proposed project would not significantly impact the quality and quantity of surface and groundwater down-gradient from the site. Limited amounts of certain chemical compounds, bacteria and other elements would be carried by project-site runoff, but would result in minimal impacts because irrigation runoff would be minimal and site runoff would be diluted.

No portion of the project site is located within areas designated as floodway or floodplain. The entire NorthLake site is classified as Zone C—an area of minimal flooding. Implementation of the proposed project would change existing drainage patterns and hydrology as a result of finished grading and the filling of Grasshopper Canyon. Upon implementation of the proposed Drainage Concept Plan and installation of all proposed storm drain features, peak flow rates during a combined 25-year and 50-year storm event would be less than under existing conditions during a 50-year storm, thereby reducing the risk of flood hazards. The 1992 SP EIR described that prior to project approval, the Applicant shall submit a Drainage Concept Plan to the Los Angeles County Department of Public Works for approval. The Drainage Concept Plan is part of the proposed project and is a standard requirement for project approval in Los Angeles County and as such, the proposed project would not require mitigation measures.

Implementation of the proposed project would limit fecal coliform pollutants downstream (and ultimately Castaic Lagoon) by eliminating cattle grazing activities. However, other forms of chemical compounds and bacteria associated with urban development would be present in the site runoff. Implementation of the proposed drainage plan improvements would intercept and treat such pollutants to required levels, and sediment loads entering Castaic Lagoon would be lower than under existing conditions. As such, the proposed project would not significantly impact the quality or quantity of surface water flows and mitigation would not be required.

The proposed project would result in an increase in wastewater generation requiring treatment. Implementation of the water reclamation facility proposed as part of the 1992 NorthLake Specific Plan project would involve limited–to-no direct discharge of the tertiary treated water into off-site drainages or streams because discharge from the plant would be used for irrigation purposes solely within the project site. Treatment of the wastewater directed to the on-site facility or the Valencia Water Reclamation Plant (WRP) would be monitored by the County Sanitation Districts in accordance with the Water Reclamation Requirements and National Pollutant Discharge Elimination System (NPDES) Permit for the facilities to ensure that discharge meets established water quality standards. As such, the proposed project would not adversely affect downstream water quality.

The following additional project features would contribute to avoidance of impacts to water quality. The proposed Landscape Plan would incorporate the use of hardy, low maintenance turf grass species as well as other drought tolerant ground coverings to reduce rates and volume of fertilizers and insecticide application. The proposed project would comply with all water reclamation and NPDES permit requirements associated with its proposed water reclamation system including the implementation of a water quality monitoring program.

2012 Santa Clarita Valley Area Plan Environmental Impact Report

The following summary reflects conditions existing at the time of preparation of the Santa Clarita Valley Area Plan 2012 (SCVAP 2012) EIR (which is incorporated by reference), and is included as further background information to provide a context for the scope of this SEIR analysis.

The County's Planning Area contains many natural streams and creeks (including San Francisquito Creek, Bouquet Canyon Creek, and Castaic Creek) that function as storm drain channels, conveying surface runoff into the Santa Clara River. Areas generally located within and directly adjacent to the major waterbodies within the planning area, the Santa Clara River, its tributaries, and Castaic Lake, are within the 100-year flood event boundaries. The Santa Clara River Valley groundwater basin underlies the central portion of the planning area and a small portion extends into the southernmost portion of the NorthLake Specific Plan site. According to the SCVAP 2012 EIR, water quality within the planning area is regulated by statewide policies and regulations for implementing water quality control programs as well as strategies and the

implementation plan that were, at the time of EIR preparation, included in the 1994 Water Quality Control Plan for the Santa Clara River Basin. It should be noted that this Water Quality Control Plan has subsequently been updated.

The implementation of County policies and mitigation measures would reduce potential impacts on hydrology and water quality to a less than significant level except for those impacts related to development within a 100-year floodplain. According to the SCVAP 2012 EIR, unless revisions are made to the Land Use Map to ensure consistency with Area Plan policies, impacts on developing in the 100-year flood plain were identified as significant. However, the NorthLake Specific Plan Project site is not located within the 100-year floodplain; therefore, the potentially significant impact would not apply.

5.8.3 EXISTING CONDITIONS

The SEIR focuses on impacts of implementing the NorthLake Specific Plan based on existing conditions at the time the Notice of Preparation (NOP) for this document was distributed in 2015. The SEIR updates the existing conditions baseline information from the 1992 SP EIR and the SCVAP 2012 EIR where conditions in 2015 are new or different from the previous EIRs.

The hydrology and drainage information presented in this section for the Project site is based on the *Drainage Concept for Vesting TTM No. 073336 (Northlake Phase 1) in the Unincorporated Area of Los Angeles County* (Drainage Plan) prepared by Sikand Engineering (Sikand 2017) and included as Appendix H-1. Although the report was prepared specifically for Phase 1 of the NorthLake Specific Plan, the technical information presented includes an analysis of the entire Specific Plan site (inclusive of both Phases 1 and 2).

Information regarding water quality is based on the *Water Quality Technical Report, NorthLake Specific Plan* prepared by Geosyntec Consultants (Geosyntec 2015) and included as Appendix H-2.

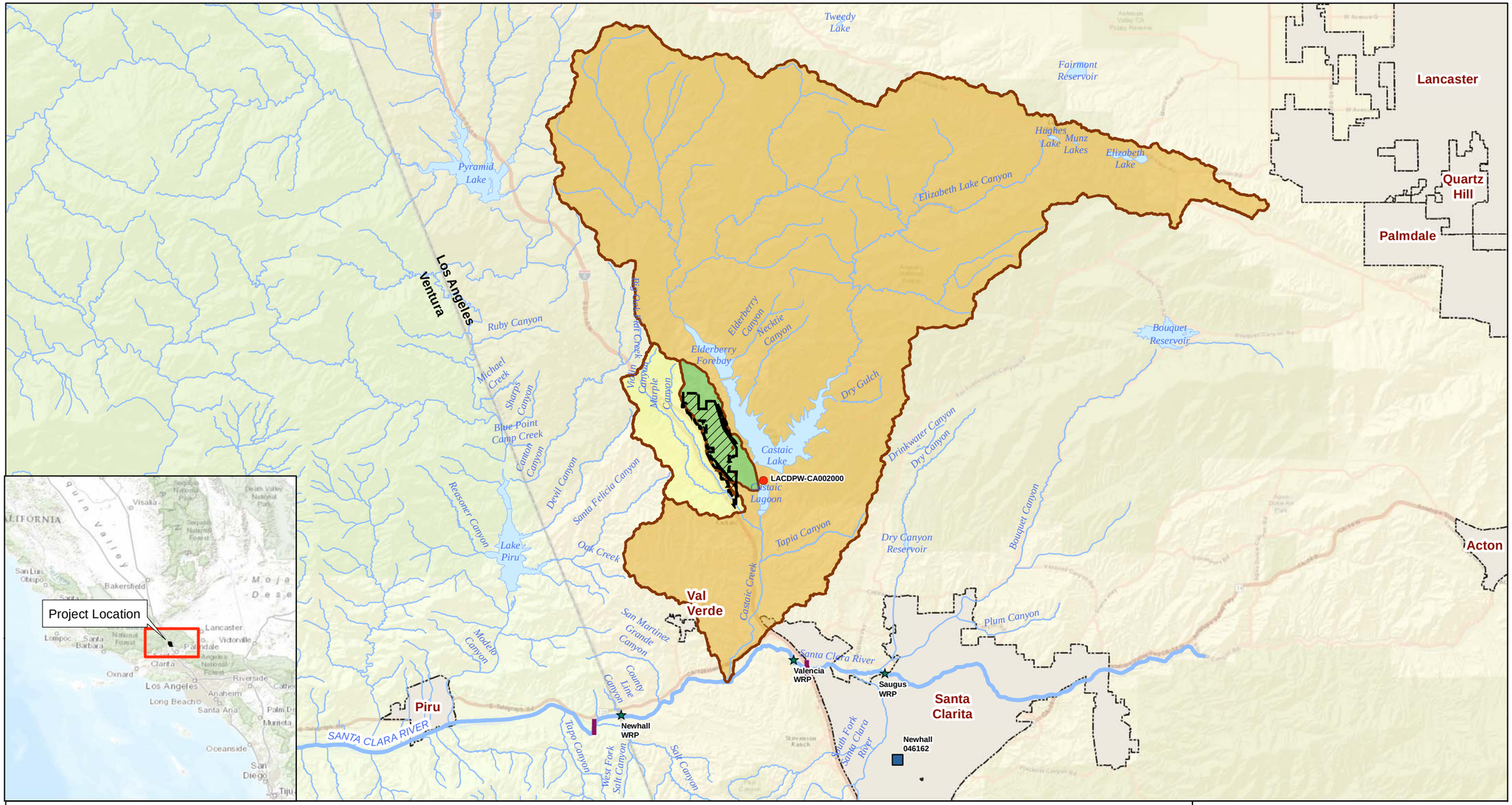
Existing Hydrology

The main drainage feature on the Project site is Grasshopper Creek, an intermittent stream which is a United States Geologic Survey (USGS) designated “blueline” watercourse and which runs through Grasshopper Canyon. The pre-development drainage area for the Project site consists of 2,108.9 acres, including the entire NorthLake Specific Plan area. Grasshopper Creek begins well to the north of the Specific Plan area at a point generally parallel with the northern reach of Castaic Lake, and continues in a southeast direction through Grasshopper Canyon, eventually reaching the northwestern edge of Castaic Lagoon. Exhibit 5.8-1, Existing Hydrology, illustrates the Project site’s location in relationship to the hydrologic features in the area.

Table 5.8-1 presents data on the existing hydrology and debris production for the Project site’s current drainage area.

TABLE 5.8-1
EXISTING HYDROLOGY FOR SPECIFIC PLAN SITE

Area (Acres)	Qb (Cubic Feet per Second)	Qbb (Cubic Feet per Second)	DPV (cubic yards)
2,108.9	**2,899.2**	**4,064.8**	**143,392**
Qb: 50 year burned design flow; Qbb: 50 year burned and bulked design flow; DPV: Debris Production Volume Source: Sikand 2017.			



Legend

- Project Boundary
- Waterbodies (National Hydrology Dataset)
- SantaClaraRiver
- Major Tributaries
- NCDC Rain Gage
- Water Reclamation Plant
- Santa Clara River Reach 5

Water Quality Monitoring Stations

- LACDPW

Watersheds

- Castaic Creek
- Marple Creek
- Grasshopper Creek
- Watershed Boundary

- City Boundaries
- Los Angeles County
- Ventura County

Source: Geosyntec Consultants 2015

Existing Hydrology

Exhibit 5.8-1

NorthLake Specific Plan EIR

N W E S

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The total peak flow from the Project site under existing conditions and based on a 50-year capital storm event is 4,064.8 cubic feet per second (cfs). Approximately 143,392 cubic yards of debris volume (including sediment and vegetative debris from surrounding open spaces) would be transported with the stormwater flows from the Project site under existing conditions.

Receiving Water Bodies

Grasshopper Creek

The majority of the Project area will discharge to Grasshopper Creek, which extends southeast from the developed portion of the Project approximately 1.4 miles to Castaic Lagoon. The Grasshopper Creek watershed comprises 4.2 square miles (2,685 acres) and varies in elevation from 1,177 feet mean sea level (msl) at its discharge point to 2,840 feet in its highlands (Geosyntec 2015).

Castaic Lagoon

Castaic Lake and Castaic Lagoon are reservoirs that are a part of the State Water Project. Castaic Lake provides emergency storage in the event of a shutdown of the State Water Project to the north, regulatory storage during normal operations, fish and wildlife enhancement, and recreation. Castaic Lagoon, downstream of Castaic Dam, provides additional recreation and serves as a recharge basin for the downstream water basin. Castaic Lagoon can be used for non-power boating, canoeing, and seasonal swimming. The Castaic Lagoon spillway discharges to Castaic Creek if water is released from the Lagoon (Geosyntec 2015).

Castaic Creek

A small portion of the Project will discharge to the existing storm drain network in Ridge Route Road, which discharges into Castaic Creek just downstream of the Castaic Lagoon spillway. The existing outfall associated with this drainage system is the outlet of Los Angeles County Department of Public Work's (LACDPW) Public Drain 2443 at Lake Hughes Road. The Castaic Creek watershed comprises 203 square miles (129,680 acres) and varies in elevation from 935 feet above msl at its discharge point to 5,745 feet in its highlands (Figure 2-1 of the WQTR, included as Appendix H-2). Castaic Creek ultimately joins the Santa Clara River approximately six miles south of the Project (Geosyntec 2015).

Marple Creek

The southern-most portion of the Project will discharge to Marple Creek. This earthen channel drains southeast approximately 0.4 miles into LACDPW's Violin Canyon Channel, a reinforced concrete channel. Violin Canyon Channel drains southeast approximately 1.0 mile to Castaic Creek (Figure 2-1 of the WQTR, included as Appendix H-2). The Marple Creek watershed comprises 9.4 square miles (6,000 acres) and varies in elevation from 1,190 feet above msl at its discharge point to 3,060 feet above msl feet in its highlands (Geosyntec 2015).

Santa Clara River

Castaic Creek drains into the Santa Clara River near the intersection of Highway 126 and Franklin Parkway, approximately two miles west of Six Flags Magic Mountain Park. This portion of the Santa Clara River is defined as Reach 5 by the Los Angeles Regional Water Quality Control Board (LARWQCB). The Project site comprises 1,382 acres within the 1,634 square-mile Santa Clara River Watershed (Geosyntec 2015).

Watershed Description

The Santa Clara River watershed drains an area of 1,624 square miles in the Transverse mountain range of Southern California. The Upper Santa Clara River watershed, which comprises approximately 650 square miles, is that portion of the watershed within Los Angeles County. Elevations within the watershed range from sea level at the river mouth to 8,900 feet at the summit of Mount Pinos in the northwest corner of the watershed. The river is fed by numerous named stream tributaries as it flows westward from the Acton Basin, through a confined canyon (Soledad Canyon), through the Santa Clarita Valley, and finally through the Santa Clara River Valley in Ventura County, which eventually opens out across the Oxnard Plain before flowing into the Pacific Ocean near the City of Ventura, approximately 40 miles downstream of the Project site.

The Santa Clara River is perennial from the existing Valencia WRP, downstream to approximately 3.5 miles downstream of the Los Angeles County/Ventura County line near Rancho Camulos. Flows in the Santa Clara River also can be affected by groundwater dewatering operations or by diversions for agriculture or groundwater recharge. Throughout the Santa Clara River channel, complex surface water/groundwater interactions lead to areas of alternating gaining and losing river segments. In particular, downstream of the Los Angeles County/Ventura County line, the Santa Clara River flows through the Piru groundwater basin where surface flows in the river are lost to groundwater. This ephemeral reach of the river is referred to as the "Dry Gap" (See Figure 2-4 of the WQTR, included as Appendix H-2). Perennial flow generally returns downstream of the confluence with Hopper Canyon Creek and continues past Piru, Sespe, and Santa Paula Creeks, and into the Oxnard Plain.

Artificial stream flow in the Upper Santa Clara River (i.e., that portion of the River within Los Angeles County) is derived from discharges of treated effluent from the Saugus and Valencia WRPs and runoff from agricultural fields and existing urban areas (LARWQCB, 2006). The Saugus WRP, located near Bouquet Canyon Road bridge, creates surface flows in the River from its outfall to near the I-5 bridge. The Valencia WRP outfall is located immediately downstream of the I-5 bridge and creates surface flows extending to the Dry Gap.

Other wastewater treatment facilities in Ventura County that discharge to the Lower Santa Clara River (i.e., that portion of the river within Ventura County) or to groundwater near the river, include the Piru Wastewater Treatment Plant, the Fillmore Wastewater Treatment Plant, the Santa Paula Wastewater Reclamation Facility, the Saticoy Sanitary District Treatment Facility, and the Ventura Water Reclamation Facility, which discharges tertiary-treated wastewater from domestic, commercial, and industrial sources into the Santa Clara River Estuary.

The existing Santa Clara River floodplain generally consists of a natural alluvial river system with a sand-bedded, braided channel and broad floodplain terraces. Bed material in the Santa Clara River is mostly composed of non-cohesive sands and gravels. Bank erosion is due to flow impinging upon the banks. This kind of system is characterized by high sediment loads, high bank erodibility, and intense and intermittent runoff conditions. Combined with the relatively flat gradient of the River through the Project area (average slopes range from five to 0.5 percent), it has a high potential to aggrade (deposit sediment) at low velocities (Geosyntec 2015).

Alluvial Groundwater Basins

As illustrated in Figure 2-4 of the WQTR, included as Appendix H-2, the Santa Clara River is underlain by several distinct alluvial groundwater basins, including the Piru, Fillmore, and Santa Paula Basins in Ventura County and the Santa Clara River Valley East Basin in Los Angeles County (below Castaic Lagoon in the Project location). These basins are divided longitudinally by sills or ridges of bedrock that support areas of locally-high (shallow) groundwater, including the area upstream from the County line (above the Piru Basin), and upstream from the mouth of Sespe Creek (the transition between the Piru and Fillmore Basins). This locally-high groundwater helps to sustain summer baseflow and riparian vegetation within the Santa Clara River corridor even through relatively dry climatic cycles (Geosyntec 2015).

Flows

Flows in the Santa Clara River, as in most southern California streams, are highly episodic. For the gauged period between 1953 and 1996, annual flow at the Los Angeles/Ventura County line gauge ranged between 253,000 acre-feet (1969) and 561 acre-feet (1961). Annual peak flows at the County line between 1953 and 1996 ranged from 68,800 cfs (1969) to 109 cfs (1960). Of note is that the second highest annual peak, 32,000 cfs in 1966, was less than half of the highest peak (68,800 in 1969). These large episodic events modify the geomorphic characteristics of the Santa Clara River mainstem (Geosyntec 2015).

Sediment delivery from hillslopes and tributaries to the mainstem river is dominated by extreme events associated with large, infrequent storms. The episodic and extreme nature of discharge in the watershed results in the majority of sediment transport occurring in very short periods of time. For example, annual sediment discharge over the past several decades at the County line, Sespe Creek, and Montalvo stream gauges (i.e., representing the upper Santa Clara River, Sespe Creek, and lower Santa Clara River watersheds) is estimated to have varied by a factor of more than 50,000. The three water years that contain the highest annual maximum instantaneous discharge at the Montalvo gauge account for nearly half of the total sediment yield out of the Santa Clara River. In contrast, most years have an annual total sediment yield less than ten percent of the average annual total sediment yield. Unlike humid-region rivers, moderate discharges of intermediate recurrence thus do not carry the majority of the sediment load—the "dominant discharge" for the Santa Clara River is the largest discharge on record (Geosyntec 2015).

Vegetation and Habitat Types

As throughout Southern California, rainfall in the Santa Clara River watershed alternates between wet and dry periods, a variation that is central to understanding the geomorphic history of the watershed. Wet cycles tend to persist for several years, sometimes for periods of six or eight years, during which rainfall, although variable, may average about 140 to 150 percent of the long-term average. For the woody riparian vegetation along the banks and on islands in the braided channels, the wet cycles are crucial periods for establishment and growth. During dry cycles, the roots of the riparian vegetation must grow downward to the water table or perched zones, and where it cannot do so, this stand of vegetation will die back.

The diversity of habitat conditions in the Santa Clara River at any one time supports a variety of aquatic invertebrates, aquatic plants, and fishes. The density, biomass, and location of vegetation in relation to the channel bottom are directly dependent upon the frequency of disturbance by flood flows. Successional mulefat scrub occupies the active channel and is disturbed annually by flows. Channel-bottom habitat also includes all aquatic features, such as pools and flowing water, as well as most of the emergent wetlands in the Santa Clara River corridor because of the

presence of water. In contrast, mature riparian forests are located above the active Santa Clara River channel and are only flooded during infrequent storm events, which allows large trees to become established between events.

Stands of vegetation are eroded by high flows, and newly vegetated areas are created where vegetation becomes established by seeds or buried stems. Often during high flows, new sandbars are formed and old ones are destroyed. High flows can also change the alignment of the low-flow channel as well as the number and location of aquatic habitats of the Santa Clara River. In high-flow years, wetland vegetation along the margins of the low-flow channel and pools may increase. In high-flow years, this vegetation would be removed, but would likely become reestablished during the spring and summer by natural colonization processes.

The aquatic habitats of the River are in a dynamic state of creation, development, disturbance, and destruction (Corps and CDFW, 2010). The amount of vegetation within the Santa Clara River Corridor appears to have increased since the 1960s, likely due to the increased summer return flows from agricultural water and to year-round augmentation of base flows due to treated effluent discharge to the River from the Valencia and Saugus WRPs. However, this vegetation does not seem to provide enough erosion resistance to maintain a "stable" channel capable of withstanding regular "resets," which occur at intervals averaging about a decade, or much less than the expected lifetime of the riparian woodlands which do get established (Geosyntec 2015).

Dry Gap

The Dry Gap is underlain by the Piru Groundwater Basin, which begins about 0.7 stream miles below the Blue Cut gauging station at a point where the alluvium is thin and underlain by nonwater bearing rocks. The western boundary of the Piru Groundwater Basin is in the vicinity of the Fillmore Fish Hatchery, just east of the City of Fillmore at a reach of rising water. Under most flow conditions, all of the stream flow of the Santa Clara River from above the confluence with Piru Creek infiltrates into the Piru Groundwater Basin so that there is no continuity of surface flow. Continuous surface flow between Blue Cut and Piru Creek often exists following large winter storms, during large releases from Castaic Lake, and in the winter and early spring of exceptionally wet years. The United Water Conservation District (UWCD) has estimated, using flow data collected over the past 50 years, that the Santa Clara River has continuous flows from the Los Angeles County Line to the Pacific Ocean only 21.9 days year (six percent of the year), with the vast majority falling in wet years (Geosyntec 2015).

Conservation releases from Lake Piru, which is located within the Piru Groundwater Basin, also contribute to the connectivity of the Santa Clara River below the confluence with Piru Creek. UWCD releases water from the Santa Felicia Dam (SFD) at scheduled intervals in order to replenish downstream aquifers in the Santa Clara River and Oxnard Plain. The SFD is located at the southernmost end of Lake Piru. These conservation releases normally start in September and last for between three to eight weeks depending on the water supply and release rate. In the one to three weeks following the initiation of a release, a low-flow channel is gradually created in Santa Clara River Reach 4 below Piru Creek which allows some surface waters to continue downstream in the normally dry reach. The incised channel created by the conservation releases typically remains in the reach and maintains the high efficiency of surface flows until storm flows from upstream watersheds fill in the channel and restore the flat, wide, braided morphology to the floodplain. Flows that breach the dry gap appear to be attributed to a number of factors, including (1) lower than normal percolation rates in the Piru Groundwater Basin, (2) wetter than normal water years, (3) larger storms, and (4) conservation releases from Lake Piru/SFD.

Based on the information available, single large precipitation events alone may not be indicative of when the Dry Gap is breached. Other factors, such as antecedent moisture conditions and timing and magnitude of conservation releases, influence when storm flows may continually flow through the Dry Gap (Geosyntec 2015).

Beneficial Uses

The Basin Plan for the Los Angeles Region specifies the beneficial uses for of major water bodies within this region. Beneficial uses for Castaic Creek, Castaic Lagoon, and the Santa Clara River are shown in Table 5.8-2, Beneficial Uses of Castaic Creek, Castaic Lagoon, and Santa Clara River (Geosyntec 2015). As identified in Table 5.8-2, the existing and potential beneficial uses of these receiving water bodies include the following:

- MUN: Community, military, or individual water supply systems including, but not limited to, drinking water supply (a potential beneficial use)
- IND: Industrial activities that do not depend primarily on water quality
- PROC: Industrial activities that depend primarily on water quality
- AGR: Agricultural supply waters used for farming, horticulture, or ranching
- GWR: Groundwater recharge for natural or artificial recharge of groundwater
- REC1: Water contact recreation involving body contact with water and ingestion is reasonably possible
- REC2: Non-contact water recreation for activities in proximity to water, but not involving body contact
- WARM: Warm freshwater habitat to support warm water ecosystems
- WILD: Wildlife habitat waters that support wildlife habitats
- RARE: Waters that support rare, threatened, or endangered species and associated habitats (Castaic Creek and Santa Clara River Reach 5 only; does not apply to Castaic Lagoon)
- WET: Wetland ecosystems (Santa Clara River Reach 5 only; does not apply to Castaic Creek or Castaic Lagoon)

TABLE 5.8-2
BENEFICIAL USES OF CASTAIC CREEK, CASTAIC LAGOON AND SANTA CLARA RIVER

	Description	Castaic Creek (Santa Clara River Reach 5 to Castaic Lake)	Castaic Lagoon	Santa Clara River
MUN	Municipal and domestic supply	I	E[a]	P[a]
IND	Industrial service supply	I	E	E
PROC	Industrial process supply	I	E	E
AGR	Agricultural supply	I	E	E
GWR	Ground water recharge	I	E	E
FRSH	Freshwater replenishment	I	E	E
REC-1	Water contact recreation	I	E	E
REC-2	Non-contact water recreation	E	E	E
WARM	Warm freshwater habitat	I	E	E
WILD	Wildlife habitat	E	E	E
RARE	Rare, threatened, or endangered species	E		E
WET[b]	Wetland habitat			E

I: Intermittent beneficial use; E: Existing beneficial use; P: Potential beneficial use

[a] MUN designation under SB 88-63 and RB 89-03. Some designations may be considered for exemptions at a later date.
[b] Waterbodies designated as WET may have wetlands habitat associated with only a portion of the waterbody. Any regulatory action would require a detailed analysis of the area.

Source: Geosyntec 2015.

State Water Project Castaic Lake Outlet Tower Data

The California Department of Water Resources (DWR) Division of Operations and Maintenance has conducted water quality monitoring as part of the State Water Project (SWP) to assess the condition of surface waters in California for drinking water, recreational uses, and fish and wildlife concerns. Water quality monitoring has been conducted at the Castaic Lake Outlet Tower (CA002000), which is the point at which water flows from Castaic Lake into the Castaic Lagoon, between 1972 and 2015 (see Figure 2-1 of the WQTR, included as Appendix H-2, for sample location).

The monitoring results are discussed and compared to the applicable water quality objectives from the Basin Plan, California Toxics Rule (CTR), and limits from the USEPA National Recommended Ambient Water Quality Criteria, where applicable. The source for each objective is noted below each table.

Selected general constituents include total suspended solids (TSS), turbidity, total organic carbon (TOC), hardness, chloride, alkalinity, dissolved boron, and pH. TSS and turbidity are measures of the particulate matter suspended in water. Excessive sediment can impair aquatic life by filling interstitial spaces of spawning gravels, impairing fish food sources, filling rearing pools, and reducing beneficial habitat structure in stream channels. In addition, excessive sediment can cause taste and odor problems in drinking water supplies and block water intake structures. Turbidity is associated with project development primarily during the construction phase. Total organic carbon is a measure of the organic matter in water.

Hardness is a measure of the multivalent cations in water, principally calcium, magnesium, strontium, iron, and manganese. It is expressed as an equivalent concentration of calcium carbonate ($CaCO_3$). The hardness in water is derived largely from contact with soil and rock formations and affects the CTR values for certain metals. Waters with a hardness concentration from 121 mg/L to 180 mg/L as $CaCO_3$ are considered hard; waters with a hardness concentration above 180 mg/L as $CaCO_3$ are considered very hard.

High levels of chloride in Santa Clara River Reaches 3, 5, and 6 are causing impairment of listed beneficial uses for agricultural irrigation. Irrigation of salt sensitive crops, such as avocados and strawberries, with water containing elevated levels of chloride can result in reduced crop yields. A chloride Total Maximum Daily Load (TMDL) was approved for these reaches in 2005. Boron is a natural mineral that can affect agricultural uses at elevated concentrations (especially citrus).

Alkalinity is a measure of the capacity of water to neutralize acids and acts as a buffer against sudden changes in pH, which is a measure of the acidity or alkalinity of a solution. Alkaline compounds in water primarily include bicarbonates, carbonates, and hydroxides. It is expressed as an equivalent concentration of calcium carbonate ($CaCO_3$).

The wasteload allocations for municipal stormwater discharges into Reach 5 of the Santa Clara River are summarized in Table 5.8-3, TMDL Wasteload Allocations for MS4 and Stormwater Sources to Santa Clara River Reach 5. Pollutant reductions are regulated through effluent limits prescribed in Publicly Owned Treatment Works (POTW) and minor point source NPDES Permits, BMPs required in NPDES MS4 Permits, and State Water Resources Control Board (SWRCB) Management Measures for non-point source discharges.

TABLE 5.8-3
TMDL WASTELOAD ALLOCATIONS FOR MS4 AND STORMWATER SOURCES TO SANTA CLARA RIVER REACH

<table>
<tr><th>Impairing Pollutant</th><th>Numeric Water Quality Objective</th><th>Wasteload Allocation</th></tr>
<tr><td>Chloride</td><td>100 mg/L.</td><td>Wasteload allocations have been adopted for the Saugus WRP) and the Valencia WRP. Other NPDES discharges contribute a minor chloride load. The wasteload allocation for these point sources is 100 mg/L.

The source analysis indicates that non-point sources are not a major source of chloride. The load allocations for non-point sources is 100 mg/L.</td></tr>
<tr><td>Nitrogen Compounds</td><td>The numeric target for nitrogen in this TMDL is based on achieving the existing nitrogen water quality objective of 5 mg/L NO_3-N + NO_2-N. (Note: the numeric target that is used to calculate the wasteload allocations includes a 10% margin of safety; thus the numeric target is 4.5 mg/L NO_3-N + NO_2-N.)

The water quality objective for ammonia in Reach 5 used in the nitrogen compounds TMDL was based on temperature and pH for different River segments within the reach:

<table><tr><th colspan="3">Ammonia Water Quality Objective (mg/L as N)[a]</th></tr><tr><th></th><th>1-Hour Average</th><th>30-Day Average</th></tr><tr><td>Reach 5 at County Line</td><td>3.4</td><td>1.2</td></tr><tr><td>Reach 5 below Valencia</td><td>5.5</td><td>2.0</td></tr><tr><td>Reach 5 above Valencia</td><td>4.8</td><td>2.0</td></tr></table></td><td>Concentration-based wasteloads are allocated to municipal, industrial, and construction stormwater sources regulated under NPDES permits. For stormwater permittees discharging into Reach 5, the following wasteload allocations apply:

30-day average nitrate plus nitrite = 6.8 mg/L (NO_3-N+NO_2-N)
1-hour average ammonia = 5.2 mg/L (NH_3 as N)
30-day average ammonia = 1.75 mg/l (NH_3 as N)</td></tr>
</table>

TABLE 5.8-3
TMDL WASTELOAD ALLOCATIONS FOR MS4 AND STORMWATER SOURCES TO SANTA CLARA RIVER REACH

<table>
<tr><th>Impairing Pollutant</th><th>Numeric Water Quality Objective</th><th>Wasteload Allocation</th></tr>
<tr><td>Indicator Bacteria (Resolution R10-006)</td><td>Numeric Targets:
<table>
<tr><th>Constituent</th><th>Santa Clara River Reach 5 Requirement</th></tr>
<tr><td>E. Coli (Single Sample)</td><td>235/100 mL</td></tr>
<tr><td>E. Coli (Geometric Mean)</td><td>126/100 mL</td></tr>
</table></td><td>Wasteload allocations are given in terms of allowable exceedance days. The numeric targets may not be exceeded more than the number of allowable exceedance days allotted in the tables below.

Interim Allowable Exceedance Days

(Dry Weather and Wet Weather deadline March 21, 2016):
<table>
<tr><th rowspan="2">Time Period</th><th colspan="2">Annual Allowable Exceedance Days of the Single Sample Objective (days)</th></tr>
<tr><th>Daily Sampling</th><th>Weekly Sampling</th></tr>
<tr><td>Dry Weather</td><td>17</td><td>3</td></tr>
<tr><td>Wet Weather</td><td>61</td><td>9</td></tr>
</table>
Final Allowable Exceedance Days

(Dry Weather deadline March 21, 2023; Wet Weather deadline March 21, 2029):
<table>
<tr><th rowspan="2">Time Period</th><th colspan="2">Annual Allowable Exceedance Days of the Single Sample Objective (days)</th></tr>
<tr><th>Daily Sampling</th><th>Weekly Sampling</th></tr>
<tr><td>Dry Weather</td><td>5</td><td>1</td></tr>
<tr><td>Wet Weather</td><td>16</td><td>3</td></tr>
</table></td></tr>
</table>

[a] The numeric targets are 10 percent smaller to incorporate a margin of safety.

Source: Geosyntec, 2015.

Castaic Lake/Castaic Lagoon

Castaic Lake, located directly north of Castaic Lagoon, is located at the end of the West Branch of the SWP, which is a 600-mile long water aqueduct system that transports water from the Sacramento-San Joaquin River Delta in northern California to various water facilities in southern California. The Lagoon is used as a recreation facility and supports swimming, fishing, and boating activities. Castaic Lagoon's primary functions are to provide emergency storage in the event of a shutdown of the SWP to the north, regulatory storage during normal operations, fish and wildlife enhancement, and recreation. Castaic Lagoon provides additional recreational opportunities and serves as a recharge basin for the downstream water basin (DWR 2015b).

The DWR Division of Operations and Maintenance has conducted water quality monitoring as part of the SWP to assess the condition of surface waters in California for drinking water, recreational uses, and fish and wildlife concerns. Water Quality monitoring has been conducted at Castaic Lake at the Outlet Tower (CA002000) between Upper Castaic Lake and Lower Castaic Lake (or Castaic Lagoon) between 1972 and 2015 (see Exhibit 5.8-1 for sample location).

Data for the sample location are summarized below for general and conventional parameters, selected nutrients, selected metals, and pesticides. The monitoring results are discussed and compared to the applicable water quality objectives. Water quality objectives are from the Los Angeles Region Basin Plan, CTR, and the USEPA National Recommended Ambient Water Quality Criteria, where applicable. The sources of each objective are noted below each table (Geosyntec 2015).

Selected General Constituents

Selected general constituents include TSS, turbidity, TOC, hardness, chloride, and alkalinity. TSS and turbidity are measures of the particulate matter suspended in water. Excessive sediment can impair aquatic life by filling interstitial spaces of spawning gravels, impairing fish food sources, filling rearing pools, and reducing beneficial habitat structure in stream channels. In addition, excessive sediment can cause taste and odor problems in drinking water supplies and block water intake structures. Turbidity is associated with Project development primarily during the construction phase. Total organic carbon is a measure of the organic matter in water.

Hardness is a measure of the polyvalent cations, primarily calcium and magnesium. It is expressed as an equivalent concentration of calcium carbonate ($CaCO_3$). Hardness measurements are important because the toxicity of metals (and the associated water quality objectives) is an inverse function of the hardness. High levels of chloride in Santa Clara River Reaches 3, 5, and 6 are causing impairment of listed beneficial uses for agricultural irrigation. Irrigation of salt sensitive crops, such as avocados and strawberries, with water containing elevated levels of chloride can result in reduced crop yields.

Alkalinity is a measure of the capacity of water to neutralize acids and acts as a buffer against sudden changes in pH. Alkaline compounds in water include bicarbonates, carbonates, and hydroxides. It is expressed as an equivalent concentration of calcium carbonate ($CaCO_3$) (Geosyntec 2015).

Water quality monitoring data for TSS, turbidity, TOC, hardness, chloride and alkalinity are summarized in Table 5.8-4.

TABLE 5.8-4
WATER QUALITY MONITORING DATA FOR GENERAL AND CONVENTIONAL PARAMETERS AT THE CASTAIC LAKE OUTLET TOWER

Constituent	Water Quality Standard	Dry Weather				
		No. Samples	No. Detects	Min	Max	Average
TSS (mg/L)	See footnote[a]	283	277	<0.1	10.4	2.6
Turbidity (NTU)	See footnote[b]	464	404	<1.0	17.0	2.0
Total Organic Carbon (mg/L)	N/A	326	326	1.5	9.6	3.3
Total Hardness (mg/L as $CaCO_3$)	N/A	360	360	104	218	157
Chloride (mg/L)	100	411	411	28	128	60
Total Alkalinity (mg/L as $CaCO_3$)	N/A	412	412	70	126	92
Dissolved Boron ($\mu g/L$)	1,500	410	410	60	400	260
pH (standard units)	See footnote[c]	686	686	7	10.3	8.5

N/A: not applicable (there is no water quality standard for this constituent); mg/L: milligrams per liter

[a] Water shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses.

[b] Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases in natural turbidity attributable to controllable water quality factors shall not exceed the following limits: Where natural turbidity is between 0 and 50 NTU, increases shall not exceed 20percent.

[c] The pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharges. Ambient pH levels shall not be changed more than 0.2 units from natural conditions as a result of waste discharge. Average value is geometric mean of available data.

Source: Geosyntec 2015.

TSS and Turbidity. The concentrations of TSS and turbidity monitored at the Outlet Tower appear relatively consistent over time and between wet and dry weather monitoring. The average TSS concentration was 2.6 mg/L. The Basin Plan objective for TSS is, "Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses". The average turbidity measurement was 2.0 mg/L. The Basin Plan objective for turbidity is, "Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases in natural turbidity attributable to controllable water quality factors shall not exceed the following limits: Where natural turbidity is between 0 and 50 NTU, increases shall not exceed 20%" (Geosyntec 2015).

Hardness. Total hardness concentrations at the Outlet Tower indicate that the waters in Castaic Lagoon are hard to very hard, with an average concentration of 157 mg/L. High hardness is a reflection of the water quality of the SWP water supplies and the natural mineral content in runoff from the watershed. The average total hardness concentration was used to determine the CTR acute freshwater criteria for selected metals (cadmium, copper, lead, nickel, silver, zinc, and chromium) (Geosyntec 2015).

Chloride. Similar to hardness, the monitoring data collected at the Outlet Tower indicated moderate to high chloride concentrations. Chloride concentrations ranged between 28 mg/L and 128 mg/L, with an average of 60 mg/L. The Basin Plan objective for chloride is 100 mg/L, which was exceeded 27 times in observed data (Geosyntec 2015).

Total Alkalinity. The total alkalinity data collected at the Outlet Tower indicated relatively consistent concentrations. The average concentration was 92 mg/L. There is no Basin Plan objective or CTR criteria for total alkalinity (Geosyntec 2015).

Dissolved Boron. The dissolved boron concentration ranged from 60 µg/L to 400 µg/L, with an average of 260 µg/L at the Outlet Tower. These concentrations are well below the Basin Plan objective of 1,500 µg/L (Geosyntec 2015).

PH. pH ranged from 7 to 10.3 standard units at the Outlet Tower, with an average of 8.5 standard units. The Basin Plan objective is between 6.5 to 8.5 standard units; the measured pH was greater than 8.5 standard units 84 times in the laboratory data and 318 times in the field data. This is likely due to the natural mineral composition of the water in Castaic Lake (Geosyntec 2015).

Selected Nutrients

The major nutrients of concern include nitrogen and phosphorus compounds. Phosphorus was measured as total phosphorus and sometimes as dissolved phosphorus in existing water quality data. Dissolved phosphorus is the more bioavailable form of phosphorus compared to total phosphorus, which is often made up of a high proportion of phosphorus associated with particulate matter. Ortho-phosphate is generally the largest component of inorganic dissolved phosphorus. Nitrogen is measured variously as nitrate, nitrite, nitrate+nitrite, ammonia, total nitrogen and total Kjeldahl nitrogen (TKN). TKN is the measure of ammonia plus the organic forms of nitrogen. Nitrate, nitrite, and ammonia are the more bioavailable forms of nitrogen, and of these, nitrate (or nitrate + nitrite) has the higher concentration in natural waters. Excessive nutrients in receiving waters can impair water quality by causing eutrophication (enrichment) which promotes the growth of algae. Excessive algae affect light penetration and causes dissolved oxygen depletion, which may kill fish and other aquatic species. In addition, some algae produce blooms that are toxic to other organisms (Geosyntec 2015). Table 5.8-5 summarizes available nutrient data.

TABLE 5.8-5
WATER QUALITY MONITORING DATA
FOR NUTRIENTS AT THE CASTAIC LAKE OUTLET TOWER

Constituent	Water Quality Standard	Dry Weather				
		No. Samples	No. Detects	Min	Max	Average
Dissolved Phosphorus (mg/L)	See footnote[a]	377	372	<0.01	0.17	0.04
Total Phosphorus (mg/L)	See footnote[a]	621	598	<0.01	0.17	0.04
Total Ortho-Phosphate (mg/L)	See footnote[a]	2228	186	<0.01	0.10	0.02
Dissolved Ammonia-N (mg/L)	N/A	289	91	<0.01	0.09	0.01
Total Ammonia-N (mg/L)	2.0[b]	327	9	<0.01	0.31	<0.01
Nitrate-N (mg/L)	5.0[c]	692	650	<0.01	3.40	0.60
Nitrite-N (mg/L)	5.0[c]	329	177	<0.001	0.32	0.01
Nitrate + Nitrite-N (mg/L)	5.0[c]	209	184	<0.01	1.01	0.33
TKN (mg/L)	See footnote[a]	582	572	<0.1	2.80	0.39
Total Organic Nitrogen (mg/L)	See footnote[a]	328	327	<0.01	1.33	0.45
Total Nitrogen (mg/L)[d]	See footnote[a]	--	--	--	--	0.64

[a] Waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses
[b] 4-day average, Early Life Stage present, average pH (8.5) and temperature of (19 °C (in Castaic Lagoon).
[c] Water quality objective for nitrate+nitrite-N.
[d] Total nitrogen was estimated using available nitrogen compound monitoring data.

Source: Geosyntec 2015.

Phosphorus. Monitoring data from the Outlet Tower show fairly consistent total and dissolved phosphorus levels, averaging 0.04 mg/L. As expected, the average ortho-phosphate concentrations are less than the total and dissolved phosphorus concentrations, averaging 0.02 mg/L. The Basin Plan water quality objective for phosphorus is a narrative standard, which states, "…waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses." (Geosyntec 2015)

Nitrogen. Nitrate-N, nitrite-N, and nitrate+nitrite-N concentrations were all generally low. The Basin Plan nitrate + nitrite-N water quality objective for Santa Clara River Reach 5 is 5 mg/L. The California Department of Public Health Primary Drinking Water maximum contaminant levels (MCL) for nitrate + nitrite-N is 10 mg/L.

Average ammonia concentrations were low and ranged from less than 0.01 mg/L to 0.31 mg/L. The four day average Basin Plan objective for total ammonia in freshwaters subject to "early life present" conditions is 2.0 mg/L in Castaic Lagoon (given an average pH of 8.5 and average temperature of 19 ºC). The ammonia water quality objectives for the Santa Clara River Nitrogen Compounds TMDL range from 3.4 mg/L to 5.5 mg/L (one hour average) and 1.2 mg/L to 2.0 mg/L (30-day average). All data were less than these water quality objectives.

Total Kjeldahl nitrogen (TKN) concentrations generally ranged between less than 0.01 mg/L to 2.8 mg/L. The Basin Plan does not contain a water quality objective for TKN, but does include a narrative standard which states, "…waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance of adversely affects beneficial uses."

Total nitrogen was not measured in Castaic Lake, so the total nitrogen value reported in Table 5.8-5 (0.64 mg/L) was calculated from the available nitrogen compounds data. The Basin Plan does not contain a water quality objective for total nitrogen, but does include a narrative standard which states, "waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance of adversely affects beneficial uses." The calculated concentration would not be expected to cause a nuisance or adversely affect beneficial uses (Geosyntec 2015).

Selected Metals

Metals occur naturally in soils and sediments. Metals present in stormwater runoff are typically commercially-available metals used in transportation (e.g. automobiles), buildings, and infrastructure. Metals are also found in fuels, adhesives, paints, and other coatings. Copper, lead, and zinc are the most prevalent metals typically found in urban runoff and can be toxic at high concentrations. Aluminum is one of the more abundant elements in the earth's crust. Iron, antimony, arsenic, chromium, mercury, nickel, selenium, and silver are indicative of overall water quality and may also be toxic at high concentrations. Metals may be toxic to aquatic organisms and certain metals, such as mercury, can bioaccumulate in fish and other aquatic organisms and affect beneficial uses of receiving waters. Table 5.8-6 presents the water quality monitoring data at the Outlet Tower (Geosyntec 2015).

TABLE 5.8-6
WATER QUALITY MONITORING DATA
FOR METALS AT THE CASTAIC LAKE OUTLET TOWER

Constituent	Water Quality Standard	Dry Weather				
		No. Samples	No. Detects	Min	Max	Average
Dissolved Aluminum (ug/L)	N/A	100	6	<10.0	40.0	<10.0
Dissolved Antimony (ug/L)	N/A	4	0	<5.0	<5.0	<5.0
Dissolved Arsenic (ug/L)	340	382	100	<1.0	5.0	3.7
Total Arsenic (ug/L)	N/A	2	0	<10.0	<10.0	<10.0
Dissolved Cadmium (ug/L)	3.1[b]	100	0	<1.0	2.5	1.1
Dissolved Chromium (ug/L)	260[b]	100	47	<1.0	8.0	2.3
Dissolved Copper (ug/L)	13.2[b]	485	256	<1.0	160.0	21.0
Total Copper (ug/L)	13.7[b]	4	4	3.0	36.0	13.3
Dissolved Iron (ug/L)	N/A	399	114	<5.0	110.0	7.6
Total Iron (ug/L)	1,000 [d]	1	1	30.0	30.0	30.0
Dissolved Lead (ug/L)	4.1[b]	398	9	<1.0	30.0	4.0
Dissolved Mercury (ug/L)	N/A	105	1	<0.20	0.5	0.2
Total Mercury (ug/L)	0.051[d]	171	9	<1.0	2.0	<1.0
Dissolved Nickel (ug/L)	76[b]	62	44	<1.0	3.0	1.2
Dissolved Selenium (ug/L)	N/A	370	47	<1.0	20.0	2.8
Total Selenium (ug/L)	5.0	1	0	<1.0	<1.0	<1.0
Dissolved Silver (ug/L)	7.5[b]	101	0	<1.0	5.0	1.1
Dissolved Zinc (ug/L)	170[b]	398	147	<5.0	340.0	8.9

[a] Los Angeles Basin Plan Water Quality Objective.
[b] Water quality standards for metals are chronic (4 day average concentration) California Toxics Rule (CTR) criteria for the average hardness value (157 mg/L) observed in Castaic Lagoon, except for dissolved silver, which is an instantaneous maximum criterion.
[c] Detection limits for dissolved cadmium changed over time.
[d] CTR human health protection, 30 day average, fish consumption only.

Source: Geosyntec 2015.

Metals. Table 5.8-6 presents the average and range of dissolved and total metals concentrations observed at the Castaic Lake Outlet Tower. The observed concentrations of dissolved arsenic, dissolved cadmium, dissolved chromium, dissolved nickel, and dissolved silver were all less than the corresponding applicable chronic (4-day average) CTR criteria. Dissolved copper, total copper, dissolved lead, total mercury, and dissolved zinc all exceeded the chronic CTR criteria. The observed dissolved copper concentrations ranged from <1.0 µg/L to 160.0 µg/L and exceeded the chronic CTR criterion 12 times. The observed total copper concentrations ranged from 3 µg/L to 36 µg/L and exceeded the chronic CTR criterion once. The observed dissolved lead concentrations ranged from <1.0 µg/L to 30.0 µg/L and exceeded the chronic CTR criterion eight times. The observed total mercury concentrations ranged from <1.0 µg/L to 2.0 µg/L and exceeded the chronic CTR criterion nine times. The observed dissolved zinc concentrations

ranged from <5.0 µg/L to 340.0 µg/L and exceeded the chronic CTR criterion twice (Geosyntec 2015).

Water Supply Source and Quality

According to the WQTR, the Project's water supply would be provided by the Newhall County Water District (NCWD), a retail purveyor for the Castaic Lake Water Agency (CLWA). CLWA receives and treats surface water from the State Water Project (SWP) and other imported sources. The SWP consists of facilities operated by the DWR to transmit water to SWP contractors for agricultural or urban supply uses. CLWA operates two water treatment plants, the Earl Schmidt Filtration Plant in Castaic and the Rio Vista Water Treatment Plant in Saugus. The Santa Clarita Valley's four water retailers (Santa Clarita Water Division (SCWD), Los Angeles County Waterworks District #36, NCWD, and Valencia Water Company (VWC) distribute the treated imported water along with groundwater from the Alluvial Aquifer and the Saugus Formation. The NCWD supplies water to its customers in an approximately 34-square mile area in portions of the City of Santa Clarita and unincorporated portions of Los Angeles County (Newhall, Canyon Country (Pinetree), Saugus (Tesoro), and Castaic (the Project location) (Geosyntec 2015).

Existing water quality conditions for urban water uses in the CLWA service area are documented in the Santa Clarita Valley Water Quality Reports (or Consumer Confidence Report [CCR]). An annual Water Quality Report is provided prior to July 1st to all Santa Clarita Valley residents who receive water from one of the four local retail water purveyors in the CLWA service area. There is detailed information in that report about the results of quality testing of the groundwater and treated SWP water supplied to the residents of the Santa Clarita Valley (Geosyntec 2015).

Perchlorate

As stated in the WQTR, the 2010 Santa Clarita Valley Urban Water Management Plan (UWMP) discusses water quality constituents, both naturally occurring and man-made, in source waters. The following sections summarize this information for a constituent of concern in groundwater, perchlorate.

Perchlorate, a chemical used in making rocket and ammunitions propellants, has been a groundwater quality constituent of concern in the Santa Clarita Valley since 1997 when it was originally detected in four wells operated by the CLWA purveyors in the eastern part of the Saugus Formation, near the former Whittaker-Bermite facility (CLWA, 2011). In late 2002, the contaminant was detected in a fifth well, an Alluvial well (SCWD's Stadium Well) also located near the former Whittaker-Bermite site, which was immediately taken out of service. Perchlorate was detected again in early 2005 in a second Alluvial well (VWC's Well Q2) near the former Whittaker-Bermite site, and in 2006 in very low concentrations (below the detection limit for reporting) in a Saugus well (NCWD's NC-13) near one of the originally impacted wells. The maximum contaminant level (MCL) of six micrograms per liter (µg/L) was adopted by the California Department of Public Health (DPH) in 2007 (Geosyntec 2015).

In August 2010, perchlorate was detected in VWC's Saugus Well 201 (CLWA, 2011). Confirmation sampling in the months that followed confirmed the detection of perchlorate at concentrations that ranged from 5.7 to 12 µg/L. VWC removed Well 201 from service when perchlorate was first detected (Geosyntec 2015).

To date, perchlorate has been detected in a total of eight wells, in both the Saugus Formation and the Alluvium. Two of these wells (SCWD Saugus 1 and Saugus 2) have been returned to service with DPH approval, utilizing approved perchlorate treatment. Two wells (VWC Well 157 and

SCWD Stadium Well) were sealed and the capacity replaced with new wells. NCWD Well 11 was taken out of service. VWC Well Q2 had treatment installed in 2005, which was then removed in 2007 with DPH approval; this well remains in service. The NCWD Well NC-13 is monitored annually; results have always been below the detection limit for reporting and the well remains in service. VWC Well 201 remains out of service pending evaluation of remediation alternatives. A more detailed discussion of pertinent events related to perchlorate contamination, containment, remediation and water supply restoration is provided in the 2013 Santa Clarita Valley Water Report (Geosyntec 2015).

Recycled Water

Recycled water will be provided to the Project from the Valencia WRP located along The Old Road south of the Project site. The Project proposes to use recycled water for landscape irrigation purposes by obtaining recycled water from the Valencia WRP.

Existing Groundwater Quality

Groundwater in the immediate vicinity of the Project site exists within the alluvial deposits south of Castaic Lagoon. The recharge source of the groundwater in the alluvial deposits is underflow from the Castaic Dam and from infiltration of water into the soils beneath Castaic Lagoon.

The Alluvial Aquifer and the Saugus Formation are the two groundwater sources within the Santa Clarita Valley. The Alluvial Aquifer system lies beneath the Santa Clara River and its tributaries (including the Castaic Creek, San Francisquito Canyon Creek, and Bouquet Canyon) and consists primarily of the land beneath the stream channel and floodplain (CLWA 2015). Recharge to this aquifer is predominantly from percolation of stream flow. The Alluvial Aquifer serves as a large source of the local water supply because the groundwater is easier to access than the deeper Saugus Formation and is capable of rapid water level recovery and storage in wet periods.

The Alluvial Aquifer has historic fluctuations in the concentrations of TDS; however, these groundwater quality variations generally correlate to precipitation and stream flow. Wet periods produce recharge of higher quality water. Therefore, the presence of long-term consistent water quality fluctuations that are affected by wet and dry cycles are not indicative of a trend toward groundwater quality degradation. In 2002, perchlorate was detected in one Alluvial Aquifer well located near the former Whittaker-Bermite facility. The well was subsequently inactivated for municipal use. All other alluvial wells have continually tested negative for perchlorate contamination.

The Saugus Formation is a large, deep aquifer that extends over an 84-square-mile area. The primary source of recharge for this aquifer is precipitation and direct infiltration from the Alluvial Aquifer located just above the Saugus Formation. Although this aquifer is larger and has much more groundwater storage capacity, it has historically been used only as a back-up source of water during dry years.

Long-term water quality data are not available for the Saugus Formation, which has only been used as a source of water since the 1970s. However, based on the most complete historical record, groundwater quality in the Saugus Formation has remained generally constant and there is no evidence of groundwater quality degradation that could be indicative of water overdrafts. However, perchlorate was discovered in four Saugus Formation wells in 1997 located near the former Whittaker-Bermite facility. All four wells are currently inactive and the water purveyors in the Santa Clarita Valley have entered into an agreement with the State Department of Toxic Substance Control (DTSC) to ensure review and oversight of the response activities related to perchlorate remediation.

5.8.4 RELEVANT REGULATIONS, PLANS, AND POLICIES

Federal

Clean Water Act

In 1972, the Federal Water Pollution Control Act [later referred to as the Clean Water Act (CWA)] was amended to prohibit discharges of pollutants to waters of the United States from any point source, unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. In 1987, the CWA was amended to require that the USEPA establish regulations for permitting of storm water discharges (as a point source) by municipal facilities, industrial facilities, and construction activities under the NPDES permit program. The USEPA published final regulations regarding stormwater discharges on November 16, 1990.The regulations require that municipal separate storm sewer system (MS4) discharges to surface waters must be regulated by an NPDES permit.

The CWA also requires states to adopt water quality standards for receiving water bodies that have designated beneficial uses (e.g., municipal, agricultural supply, recreational), along with water quality criteria necessary to support those uses. Water quality criteria are set concentrations of pollutants (e.g., suspended sediment, chloride, heavy metals) or narrative statements that represent the quality of water that is necessary to support a beneficial use. If the designated beneficial uses of a water body are compromised by pollutants, Section 303(d) of the Clean Water Act requires that the water body be listed as “impaired.” Because California did not establish a complete list of acceptable water quality criteria, U.S. EPA established, in the California Toxics Rule (CTR), numeric water quality criteria for certain toxic constituents in receiving waters with human health or aquatic life designated uses (40 CFR 131.38).Once a water body has been deemed impaired, a Total Maximum Daily Load (TMDL) must be developed for each water quality pollutant that is causing the impairment.

CWA Section 303(d) – TMDLs

When designated beneficial uses of a particular receiving water body are being compromised by water quality, Section 303(d) of the CWA requires identifying and listing that water body as “impaired”. Once a water body has been deemed impaired, a TMDL must be developed for the impairing pollutant(s). A TMDL is an estimate of the total load of pollutants from point, non-point, and natural sources that a water body may receive without exceeding applicable water quality standards (with a “factor of safety” included). Once established, the TMDL allocates the loads among current and future pollutant sources to the water body.

The Project would discharge runoff through Grasshopper Creek, Castaic Lagoon, and Castaic Creek to Santa Clara River Reach 5. Grasshopper Creek, Castaic Lagoon, and Castaic Creek are no listed as impaired. Table 5.8-7, 2010 CWA Section 303(d) Listings for the Santa Clara River Mainstem, lists the water quality impairments for the Santa Clara River, including reaches upstream of the confluence of Castaic Creek and the Santa Clara River (although these upstream impairments do not affect the Project), as reported in the 2010 CWA Section 303(d) List of Water Quality Limited Segments. Reach 7 of the Santa Clara River (Bouquet Canyon Road to above Lang Gaging Station) is listed for coliform bacteria. Reach 6 (West Pier Highway 99 to Bouquet Canyon Road) is listed for chloride, coliform bacteria, chlorpyrifos, diazinon, toxicity, iron, and copper. Reach 5 of the Santa Clara River (where the confluence of Castaic Creek with the Santa Clara River is located) is listed for chloride, coliform bacteria, and iron. Santa Clara River Reach 3, approximately 25 miles downstream of Reach 5 and below the Dry Gap in Reach 4, is listed for ammonia, chloride, total dissolved solids (TDS), and toxicity. Santa Clara River Reach 1, approximately 30 miles downstream of Reach 5, is listed for toxicity. The Santa Clara River

estuary, located approximately 40 miles downstream of Reach 5, is listed for coliform bacteria, chlorinated legacy pesticides,[1] Toxaphene, toxicity, and nitrate-nitrogen.

The Regional Water Board has adopted nitrogen compounds (nitrate plus nitrite-nitrogen and ammonia), chloride, and indicator bacteria TMDLs in the Basin Plan. The wasteload allocations for municipal stormwater discharges into Reach 5 of the Santa Clara River are summarized in Table 5.8-8, TMDL Wasteload Allocations for MS4 and Stormwater Sources to Santa Clara River Reach 5. Pollutant reductions are regulated through effluent limits prescribed in Publicly Owned Treatment Works (POTW) and minor point source NPDES Permits, BMPs required in NPDES MS4 Permits, and SWRCB Management Measures for non-point source discharges.

Clean Water Act Sections 401 and 404 - Discharge of Fill or Dredge Materials

Hydrologic conditions of concern addressed in this section include in-stream changes in sediment transport, erosion, sedimentation, and channel stability (i.e., hydromodification). There is a nexus between these concerns and the stream, habitat, and species protection programs administered by the U.S. Army Corps of Engineers (Corps), U.S. Fish and Wildlife Service (USFWS), and California Department of Fish and Wildlife (CDFW).

Section 404 of the CWA regulates the discharge of dredged and fill material into “waters of the United States,” including wetlands. Activities in waters of the United States regulated under this program include fill for development (including physical alterations to drainages to accommodate storm drainage, stabilization, and flood control improvements), water resource projects (such as dams and levees), infrastructure development (such as highways and airports), and conversion of wetlands to uplands for farming and forestry. The USEPA and the Corps have issued Section 404(b)(1) Guidelines (40 C.F.R. 230) that regulate dredge and fill activities, including water quality aspects of such activities. Subpart C at Sections 230.20 thru 230.25 contains water quality regulations applicable to dredge and fill activities. Among other topics, these guidelines address discharges that alter substrate elevation or contours, suspended particulates, water clarity, nutrients and chemical content, current patterns and water circulation, water fluctuations (including those that alter erosion or sediment rates), and salinity gradients.

Section 401 of the CWA requires that any person applying for a federal permit or license that may result in a discharge of pollutants into waters of the United States must obtain a state water quality certification that the activity complies with all applicable water quality standards, limitations, and restrictions. Subject to certain limitations, no license or permit may be issued by a federal agency until the Section 401 certification has been granted. CWA Section 404 permits and authorizations are subject to Section 401 certification by the various California Regional Water Quality Control Boards (Regional Water Boards).

1 Legacy pesticides are persistent bioaccumulative pesticides (e.g., DDT) which have been banned.

TABLE 5.8-7
2010 CWA SECTION 303(D) LISTINGS FOR THE SANTA CLARA RIVER MAINSTEM

River Reach or Tributary	Geographic Description and Distance from Project to Upstream End of Reach	Pollutants	TMDL Completion	Potential Sources
7	Bouquet Canyon Rd to above Lang Gaging Station (5 miles upstream of Reach 5)	Coliform Bacteria	TMDL Adopted 2012	Nonpoint and Point Sources
6	West Pier Hwy 99 to Bouquet Cyn. Rd (Directly upstream of Reach 5)	Chloride Coliform Bacteria Chlorpyrifos Diazinon Toxicity Iron Copper	TMDL Adopted 2005 TMDL Adopted 2012 Requires TMDL/2019 Requires TMDL/2019 Requires TMDL/2019 Requires TMDL/2021 Requires TMDL/2021	Nonpoint and Point Sources Nonpoint and Point Sources Source Unknown Source Unknown Source Unknown Source Unknown Nonpoint and Point Sources
5	Blue Cut Gaging Station to West Pier Hwy 99 (Location where Castaic Creek joins the Santa Clara River)	Chloride Coliform Bacteria Iron	TMDL Adopted 2005 TMDL Adopted 2012 2021	Nonpoint and Point Sources Nonpoint and Point Sources Source Unknown
3	Freeman diversion dam to "A" street (25 miles downstream of Reach 5)	Ammonia Chloride Total Dissolved Solids Toxicity	TMDL Adopted 2004 TMDL Adopted 2002 Requires TMDL/2015 Requires TMDL/2021	Nonpoint and Point Sources Nonpoint and Point Sources Source Unknown Source Unknown
1	Estuary to Highway 101 Bridge (30 miles downstream of Reach 5)	Toxicity	Requires TMDL/2019	Source Unknown
--	Estuary (40 miles downstream of Reach 5)	Coliform Bacteria ChemA Toxaphene Toxicity Nitrate	TMDL Adopted 2012 Requires TMDL/2019 Requires TMDL/2019 Requires TMDL/2019 Requires TMDL/2021	Nonpoint Source Source Unknown Nonpoint Source Source Unknown Source Unknown

Source: Geosyntec 2015.

TABLE 5.8-8
TMDL WASTELOAD ALLOCATIONS FOR MS4 AND STORMWATER SOURCES TO SANTA CLARA RIVER REACH 5

<table>
<tr><th>Impairing Pollutant</th><th colspan="3">Numeric Water Quality Objective</th><th>Wasteload Allocation</th></tr>
<tr><td>Chloride</td><td colspan="3">100 mg/L.</td><td>Wasteload allocations have been adopted for the Saugus WRP and the Valencia WRP. Other NPDES discharges contribute a minor chloride load. The wasteload allocation for these point sources is 100 mg/L.

The source analysis indicates that non-point sources are not a major source of chloride. The load allocations for non-point sources is 100 mg/L.</td></tr>
<tr><td rowspan="5">Nitrogen Compounds</td><td colspan="3">The numeric target for nitrogen in this TMDL is based on achieving the existing nitrogen water quality objective of 5 mg/L NO_3-N + NO_2-N. (Note: the numeric target that is used to calculate the wasteload allocations includes a 10% margin of safety; thus the numeric target is 4.5 mg/L NO_3-N + NO_2-N.) The water quality objective for ammonia in Reach 5 used in the nitrogen compounds TMDL was based on temperature and pH for different River segments within the reach:</td><td rowspan="5">Concentration-based wasteloads are allocated to municipal, industrial, and construction stormwater sources regulated under NPDES permits. For stormwater permittees discharging into Reach 5, the following wasteload allocations apply:

30-day average nitrate plus nitrite = 6.8 mg/L (NO_3-N+NO_2 - N) 1-hour average ammonia = 5.2 mg/L (NH_3 as N)
30-day average ammonia = 1.75 mg/l (NH_3 as N)</td></tr>
<tr><td colspan="3">Ammonia Water Quality Objective (mg/L as N)[1]</td></tr>
<tr><td></td><td>1-hour average</td><td>30-day average</td></tr>
<tr><td>Reach 5 at County Line</td><td>3.4</td><td>1.2</td></tr>
<tr><td>Reach 5 below Valencia</td><td>5.5</td><td>2.0</td></tr>
<tr><td>Reach 5 above Valencia</td><td>4.8</td><td>2.0</td></tr>
</table>

TABLE 5.8-8
TMDL WASTELOAD ALLOCATIONS FOR MS4 AND STORMWATER SOURCES TO SANTA CLARA RIVER REACH 5

<table>
<tr><th>Impairing Pollutant</th><th>Numeric Water Quality Objective</th><th>Wasteload Allocation</th></tr>
<tr><td>Indicator Bacteria (Resolution R10-006)</td><td>
Numeric Targets:
<table>
<tr><th>Constituent</th><th>SCR Reach 5 Requirement</th></tr>
<tr><td>E. Coli (Single Sample)</td><td>235/100 mL</td></tr>
<tr><td>E. Coli (Geometric Mean)</td><td>126/100 mL</td></tr>
</table>
</td><td>
Wasteload allocation are given in terms of allowable exceedance days. The numeric targets may not be exceeded more than the number of allowable exceedance days allotted in the tables below.

Interim allowable Exceedance Days
(Dry Weather and wet Weather deadline March 21, 2016):
<table>
<tr><th rowspan="2">Time Period</th><th colspan="2">Annual Allowable Exceedance Days of the Single Sample Objective (days)</th></tr>
<tr><th>Daily Sampling</th><th>Weekly Sampling</th></tr>
<tr><td>Dry Weather</td><td>17</td><td>3</td></tr>
<tr><td>Wet Weather</td><td>61</td><td>9</td></tr>
</table>
Final Allowable Exceedance Days
(Dry Weather deadline March 21, 2023; Wet Weather deadline March 21, 2029):
<table>
<tr><th rowspan="2">Time Period</th><th colspan="2">Annual Allowable Exceedance Days of the Single Sample Objective (days)</th></tr>
<tr><th>Daily Sampling</th><th>Weekly Sampling</th></tr>
<tr><td>Dry Weather</td><td>5</td><td>1</td></tr>
<tr><td>Wet Weather</td><td>16</td><td>3</td></tr>
</table>
</td></tr>
</table>

[1] The numeric targets are 10 percent smaller to incorporate a margin of safety

Source: Geosyntec 2015.

Clean Water Act Section 402 - Construction General Permit

Pursuant to CWA Section 402(p), which requires regulations for permitting certain stormwater discharges, the SWRCB issued a statewide general permit for stormwater discharges from construction sites [Water Quality Order 2009-0009-DWQ, SWRCB NPDES General Permit for Stormwater Discharges Associated with Construction Activity (NPDES No. CAR000002; adopted by the SWRCB on September 2, 2009)].

Under the Construction General Permit, discharges of stormwater from construction sites with a disturbed area of one or more acres are required to either obtain individual NPDES permits for stormwater discharges or be covered by the Construction General Permit. Coverage under the Construction General Permit is accomplished by submitting a construction site risk assessment to determine appropriate coverage level; preparing a Stormwater Pollution Prevention Plan (SWPPP), including site maps, a Construction Site Monitoring Program (CSMP), and sediment basin design calculations; for projects located outside of a Phase I or Phase II permit area, completing a post-construction water balance calculation for hydromodification controls; and completing a Notice of Intent (NOI). All of these documents must be electronically submitted to the SWRCB for General Permit coverage. The primary objective of the SWPPP is to identify and apply proper construction, implementation, and maintenance BMPs to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the construction site during construction. The SWPPP also outlines the monitoring and sampling program required for the construction site to verify compliance with discharge Numeric Action Levels (NALs) set by the Construction General Permit.

California Toxics Rule

The California Toxics Rule (CTR) is a federal regulation issued by the EPA providing water quality criteria for potentially toxic constituents in receiving waters with human health or aquatic life designated uses in the State of California. EPA adopted the CTR in 2000 to create legally applicable water quality criteria for priority toxic pollutants for inland surface waters, enclosed bays, and estuaries to protect human health and the environment for all purposes and programs under the Clean Water Act. The CTR aquatic life criterion were derived using a CWA Section 304(a) method that produces an estimate of the highest concentration of a substance in water which does not present a significant risk to the aquatic organisms in the water and their uses. The CTR water quality criteria provide a reasonable and adequate amount of protection with only a small possibility of substantial overprotection or under protection. In this document, the CTR criteria are used as one type of benchmark to evaluate the potential impacts of the Project on water quality of the receiving waters.

The CTR's numerical aquatic life criteria are expressed as short-term (acute) and long-term (chronic) averages, rather than one number, in order that the criterion more accurately reflect toxicological and practical realities. Due to the intermittent nature of stormwater runoff (especially in Southern California), the acute criteria are considered to be more applicable to stormwater conditions than chronic criteria and therefore are used in assessing Project impacts. For example, the average storm duration for all storms in the 40-year Newhall rain gauge record is 7.1 hours. Acute criteria represent the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time (one hour) without deleterious effects; chronic criteria equal the highest concentration to which aquatic life can be exposed for an extended period of time (four days) without deleterious effects.

CTR criteria are applicable to the receiving water body and therefore the metals criteria, which are expressed as a function of receiving water hardness, must be calculated based upon the probable hardness values of the Project's receiving waters for evaluation of acute (and chronic)

toxicity criteria. At higher hardness values for the receiving water, copper, lead, and zinc are more likely to be complexed (bound) with other chemical constituents in the water column. This in turn reduces the bioavailability and resulting potential toxicity of these metals.

Federal Antidegradation

The Federal Antidegradation Policy (40 CFR §131.12) requires states to develop statewide antidegradation policies and identify methods for implementing them. Pursuant to the Code of Federal Regulations, state antidegradation policies and implementation methods shall, at a minimum, protect and maintain: (1) existing in-stream water uses; (2) existing water quality where the quality of the waters exceeds levels necessary to support existing beneficial uses, unless the State finds that allowing lower water quality is necessary to accommodate economic and social development in the area; and (3) water quality in waters considered an outstanding national resource. State permitting actions must be consistent with the federal Antidegradation Policy.

State

Porter-Cologne Act

The federal CWA places with the states the primary responsibility for the control of surface water pollution and for planning the development and use of water resources, although it does establish certain guidelines for the states to follow in developing their programs and allows the USEPA to withdraw control from states with inadequate implementation mechanisms.

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act), Water Code Sections 13000 et seq. The Porter-Cologne Act grants the SWRCB and the Regional Water Boards power to protect water quality and it is the primary vehicle for implementation of California's responsibilities under the federal Clean Water Act. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, regulate discharges of waste to surface and groundwater, regulate waste disposal sites, and require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each of the Regional Water Boards must formulate and adopt a water quality control plan (known as a Basin Plan) for its region. The Basin Plan must conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its state water policy. To implement state and federal law, the Basin Plan establishes beneficial uses for surface water and groundwater in the region and sets forth narrative and numeric water quality standards to protect those beneficial uses. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

California Antidegradation

The California Antidegradation Policy, otherwise known as the Statement of Policy with Respect to Maintaining High Quality Water in California, was adopted by the SWRCB (State Board Resolution No. 68-16) in 1968. Unlike the Federal Antidegradation Policy, the California Anti-Degradation Policy applies to all waters of the state, not just surface waters. Under the policy, whenever the existing quality of a water body is better than the quality established in individual Basin Plans, such high quality must be maintained and discharges to that water body must not unreasonably affect any present or anticipated beneficial use of the water resource.

Basin Plan

The applicable Basin Plan (LARWQCB, 1994, as amended) provides numeric and narrative criteria for a range of water quality constituents applicable to certain receiving water bodies and groundwater basins within the Los Angeles region. Specific criteria are provided for the larger, designated water bodies within the region, as well as general criteria or guidelines for ocean waters, bays and estuaries, inland surface waters, and ground waters. Those waters not specifically listed (generally smaller tributaries) are assumed to have the same beneficial uses as the streams, lakes, or reservoirs to which they are tributary. In general, the narrative criteria require that degradation of water quality not occur due to increases in pollutant loads that will adversely impact the designated beneficial uses of a water body. For example, the Los Angeles Basin Plan requires that "Inland surface waters shall not contain suspended or settleable solids in amounts which cause a nuisance or adversely affect beneficial uses as a result of controllable water quality factors." Water quality criteria apply within receiving waters as opposed to applying directly to runoff; therefore, water quality criteria from the Basin Plan are utilized as benchmarks as one method to evaluate the potential ecological impacts of Project runoff on the receiving waters of the proposed project. Table 5.8-2 above lists the beneficial uses of applicable surface receiving waters.

The Basin Plan also contains water quality criteria for groundwater basins. For example, the Basin Plan requires that "Ground waters shall not contain taste or odor producing substances in concentrations that cause nuisance or adversely affect beneficial uses". Table 5.8-2 above lists the beneficial uses of the applicable groundwater basin.

Trash Amendments

On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted an Amendment to the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) to Control Trash and Part 1 Trash Provision of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries. Together, the amendments are collectively called the "Trash Amendments." The State Water Board's objective for the Trash Amendments is to provide statewide consistency for the Water Boards' regulatory approach to reduce environmental issues associated with trash in state waters, while focusing limited resources on high trash generating areas.

The Trash Amendments prohibit the discharge of trash[2] to surface waters of the State, or the deposition of trash where it may be discharged into surface waters of the State, and require systems to control mobilization and discharge of trash from areas with high trash generation rates (called "priority land uses"). The Trash Amendments provide a compliance schedule for retrofit of existing developed areas that discharge to municipal separate storm sewer systems. The Trash Amendments will be implemented through revision of MS4 and other NPDES permits in the future.

California Toxics Rule

Because California did not establish a complete list of acceptable water quality criteria, the USEPA established the California Toxics Rule (CTR), a federal program that includes numeric water quality criteria for certain toxic constituents in receiving waters with human health or aquatic life designated uses (40 C.F.R. 131.38). The CTR's numerical aquatic life criteria are expressed as short-term (acute) and long-term (chronic) averages. Due to the intermittent nature of

2 Trash means all improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

stormwater runoff (especially in Southern California), the acute criteria are considered to be more applicable to stormwater conditions than chronic criteria and, therefore, are used in assessing Project impacts. For example, the average storm duration for all storms in the 40-year Newhall rain gauge record is 7.1 hours. Acute criteria represent the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time (one hour) without deleterious effects; chronic criteria equal the highest concentration to which aquatic life can be exposed for an extended period of time (four days) without deleterious effects.

In addition, discharges are subject to metals criteria, which are expressed as a function of receiving water hardness and must be calculated based upon the probable hardness values of the receiving waters for evaluation of toxicity criteria. At higher hardness values for the receiving water, copper, lead, and zinc are more likely to be complexed (bound with) components in the water column. This in turn reduces the bioavailability and resulting potential toxicity of these metals. The average wet weather hardness value of 198 milligrams per liter (mg/L) for calcium carbonate (CaCO3) in Santa Clara River Reach 5 was used to approximate CTR criteria for metals.

Clean Water Act Section 402 - Construction General Permit

Pursuant to CWA Section 402(p), the SWRCB issued a statewide general permit for stormwater discharges from construction sites [Water Quality Order 2009-0009-DWQ, SWRCB NPDES General Permit for Stormwater Discharges Associated with Construction Activity (NPDES No. CAR000002; adopted by the SWRCB on September 2, 2009)].

Under the Construction General Permit, discharges of stormwater from construction sites with a disturbed area of one or more acres are required to either obtain individual NPDES permits for stormwater discharges or be covered by the Construction General Permit. Coverage under the Construction General Permit is accomplished by submitting a construction site risk assessment to determine appropriate coverage level; preparing a Stormwater Pollution Prevention Plan (SWPPP), including site maps, a Construction Site Monitoring Program, and sediment basin design calculations; for projects located outside of a Phase I or Phase II permit area, completing a post-construction water balance calculation for hydromodification controls; and completing a NOI. The primary objective of the SWPPP is to identify and apply proper construction, implementation, and maintenance BMPs to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the construction site during construction. The SWPPP also outlines the monitoring and sampling program required for the construction site to verify compliance with discharge Numeric Action Levels set by the Construction General Permit.

California Green Building Standards Code

The California Green Building Standards Code (CALGreen Code), Part 11 of the California Building Standards Code (Title 24), is designed to improve public health, safety, and general welfare by utilizing design and construction methods that reduce the negative environmental impact of development and encourage sustainable construction practices.

The CALGreen Code provides mandatory direction to developers of all new construction and renovations of residential and non-residential structures with regard to all aspects of design and construction, including but not limited to site drainage design, stormwater management, and water use efficiency. Required measures are accompanied by a set of voluntary standards designed to encourage developers and cities to aim for a higher standard of development.

Under CALGreen, all residential and non-residential sites are required to be planned and developed to keep surface water from entering buildings and to incorporate efficient outdoor water use measures. Construction plans are required to show appropriate grading and surface water management methods such as swales, water collection and disposal systems, French drains, water retention gardens, and other water measures which keep surface water away from buildings and aid in groundwater recharge. Plans should also include outdoor water use plans that utilize weather or soil moisture controlled irrigation systems. In addition to the above mentioned requirements, non-residential structures are also required to develop an irrigation water budget for landscapes greater than 2,500 square feet that conforms to the local water efficient landscape ordinance or to the DWR Model Water Efficient Landscape Ordinance where no local ordinance is applicable.

Local

Basin Plan

The LARWQCB's Basin Plan, entitled the *Water Quality Control Plan for the Coastal Waters of Los Angeles and Ventura Counties*, provides numeric and narrative criteria for a range of water quality constituents applicable to certain receiving water bodies and groundwater basins within the Los Angeles region. Specific criteria are provided for the larger, designated water bodies within the region, as well as general criteria or guidelines for ocean waters, bays and estuaries, inland surface waters, and groundwaters. Those waters not specifically listed (generally smaller tributaries) are assumed to have the same beneficial uses as the streams, lakes, or reservoirs to which they are tributary. In general, the narrative criteria require that degradation of water quality does not occur due to increases in pollutant loads that will adversely impact the designated beneficial uses of a water body. For example, the Basin Plan requires that "[i]nland surface waters shall not contain suspended or settleable solids in amounts which cause a nuisance or adversely affect beneficial uses as a result of controllable water quality factors."[3] The existing beneficial uses of Santa Clara River Reach 5 include industrial and agricultural water supply; groundwater recharge; contact and non-contact water recreation; warm freshwater, wildlife, and rare species habitat; and wetland ecosystems.

The Basin Plan also contains water quality criteria for groundwater basins. For example, the Basin Plan requires that "[g]round waters shall not contain taste or odor producing substances in concentrations that cause nuisance or adversely affect beneficial uses."[4] The existing beneficial use for groundwater at the Project site is designated as municipal: community, military, or individual water supply systems including drinking water.

General Dewatering Permit

The LARWQCB has issued a General NPDES Permit and General Waste Discharge Requirements (WDRs) (Order No. R4-2013-0095, NPDES No. CAG994004) that governs construction-related dewatering discharges within the Project development areas (known as the General Dewatering Permit). This permit addresses discharges from temporary dewatering operations associated with construction and permanent dewatering operations associated with operations. The discharge requirements include provisions mandating notification, sampling and analysis, and reporting of dewatering and testing-related discharges.

3 Los Angeles Regional Water Quality Control Board (LARWQCB), 1994. Water Quality Control Plan Los Angeles Region (Revised April 19, 2013), page 3-37.

4 Ibid, page 3-41.

Los Angeles County Flood Control Act

The Los Angeles County Flood Control District (District) is empowered to carry out the objectives of the Los Angeles County Flood Control Act of 1915. The objectives are to provide for the control and conservation of flood, storm, and other wastewater and to protect from damage to harbors, waterways, public highways, and property within the District.

MS4 Permit

In 2012, the LARWQB issued a revised NPDES Permit and WDRs (Order No. R4-2012-0175; NPDES Permit No. CAS004001) under the Clean Water Act and the Porter-Cologne Act for discharges of urban runoff in public storm drains in Los Angeles County (County). The Permittees are the County, the County Flood Control District, and 84 incorporated cities within the County's coastal watersheds. This permit regulates stormwater discharges from MS4s in the Project area.

Planning and Land Development Program Requirements

The Low Impact Development (LID) Ordinance details specific requirements for new development and significant redevelopment projects, including selection, sizing, and design criteria for LID, treatment control, and hydromodification control BMPs. These requirements (referred to herein as Project Performance Criteria) are as follows:

- Projects shall control pollutants, pollutant loads, and runoff volume emanating from a project site by controlling runoff from impervious surfaces through infiltration, bioretention, and/or rainfall harvest and use.
- Except where technically infeasible, projects shall retain the Stormwater Quality Design Volume (Design Volume) on-site. The average 85th percentile, 24-hour rain event for the Project site appears to be 1.15 inches.
- Where it is technically infeasible to retain 100 percent of the Design Volume on-site, a project must biofilter 1.5 times the portion of the Design Volume that is not reliably retained on-site.
- Bioretention[5] and biofiltration[6] systems must meet the design specifications provided in the LID Ordinance unless otherwise approved by the Regional Water Board Executive Officer. Projects that discharge to a receiving water body impaired for nitrogen compounds must design and maintain biofiltration systems to achieve enhanced nitrogen removal capability.
- When evaluating the potential for onsite retention, each project must consider the maximum potential for evapotranspiration from green roofs and rainfall harvest and use.
- Technical infeasibility may result from conditions including:
    - An in-situ saturated soil infiltration rate less than 0.3 inches per hour (and it is not technically feasible to amend the in-situ soils to attain an infiltration rate necessary to achieve reliable performance of infiltration or bioretention BMPs in retaining the SWQDv on-site).
    - Depth to seasonal high groundwater is within 5 to 10 feet of the surface.

5 As defined in the LID Ordinance, a bioretention BMP may not include an underdrain. When a bioretention BMP is designed or constructed with an underdrain, it is regulated by the LID Ordinance as biofiltration.

6 Biofiltration is defined in the LID Ordinance to include only systems designed to facilitate incidental infiltration or achieve the equivalent pollutant reduction as biofiltration BMPs with an underdrain (subject to Executive Officer approval). Biofiltration BMPs include bioretention systems with an underdrain and bioswales.

  - Locations within 100 feet of a groundwater well used for drinking water.
  - Brownfield development sites where infiltration poses a risk of causing pollutant mobilization.
  - Other locations at or near properties that are contaminated or store hazardous substances underground, where pollutant mobilization is a documented concern.
  - Locations with potential geotechnical hazards.
  - Smart growth, infill, or redevelopment locations where the density and/or nature of the project would create significant difficulty for compliance with the onsite volume retention requirement.

- If a project is complying with the Project Performance Standards via retention at an offsite location, then onsite treatment BMPs must be designed and implemented to meet specific benchmark effluent limitations contained in the LID Ordinance and to ensure that the treated discharge does not cause or contribute to an exceedance of water quality standards at the downstream MS4 outfall. These treatment BMPs may include sand filters or other proprietary BMPs with a demonstrated treatment efficiency equivalent to a sand filter. The sizing of a flow-through treatment BMP must be based on a rainfall intensity of 0.2 inches per hour or the one-year, one-hour rainfall intensity as determined from the most recent Los Angeles County isohyetal map, whichever is greater.
- Projects that discharge to natural drainage systems must implement hydrologic control measures (i.e., hydromodification controls) to prevent accelerated downstream erosion and to protect stream habitat. Hydromodification control in natural drainage systems must be achieved by: (1) complying with the frequency analysis requirements per Section 8.3 of the Los Angeles County LID Standards Manual (LACDPW 2014); and (2) maintaining the erosion potential (EP) of susceptible watercourses associated with the Project within an appropriate range of the target value.
- Hydromodification control may include one or a combination of onsite, regional or sub-regional hydromodification control BMPs, LID BMPs, or stream and riparian buffer restoration measures. Any in-stream restoration measure cannot adversely affect the beneficial uses of the natural drainage system.
- Natural drainage systems subject to the hydromodification control requirements in the LID Ordinance include all drainages that have not been improved (e.g., channelized or armored with concrete, shotcrete, or rip-rap) and drainage systems that are tributary to a natural drainage system, except as specifically exempted in the LID Ordinance. Exemptions include:
  - Projects that are replacement, maintenance or repair of a Permittee's existing flood control facility, storm drain, or transportation network.
  - Redevelopment projects in the urban core that do not increase the effective impervious area or decrease the infiltration capacity of pervious areas compared to the pre-project condition.
  - Projects that have any increased discharge directly or via a storm drain to a sump, lake, area under tidal influence, into a waterway that has a 100-year peak flow (Q_{100}) of 25,000 cfs or more, or other receiving water that is not susceptible to hydromodification impacts.
  - Projects that discharge directly or via a storm drain into concrete or otherwise engineered (not natural) channels (e.g., channelized or armored with rip rap,

shotcrete, etc.), which, in turn, discharge into a receiving water that is not susceptible to hydromodification impacts.

- If a project applicant is unable to show there will be no impacts from the post-construction condition using frequency analyses, the project must obtain Drainage Acceptance Letters from the owner of every impacted downstream property. In addition to obtaining Drainage Acceptance Letters, the project applicant must also comply with one of the following alternative requirements:
    - The site infiltrates on-site at least the runoff from a 2-year, 24-hour storm event, or
    - The runoff flow rate, volume, velocity, and duration for the post-development condition does not exceed the pre-development condition for the 2-year, 24-hour rainfall events. These conditions must be substantiated by hydrologic modeling acceptable to the Regional Water Board Executive Officer, or
    - The Erosion Potential in the receiving water channel will approximate 1, as determined by a the LID Ordinance.

The preliminary selection and sizing of facilities to meet the LID Ordinance's Project Performance Criteria is set forth in Section 5 of the WQTR (see Appendix H-2 of this SEIR) and the Drainage Plan provided in Appendix H-1. Prior to issuance of a grading permit, facility sizing will be finalized by the Project engineer as part of the final hydrology study, which will be prepared and approved to ensure consistency with this analysis.

General Waste Discharge Requirements for Dischargers of Groundwater from Construction and Project Dewatering

The LARWQCB reissued a General NPDES Permit and General WDRs (Order No. R4-2013-0095, NPDES No. CAG994004), which supersedes the former dewatering permit (Order No. R4 2008-032). This permit governs construction-related dewatering discharges within the project development areas (the "General Dewatering Permit.")

This permit addresses discharges from temporary dewatering operations associated with construction and permanent dewatering operations associated with development. The discharge requirements include provisions mandating notification, sampling and analysis, and reporting of dewatering and testing-related discharges. The General Dewatering Permit authorizes such construction-related activities so long as all conditions of the permit are fulfilled. Compliance with the requirements of the General Dewatering Permit is used as one method to evaluate Project construction-related impacts on surface water quality.

Lake or Streambed Alteration Agreement (LSAA)

The CDFW is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the law requires the proponent of a project that may impact a river, stream, or lake to notify the CDFW before beginning the project. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life and watercourses having a surface or subsurface flow that support or have supported riparian vegetation.

Section 1602 of the Fish and Game Code6 requires any person who proposes a project that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake or use materials from a streambed to notify the CDFW before beginning the project. Similarly, under section 1602 of the Fish and Game Code, before any State

or local governmental agency or public utility begins a construction project that will: (1) divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake; (2) use materials from a streambed; or (3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake, it must first notify the CDFW of the proposed project. If the CDFW determines that the project may adversely affect existing fish and wildlife resources, a Lake or Streambed Alteration Agreement is required. In this case, the applicant will be required to enter into a Streambed Alteration Agreement with CDFW prior to grading activities.

Recycled Water Policy

On February 3, 2009, by its Resolution No. 2009-0011, the SWRCB adopted a Recycled Water Policy in an effort to move towards a sustainable water future. In this Policy, the State Water Board stated "we declare our independence from relying on the vagaries of annual precipitation and move towards sustainable management of surface waters and groundwater, together with enhanced water conservation, water reuse and the use of stormwater."

The following goals are included in this Policy:

- Increase use of recycled water over 2002 levels by at least one million acre-feet per year by 2020 and at least two million acre-feet per year by 2030.
- Increase the use of stormwater over use in 2007 by at least 500,000 acre-feet per year by 2020 and at least one million acre-feet per year by 2030.
- Increase the amount of water conserved in urban and industrial areas by comparison to 2007 by at least 20 percent by 2020.
- Included in these goals is the substitution of as much recycled water for potable water as possible by 2030.

The State Water Board also stated in this Policy that they expect to develop additional policies to encourage the use of stormwater, encourage water conservation, encourage the conjunctive use of surface and groundwater, and improve the use of local water supplies.

The Recycled Water Policy provides direction to the Regional Water Quality Control Boards regarding appropriate criteria in issuing permits for recycled water projects intended to streamline permitting of the vast majority of recycled water projects, while also reserving sufficient authority and flexibility to address site-specific conditions. The Policy also addresses the benefits of recycled water and encourages other public agencies to use this presumption in evaluating the impacts of recycled water projects on the environment as required by the California Environmental Quality Act (CEQA). The Policy addresses a mandate for use of recycled water and indicates the State Water Board will exercise their authority to the fullest extent possible to encourage the use of recycled water, consistent with state and federal water quality laws and indicates that the water industry and environmental community have agreed jointly to advocate for $1 billion in state and federal funds to fund projects needed to meet the goals and mandates established in this Policy.

The Policy indicates that some groundwater basins contain salts and nutrients that exceed or threaten to exceed water quality objectives established in Basin Plans and states that it is the intent of the Policy that all salts and nutrients be managed on a basin-wide or watershed-wide basis through development of regional or sub-regional management plans. The Policy describes the components of these salt and nutrient management plans.

Finally, the Policy addresses the control of incidental runoff from landscape irrigation projects, recycled water groundwater recharge projects, antidegradation, control of emerging constituents and chemicals of emerging concern and incentives for use of recycled water.

In accordance with the provisions of the Recycled Water Policy, a Constituents of Emerging Concerns (CEC) Advisory Panel was established to address questions about regulating CECs with respect to the use of recycled water. The Panel's primary charge was to provide guidance for developing monitoring programs that assess potential CEC threats from various water recycling practices, including groundwater recharge/reuse and urban landscape irrigation. On June 25, 2010, the CEC Advisory Panel provided recommendations to the State Water Board and California Department of Public Health in their Final Report *"Monitoring Strategies for Chemicals of Emerging Concern in Recycled Water – Recommendations of a Scientific Advisory Panel"* (SCCWRP, 2012a). The State Water Board used those recommendations to amend the Recycled Water Policy (SWRCB Resolution No. 2013-003).

The amendment, which became effective on April 25, 2013, provides direction to the Regional Water Boards on monitoring requirements for CECs in recycled water. The monitoring requirements pertain to the production and use of recycled water for groundwater recharge reuse by surface and subsurface application methods8, and for landscape irrigation.

The amendment identifies three classes of constituents to monitor:

- Health-based CECs - CECs of toxicological relevance to human health
- Performance Indicator CECs – an individual CEC used for evaluating removal through treatment processes of a family of CECs with similar physicochemical or biodegradable characteristics.
- Surrogates – a measurable physical or chemical property, such as chlorine residual or electrical conductivity, that provides a direct correlation with the concentration of an indicator compound. Surrogates are used to monitor the efficiency of CEC treatment.

Tables indicating the specific CECs and surrogates are listed in the policy amendment, but are subject to change on a case-by-case basis and shall be appropriate for the treatment process or processes. Only groundwater recharge reuse facilities will be required to monitor for CECs and surrogates. Surface application and subsurface application facilities will have different mandatory CECs and a different monitoring schedule. Monitoring is not required for recycled water used for landscape irrigation due to the low risk for ingestion of the water.

Municipal Recycled Water Landscape Irrigation Use Permit

The General Waste Discharge Requirements for Landscape Irrigation Uses of Municipal Recycled Water (Water Quality Order No. 2009-0006-DWQ) (Landscape Irrigation General Permit) regulates landscape irrigation with recycled water. Specified uses of recycled water considered to be "landscape irrigation" include any of the following: (i) parks, greenbelts, and playgrounds; (ii) school yards; (iii) athletic fields; (iv) golf courses; (v) cemeteries; (vi) residential landscaping and common areas (not including individually owned residential areas); (vii) commercial landscaping, except eating areas; (viii) industrial landscaping, except eating areas; and (ix) freeway, highway, and street landscaping. Producers or distributors of recycled water must submit a NOI for coverage under the Landscape Irrigation General Permit. This permit is not required for individual recycled water users and does not cover use of harvested stormwater for irrigation.

Producer and Distributor Responsibilities

Producers must produce disinfected tertiary recycled water as defined by CCR Title 22, sections 60301.230 and 60301.320, which address disinfection requirements and "filtered wastewater" requirements, respectively. Producers are responsible for ensuring that recycled water meets the quality standards for disinfected tertiary recycled water as described in Title 22 and any associated waste discharge requirement order for the water reclamation plant. Distributors are responsible for drafting and submitting an Operations and Maintenance (O&M) Plan to the State Water Board.

The plan contents are contained in the permit, and include operation and maintenance/management of transport facilities and associated infrastructure necessary to convey and distribute recycled water from the point of production to the point of use. Additionally, distributors must designate a Recycled Water Use Supervisor for each use area. The permit also addresses best management practices, including general operations and maintenance, which producers and distributors must apply to manage recycled water and prevent water quality impacts.

Usage

The permit establishes terms and conditions of discharge to ensure that the discharge does not unreasonably affect beneficial uses of groundwater and surface water. This includes minimum setback distances, signage, application control, and use restrictions, along with other preventative measures, such as backflow prevention and cross-contamination programs.

Los Angeles County Green Building Program

The County has a Green Building Program, which includes the drought-tolerant landscaping, green building, and low impact development (LID) ordinances, and has created an Implementation Task Force and Technical Manual, all of which are implemented through the Los Angeles County Green Building Standards Code (Title 31) and Section 12.84 of the County Code pertaining to LID.

Los Angeles County Low Impact Development Ordinance and Manual

Chapter 12.84 of the County Code requires the use of LID BMPs in development projects within the County's unincorporated areas.[7] Public Works' LID Standards Manual outlines stormwater runoff quantity and quality control development principles, technologies, and design standards for achieving the LID standards. The LID Standards Manual requires large scale residential and non-residential development projects to prioritize the selection of BMPs to retain 100 percent of the specified stormwater runoff design volume on-site through infiltration, evapotranspiration, stormwater runoff harvest and use, or a combination thereof, unless it is demonstrated that it is technically infeasible to do so. County Code Chapter 12.84 and the LID Standards Manual also contain requirements to fully mitigate off-site drainage impacts caused by hydromodification and changes in water quality, flow velocity, flow volume, and depth/width of flow, unless compliance is infeasible, and then the project must obtain written consent to the unmitigated impacts from the owner of every impacted downstream property. Drainage acceptance letters from the owner of every impacted downstream property will also be required if impacts cannot be mitigated.

7 Chapter 12.84 was amended in September 2013 to conform to the requirements of the revised Los Angeles County MS4 Permit (Order No. R4-2012-0175).

Los Angeles County Drought-Tolerant Landscaping Ordinance

Title 31 of the Los Angeles County Code requires that turf areas in post-construction landscape designs not exceed 25 percent of the total landscaped area; that non-invasive, drought-tolerant plant and tree species appropriate for the climate zone region be used in at least 75 percent of the total landscaped area; and that hydrozoning irrigation techniques be incorporated. In addition, a water budget must be developed for landscape irrigation use that conforms to the DWR Model Water Efficient Landscape Ordinance.

County of Los Angeles General Plan

Conservation and Natural Resources Element

- **Policy C/NR 3.9:** Consider the following in the design of a project that is located within an SEA, to the greatest extent feasible:
    - Preservation of biologically valuable habitats, species, wildlife corridors and linkages;
    - Protection of sensitive resources on the site within open space;
    - Protection of water sources from hydromodification in order to maintain the ecological function of riparian habitats;
    - Placement of the development in the least biologically sensitive areas on the site (prioritize the preservation or avoidance of the most sensitive biological resources onsite);
    - Design required open spaces to retain contiguous undisturbed open space that preserves the most sensitive biological resources onsite and/or serves to maintain regional connectivity;
    - Maintenance of watershed connectivity by capturing, treating, retaining, and/or infiltrating storm water flows on site; and
    - Consideration of the continuity of onsite open space with adjacent open space in project design.
- **Policy C/NR 5.1:** Support the LID philosophy, which seeks to plan and design public and private development with hydrologic sensitivity, including limits to straightening and channelizing natural flow paths, removal of vegetative cover, compaction of soils, and distribution of naturalistic BMPs at regional, neighborhood, and parcel-level scales
- **Policy C/NR 5.2:** Require compliance by all County departments with adopted Municipal Separate Storm Sewer System (MS4), General Construction, and point source NPDES permits.
- **Policy C/NR 5.6:** Minimize point and non-point source water pollution.
- **Policy C/NR 5.7:** Actively support the design of new and retrofit of existing infrastructure to accommodate watershed protection goals, such as roadway, railway, bridge, and other – particularly – tributary street and greenway interface points with channelized waterways.
- **Policy C/NR 6.1:** Support the LID philosophy, which incorporates distributed, post-construction parcel-level stormwater infiltration as part of new development.
- **Policy C/NR 6.2:** Protect natural groundwater recharge areas and regional spreading grounds.

- **Policy C/NR 7.1:** Support the LID philosophy, which mimics the natural hydrologic cycle using undeveloped conditions as a base, in public and private land use planning and development design.

Parks and Recreation Element

- **Policy P/R 6.1:** Support the use of recycled water for landscape irrigation in County parks.

Santa Clarita Valley Area Plan

Land Use Element

- **Policy LU-1.3.6:** Encourage retention of natural drainage patterns and the preservation of significant riparian areas, both of which are commonly located in hillside areas.
- **Policy LU-7.3.1:** Promote the use of permeable paving materials to allow infiltration of surface water into the water table.
- **Policy LU-7.3.2:** Maintain stormwater runoff onsite by directing drainage into rain gardens, natural landscaped swales, rain barrels, permeable areas and use of drainage areas as design elements, where feasible and reasonable.
- **Policy LU-7.3.3:** Seek methods to decrease impermeable site area where reasonable and feasible, in order to reduce stormwater runoff and increase groundwater infiltration, including use of shared parking and other means as appropriate.
- **Policy LU-7.3.4:** Implement best management practices for erosion control throughout the construction and development process.

Conservation and Open Space Element

- **Policy CO-4.2.2:** Require new development to provide the infrastructure needed for delivery of recycled water to the property for use in irrigation, even if the recycled water main delivery lines have not yet reached the site, where deemed appropriate by the reviewing authority.
- **Policy CO-4.2.3:** Promote the installation of rainwater capture and gray water systems in new development for irrigation, where feasible and practicable.
- **Policy CO-4.2.4:** Protect areas with substantial potential for groundwater recharge as depicted on Figure CO-10, and promote recharge of groundwater basins throughout the watershed (excluding the river bed) to assure water quality and quantity. The greatest consideration should be given to the Alluvial Aquifer and Saugus Aquifer groundwater recharge areas, followed by groundwater recharge areas for other groundwater basins that are designated by the State of California.
- **Policy CO-4.3.1:** On undeveloped sites proposed for development, promote onsite stormwater infiltration through design techniques such as pervious paving, draining runoff into bioswales or properly designed landscaped areas, preservation of natural soils and vegetation, and limiting impervious surfaces.
- **Policy CO-4.3.4:** Encourage and promote the use of new materials and technology for improved stormwater management, such as pervious paving, green roofs, rain gardens, and vegetated swales.

- **Policy CO-4.3.5:** Where detention and retention basins or ponds are required, seek methods to integrate these areas into the landscaping design of the site as amenity areas, such as a network of small ephemeral swales treated with attractive planting.
- **Policy CO-4.3.6**: Discourage the use of mounded turf and lawn areas which drain onto adjacent sidewalks and parking lots, replacing these areas with landscape designs that retain runoff and allow infiltration.
- **Policy CO-4.3.7:** Reduce the amount of pollutants entering the Santa Clara River and its tributaries by capturing and treating stormwater runoff at the source, to the extent possible.
- **Policy CO-4.4.1:** Cooperate with the Los Angeles County Sanitation District and Regional Water Quality Control Board as appropriate to achieve Total Maximum Daily Load (TMDL) standards for chlorides in the Santa Clara River.
- **Policy CO-4.4.3:** Discourage the use of chemical fertilizers, herbicides, and pesticides in landscaping to reduce water pollution by substances hazardous to human health and natural ecosystems.
- **Policy CO-4.4.4:** Promote the extension of sanitary sewers for all urban uses and densities, to protect groundwater quality, where feasible.

Safety Element

- **Policy S-2.1.3:** Promote the use of vegetated drainage courses and soft-bottom channels for flood control facilities to the extent feasible, in order to achieve water quality and habitat objectives in addition to flood control.
- **Policy S-2.1.5:** Promote the joint use of flood control facilities with other beneficial uses where feasible, such as by incorporating detention basins into parks and extending trails through floodplains.

5.8.5 RELEVANT PROJECT CHARACTERISTICS

As discussed in Section 4.0, Project Description, of this Draft EIR, the Project would meet or surpass the requirements of the (LACDPW) and all applicable NPDES permits by providing drainage, flood control, and water quality features such as storm drains, debris basins, water quality facilities, and inlet and outlet structures. The proposed stormwater collection system is shown in Exhibit 4-10, in Section 4.0, Project Description. As shown, the plan includes a comprehensive series of features designed to meet or exceed NPDES permit requirements and protect Project development.

BMPs incorporated into the Project to address surface water and groundwater quality and hydromodification impacts include erosion and sediment control BMPs to be implemented during the Project's construction phase, and site design, source control, LID, and hydromodification control BMPs to be implemented during the post-development (operational) phase.

Construction Phase Controls

During the Project's construction phase, BMPs would be implemented in compliance with the State's Construction General Permit and the LARWQCB's General Dewatering Permit. In accordance with the Construction General Permit, the Project would reduce or prevent erosion and sediment transport and the transport of other potential pollutants from the site through

implementation of BMPs meeting BAT/BCT.[8] The BMPs to be implemented would be documented in the SWPPP. The following types of BMPs would be included in the SWPPP and implemented as-needed during construction:

Erosion control: Vegetation and other materials (such as straw, fiber, stabilizing emulsion, etc.) placed to stabilize areas of disturbed soils, reduce loss of soil due to the action of water or wind, and prevent water pollution.

Sediment control: Practices that trap soil particles after they have been eroded by rain, flowing water, or wind. They include those practices that intercept and slow or detain the flow of storm water to allow sediment to settle and be trapped (e.g., silt fence, sediment basin, fiber rolls, etc.).

Waste and Materials Management: Measures include covered storage and secondary containment for material storage areas, secondary containment for portable toilets, covered dumpsters, dedicated and lined concrete washout/waste areas, proper application of chemicals, and proper disposal of all manner of waste products including: solid, liquid, sanitary, concrete, hazardous, and equipment-related wastes.

Non-Stormwater Management: Practices designed to reduce or eliminate the addition of pollutants to construction site runoff through analysis of pollutant sources, implementation of proper handling/disposal practices, employee education, water conservation practices, vehicle and equipment cleaning and fueling practices, street sweeping, and other actions.

Training and Education: Training of individuals responsible for SWPPP implementation and permit compliance, including contractors and subcontractors, would include certification through the SWRCB for Qualified SWPPP Developers and Qualified SWPPP Practitioners.

Inspection, Maintenance, Monitoring and Sampling: Includes site inspections before, during, and after storm events, implementing a Rain Event Action Plan prior to qualifying storm events, construction site monitoring plans to address leaks and spills of non-visible pollutants, and water quality sampling for turbidity and pH.

BMPs would also be implemented to protect the Project site's receiving waters from dewatering and construction-related non-stormwater discharges. Such discharges would be implemented in compliance with the General Dewatering Permit. Typical BMPs for construction dewatering include infiltration of clean groundwater; on-site treatment using suitable treatment technologies; on-site or transport offsite for sanitary sewer discharge with local sewer district approval; or use of a sedimentation bag for small volumes of localized dewatering.

Post-Construction (Operational) Phase Controls

Source Control BMPs

Source Control BMPs, which are incorporated into the Project, are consistent with the County's LID Manual. The Project BMPs are summarized below. Additionally, Figure 5-1 of the WQTR

8 BAT/BCT are Clean Water Act technology-based standards that are applicable to construction site stormwater discharges. Federal law specifies factors relating to the assessment of BAT including: age of the equipment and facilities involved; the process employed; the engineering aspects of the application of various types of control techniques; process changes; the cost of achieving effluent reduction; non-water quality environmental impacts (including energy requirements); and other factors as the Administrator deems appropriate. (Clean Water Act Sections 304(b)(2)(B) and 304(b)(4)(B).)

included in Appendix H-2 to this EIR, shows the locations of regional and project-specific LID BMP drainage areas.

Storm Drain System Message and Signage. All Project storm drain inlets and water quality inlets are to be stenciled or labeled and signs posted to discourage illegal dumping in areas where dumping could occur.

Outdoor Material Storage Areas. Pesticides, fertilizers, paints, and other hazardous materials used for maintenance of common areas, parks, commercial areas, and multi-family residential common areas are to be kept in enclosed storage areas.

Outdoor Trash Storage and Waste Handling Areas. All outdoor trash storage areas are to be covered and isolated from stormwater runoff.

Outdoor Loading/Unloading Dock Areas. These areas are to cover loading dock areas or design drainage to minimize run-on and runoff of stormwater and prohibit the direct connection of depressed loading docks (truck wells) to storm drains.

Outdoor Vehicle/Equipment Repair/Maintenance Areas. Commercial areas are not to have repair/maintenance bays or the bays must comply with design requirements.

Outdoor Vehicle/Equipment/Accessory Wash Areas. These areas are to be self-contained and/or covered; equipped with a clarifier, or other pretreatment facility; and properly connected to a sanitary sewer or to a permitted disposal facility.

Fueling and Maintenance Area. These areas incorporate the LID design criteria which includes overhead coverage, paving, appropriate slopes to prevent ponding, and measures to prevent run-on.

Landscape Irrigation Practices. Landscape irrigation practices promote effective irrigation so as to produce less runoff, resulting in less potential for pollutants to enter the storm drain system.

Building Materials Selection. The use of alternative building materials can reduce copper and zinc sources in stormwater runoff.

Animal Care and Handling Facilities. Implementing source control measures, such as preventing stormwater runoff in animal care and confinement areas and good housekeeping, reduces the potential for pollutant mobilization from animal care and handling facilities into stormwater runoff.

Outdoor Horticulture Areas. Wash water from the horticulture area should not drain directly to the storm drain system or receiving waters.

Low Impact Development

Site Design

Site design principals can reduce stormwater runoff flows and impacts associated with land development to sensitive environmental features such as riparian areas, wetlands, and steep slopes (LACDPW, 2014). The benefits derived from this approach include:

- Reduction in the size of stormwater quality control measures and conveyance systems;

- Reduction in pollutant loading to stormwater quality control measures and receiving waters; and
- Reduction in hydraulic impact on receiving waters.

Site design principles outlined in the Los Angeles LID Manual include site planning, protection and restoration of natural areas, minimization of land disturbance, and minimization of impervious cover. These site design principles have been incorporated into the Project as follows:

- Impervious areas will be minimized by incorporating parks and open space areas into the Project. Approximately 839.1 acres of the 1,382.3 acre total Project area (61%) would be parks, trails, or open space areas.
- Project BMPs, including parcel-based and regional LID BMPs, will disconnect impervious areas and reduce flows to natural channels through infiltration and evapotranspiration.
- In areas not subject to mass grading, the smallest site disturbance area possible will be delineated and flagged and temporary storage of construction equipment will be restricted in these areas to minimize soil compaction on site. Site clearing and grading will be limited as necessary to allow development, allow access, and provide fire protection.
- Streets, sidewalks, and parking lot aisles will be constructed to the minimum widths in compliance with regulations for the Americans with Disabilities Act and safety requirements for fire and emergency vehicle access.
- Native and/or non-native/non-invasive vegetation that requires less watering and chemical application will be utilized in compliance with the Los Angeles County Drought-Tolerant
- Landscaping Ordinance.
- Impervious surfaces will be minimized in common area landscape design.

LID Performance Standard

This Project is required to comply with the County of Los Angeles LID Ordinance. The Project's LID Performance Standard is as follows:

> *LID BMPs shall be selected and sized to retain the volume of stormwater runoff produced from a 1.15 inch storm event[9] (LID design volume). When it has been demonstrated that 100 percent of the LID design volume cannot be feasibly infiltrated, then biofiltration shall be provided for 1.5 times the portion of the LID design volume that is not retained. Runoff from roadways shall be retained or biofiltered in retention or biofiltration BMPs sized to capture the design storm volume or flow, per the guidance in USEPA's Managing Wet Weather with Green Infrastructure: Green Streets. Regional facilities shall be implemented within the Project to infiltrate or biofilter the runoff volume from the 1.15 inch design storm volume that has not been retained or biofiltered within parcels or road right-of-ways.*

LID BMPs

Proposed LID BMPs for the Project include parcel-based LID BMPs and regional infiltration facilities. An assessment of feasibility was conducted to estimate, for the Project area, if infiltration could be implemented. Based on an assessment of soil type and geotechnical analyses by Petra Geosciences (Petra, 2015a), it was determined that potential geotechnical hazards would prohibit

9 The 85th percentile, 24-hour storm depth is equal to 1.15 inches as determined from the Los Angeles County 85th Percentile 24-hr Rainfall Isohyetal Map (February 2004).

infiltration within the Project's developed area within Grasshopper Canyon and low soil infiltration rates would likely limit the feasibility of infiltration for the Project areas that drain to Castaic Creek and Marple Creek. Therefore, this WQTR assumes that biofiltration LID BMPs will be implemented for the portions of the Project that discharge to Castaic Creek and Marple Creek. For the Project area within the Grasshopper Creek watershed, a series of regional detention/ retention basins will be implemented for to provide both water quality and hydromodification control.

The proposed LID BMPs are illustrated in Figures 5-1 through 5-6 of the WQTR, included in Appendix H-2 to this SEIR, and are described below.

Parcel-based BMPs

Parcel-based LID BMPs will be implemented for the parcels that drain towards Castaic Creek and Marple Creek as part of the construction of final parcel improvements (Figure 5-1 of the WQTR, included as Appendix H-2). Biofiltration BMPs have been assumed for the purposes of this WQTR due to uncertainty in the soils that will be exposed by grading. Infiltration testing must be conducted following rough grading to confirm or adjust this preliminary determination. Parcel-based biofiltration BMPs provide for pollutant removal (e.g., filtration, adsorption, nutrient uptake) by filtering stormwater through the vegetation and soils. These BMPs include bioretention with underdrains (Figure 5-2 of the WQTR, included as Appendix H-2) and planter boxes (Figure 5-3 of the WQTR, included as Appendix H-2). In these BMPs, pore spaces and organic material in the soils help to retain water in the form of soil moisture and to promote the adsorption of pollutants (e.g., dissolved metals and petroleum hydrocarbons) into the soil matrix. Plants utilize soil moisture and promote the drying of the soil through evapotranspiration.

Green Streets BMPs

The Project may utilize "green streets" techniques to treat runoff from public rights-of-way in a manner consistent with USEPA's Managing Wet Weather with Green Infrastructure: Green Streets. Retention or biofiltration BMPs sized to capture the design storm volume or flow may include bioretention with underdrains, vegetated swales (Figure 5-4 of the WQTR, included as Appendix H-2), filter strips (Figure 5-5 of the WQTR, included as Appendix H-2), or proprietary flow-based biofiltration BMPs (e.g., Filterra® or equivalent).

Regional Detention/Retention Facilities

Regional detention/retention basins, or ponds, are large scale stormwater management facilities that are designed to detain or infiltrate runoff from multiple parcels or project areas. These basins are typically shallow with flat, vegetated bottoms. Regional basins can be constructed by either excavating a depression or building a berm to create above ground storage, such that runoff can drain into the basin by gravity. Runoff is stored in the basin as well as in the pore spaces of the surface soils. Pre-treatment such as swales, filter strips, and sedimentation forebays minimize fine sediment loading to the basins, thereby reducing maintenance frequencies. In addition, these BMPs can be designed to fully capture trash and debris.

The proposed regional detention/retention system includes several connected regional basins having a total storage volume below the spillway crests of 107.3 acre-feet and a total bottom footprint of 5.6 acres. This series of regional basins is situated along Grasshopper Creek, at the downstream end the Project boundary (see Figure 5-1 of the WQTR, included as Appendix H-2). Assuming an average design infiltration rate of 1.73 inches/hour for the bottom area of the regional basins that overlies alluvium and no infiltration for the remaining bottom area, this series of regional basins will retain the LID design volume for the Project area within the Grasshopper

Creek watershed. The specific infiltration rate for each basin location will be confirmed as part of the final project design. Figure 5-6 of the WQTR, included as Appendix H-2, illustrates a regional detention/retention basin.

The regional detention / retention facilities would provide a combination of volume reduction for the LID design storm and detention for hydromodification control. Volume reduction would be provided via infiltration below the lowest surface discharge of the facility. In retention basins, sediment and sediment-bound pollutants are removed by filtration in the underlying soils. Pore spaces and organic material in the soils help to retain water in the form of soil moisture and to promote the adsorption of pollutants (e.g., dissolved metals and petroleum hydrocarbons) into the soil matrix. Plants utilize soil moisture and promote the drying of the soil. The extended detention for hydromodification control would provide pollutant removal through settling.

Table 5.8-9 below lists the modeled drainage areas and LID BMPs for the Project.

TABLE 5.8-9
MODELED PROJECT DRAINAGE AREAS AND LID BMPS

Drainage Area	Area (acres)	LID BMP(s)
Grasshopper Creek Watershed	728.3	Regional detention / retention basins
Castaic Creek and Marple Creek Watershed	31.4	Biofiltration parcel-based BMPs
Total	**759.7**	
Source: Geosyntec 2015.		

Hydromodification Control

The Project will be designed to meet the following hydromodification control performance standard:

> Per Section 8.3 of the Los Angeles County LID Standards Manual (LACDPW, 2014), Projects required to analyze for hydromodification impacts must conduct hydrology and hydraulic frequency analyses for LID, 2-, 5-, 10-, 25-, and 50-year storm events per the LACDPW Hydraulic and Hydrology manuals. The frequency analyses, which analyze changes in flow velocity, flow volume, and depth/width of flow for all natural drainage systems using HEC-RAS, are used to demonstrate compliance with hydromodification requirements and identify drainage impacts on off-site property.
>
> Additionally, the erosion potential (Ep) of susceptible watercourses associated with the Project shall be maintained within an appropriate range of the target value. The target Ep shall be 1.0 unless a more appropriate value is derived based on best available science. The target Ep shall account for changes in bed sediment supply at the point of analysis. If the Project does not significantly alter the hydrology, bed sediment supply, channel geometry, and bed/bank material of a receiving stream, then the Project is in compliance with the Ep management objective for this watercourse.

Hydromodification Control BMPs

Non-Structural Measures

The following non-structural measures will provide hydrologic source control for the Project.

Minimize Impervious Areas/Preservation of Open Spaces

Project design to minimize impervious areas reduces the increase in runoff volumes and rates that need to be managed. Undeveloped areas with un-compacted soils also provide opportunities for infiltration of impervious area runoff, and help to preserve the pre-development water budget (consisting of infiltration, evapotranspiration, percolation, subsurface flows, groundwater recharge, and surface runoff). As discussed above, approximately 839.1 acres of the 1,382.3 acre Project area (61 percent) would be parks, trails, or open space areas.

Prioritize Soils for Development and Infiltration

Development within the Project will be located preferentially on existing poorly infiltrating soils, leaving soils with good infiltration rates as areas for flow and volume management and groundwater recharge. If development is to occur on well infiltrating soils, then incorporation of infiltration facilities will help compensate for the loss of infiltration associated with the development.

Establish Riparian Buffer Zones

Establishing riparian buffer zones, where no development is allowed, prevents direct impacts to riparian habitat in multiple ways. Benefits of riparian buffer zones include: helping prevent changes to channel geometry (i.e., narrowing of the floodplain width) or bed and bank materials that can contribute to increase erosion independent of upstream flow changes; sustainably supporting the flora and fauna that exist prior to development; maintaining the degree of native wood and leaf debris input into the creek system; filtering stormwater runoff before it enters the receiving stream; and maintaining the hydrologic connectivity between streams and floodplains. If runoff can be routed through the buffer, it can provide attenuation and infiltration to reduce the volume of runoff entering the creek. Existing riparian corridor widths will be conserved while avoiding in-stream constrictions (i.e., culverts, bridges, and at-grade crossings) to the extent possible.

Structural Measures

Distributed Volume and Flow Management

A variety of volume/flow management structural measures can be used for hydromodification control that utilize the following two basic principles:

- Detain runoff and release it in a controlled way that mimics pre-development in-stream sediment transport capacity.
- Manage excess runoff volumes through one or more of the following pathways: infiltration, evapotranspiration, storage and use, discharge at a rate below the critical low-flowrate, or discharge downstream to a conveyance system and water body which are not susceptible to hydromodification.

Distributed facilities are smaller-scale facilities, typically treating runoff from one or a few lots. These types of facilities include LID BMPs as described above, but may also include hydromodification control detention-type facilities such as underground vaults and pipes. LID BMPs, typically sized to achieve the LID performance standard, may be enlarged to accommodate hydromodification control. Distributed facilities are most feasible where the land use is lower density or isolated from other development. Distributed volume and flow management

will be implemented for the portions of development that discharge to Castaic Creek and Marple Creek.

Regional Detention/Retention Basins

Regional basins for hydromodification management incorporate outlet structures designed to mimic pre-development in-stream sediment transport capacity. These basins can also be designed to support flood control and LID objectives in addition to hydromodification control. If underlying soils are not suitable for infiltration, the basin may be designed for flow detention only, with alternative practices to manage increased volumes, such as storage and use, discharge at a rate below the critical rate for adverse impacts, or discharge to a non-susceptible water body, as well as to meet the LID objectives. To the extent possible, regional basins should be designed to receive flows from developed areas only.

An Erosion Potential analysis performed for the post-project condition with the proposed regional detention/retention basins indicates that the hydromodification control performance standard will be achieved with the proposed facilities.

BMP Operation and Maintenance

Depending on the type and location of each LID or treatment BMP control measure, either the County, a Landscape or Local Maintenance District, Geologic Hazard Abatement District, Home Owners Association (HOA), or other similar government or quasi-government agency will be responsible for operation and maintenance of regional BMPs. The HOA or commercial/business owners would be responsible for operation and maintenance of parcel-based BMPs such as bioretention placed in common area landscaping or parking lot islands. Homeowners would be responsible for maintenance of hydrologic source controls on single-family residential properties. Operation and maintenance activities would be conducted in compliance with maintenance requirements established in the Los Angeles County Stormwater BMP Design and Maintenance Manual.

Regulatory Requirements

The following Regulatory Requirements (RRs) are incorporated as part of the proposed Project and are assumed in the analysis presented in this section.

RR 5.8-1 Prior to the issuance of a grading permit, the Project Applicant shall be responsible for filing a Notice of Intent and the appropriate fees to the SWRCB in order to obtain coverage under the NPDES General Construction Permit for construction activities. Pursuant to the permit requirements, the Project Applicant shall develop a Stormwater Pollution Prevention Plan that incorporates Best Management Practices for minimizing construction-related pollutants in site runoff.

RR 5.8-2 The Project shall comply with the Los Angeles Regional Water Quality Control Board MS4 Permit (Order No. R4-2012-0175; NPDES Permit No. CAS004001), the County of Los Angeles LID Ordinance, and the County of Los Angeles LID Standards Manual.

RR 5.8-3 The Project shall comply with the Los Angeles Regional Water Quality Control Board General NPDES Permit and General WDRs for Dischargers of Groundwater from Construction and Project Dewatering (Order No. R4-2013-0095, NPDES No. CAG994004).

5.8.6 THRESHOLD CRITERIA

Thresholds Addressed in the Initial Study

The Initial Study prepared for the proposed Project (included in Appendix A) and circulated with the Notice of Preparation (NOP) concludes that Project implementation would not result in significant impacts for the thresholds of significance listed below. Further analysis of these thresholds in this SEIR is not required (a summary of the analysis presented in the Initial Study is provided in Section 7.1, Effects Determined Not to be Significant, of this Draft EIR):

- Would the project add water features or create conditions in which standing water can accumulate that could increase habitat for mosquitoes and other vectors that transmit diseases such as the West Nile virus and result in increased pesticide use?
- Would the project result in point or nonpoint source pollutant discharges into State Water Resources control Board-designated Areas of Special Biological Significance?
- Would the project use onsite wastewater treatment systems in areas with known geological impacts (e.g., high groundwater) or in close proximity to surface water (including, but not limited, streams, lakes, and drainage course)?
- Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, or within a floodway or floodplain?
- Would the project place structures, which would impede or redirect flood flows, within a 100-year flood hazard area, floodway, or floodplain?
- Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure or a levee or dam?
- Would the project place structures in areas subject to inundation by seiche, tsunami, or mudflow?

Thresholds Addressed in this Supplemental Environmental Impact Report

The County of Los Angeles utilizes an Initial Study Questionnaire with Thresholds of Significance specific to the County. The Initial Study for the proposed Project concludes that additional analysis of the following thresholds of significance is required in this Draft EIR. The Project will be considered to have a significant effect related to hydrology and water quality if the Project would:

- Violate any water quality standards or waste discharge requirements.
- Otherwise substantially degrade water quality.
- Generate construction or post-construction runoff that would violate applicable stormwater NPDES permits or otherwise significantly affect surface water or groundwater quality.
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site.

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.
- 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.
- Conflict with the Los Angeles County Low Impact Development Ordinance (L.A. County Code, Title 12, Ch. 12.84).

5.8.7 ENVIRONMENTAL IMPACTS

Impact Analysis

Threshold 5.8-1a Would the project violate any water quality standards?

Threshold 5.8-2 Would the project otherwise substantially degrade water quality?

Threshold 5.8-3 Would the project generate construction or post-construction runoff that would violate applicable stormwater NPDES permits or otherwise significantly affect surface water or groundwater quality.

Short-Term Construction Related Impacts

The proposed Project could result in short-term construction impacts to surface water quality from grading activities; construction of structures, roadways, and infrastructure improvements; and other construction-related activities. The potential impacts on water quality related to construction activities, construction materials, and non-stormwater runoff during the construction phase are primarily related to sediment (TSS and turbidity) and certain non-sediment related pollutants. Construction-related activities primarily responsible for sediment releases are those that expose previously stabilized soils to potential mobilization by rainfall/runoff and wind. Such activities include the removal of vegetation, grading, and trenching for infrastructure improvements. Environmental factors that affect erosion include topographic, soil, and rainfall characteristics. Non-sediment-related pollutants also of concern during construction derive from non-stormwater flows and include construction materials (e.g., paint, stucco, etc.); chemicals, liquid products, and petroleum products used in building construction or the maintenance of heavy equipment; and concrete-related pollutants.

The Project's construction impacts will be minimized through compliance with the Construction General Permit and the general waste discharge requirements in the Dewatering General WDRs. The Project will reduce or prevent erosion and sediment transport and the transport of other potential pollutants from the Project site during the construction phase through implementation of BMPs meeting BAT/BCT that will prevent or minimize environmental impacts and ensure that any discharges during the Project construction phase will not cause or contribute to a violation or an exceedance of water quality standards in the receiving waterbodies, or degrade or contribute pollutants resulting in an adverse significant impact.

Pursuant to RR 5.8-1, the Project will comply with all Construction General Permit requirements. The discharger will be required to perform a risk assessment for the proposed development (with differing requirements based upon the determined risk level) and to prepare and implement a SWPPP, which must include erosion and sediment control BMPs that will meet or exceed measures required by the determined risk level, as well as BMPs that control the other potential construction-related pollutants. A Construction Site Monitoring Program that identifies monitoring and sampling requirements during construction is a required component of the SWPPP. Based

on preliminary analysis, the Project will most likely be categorized as a Risk Level 2. BMPs required by the Construction General Permit will be incorporated assuming this level of risk; if final design analysis indicates that the Project will fall under Risk Level 3, the additional Level 3 permit requirements will be implemented as necessary, in compliance with regulatory requirements.

The Construction General Permit requires the SWPPP to include BMPs to be selected and implemented based on the determined project risk level to effectively control erosion and sediment to the BAT/BCT. Project-specific BMPs are identified previously in Section 5.8.5, Relevant Project Characteristics.

The Project will comply with all requirements of the Construction General Permit pursuant to RR 5.8-1. Compliance would require that, prior to the issuance of preliminary or precise grading permits, the Applicant provide the County with evidence that a NOI to construct has been filed with the State Water Resources Control Board. Such evidence will consist of a copy of the NOI stamped by the State Water Board or RWQCB, or a letter from either agency stating that the NOI has been filed and a copy of the site's applicable Waste Discharge identification number.

Construction on the Project site may require dewatering related to removal of standing on-site water prior to construction activities or for vector control, if groundwater is encountered during grading, or to allow discharges associated with testing of water lines, sprinkler systems, and other facilities. In general, the Construction General Permit authorizes construction dewatering activities and other construction-related non-stormwater discharges as long as they: (a) comply with Section III.C of the Construction General Permit; (b) do not cause or contribute to a violation of any water quality standards; (c) do not violate any other provisions of the Construction General Permit; (d) do not require a non-stormwater permit as issued by some Regional Water Boards; and (e) are not prohibited by a Basin Plan provision.

BMPs will be implemented to protect receiving waters from dewatering and construction-related non-stormwater discharges. Such discharges will be implemented in compliance with the LARWQCB's General WDRs under order No. R4-2013-0095 (NPDES No. CAG994004) governing construction-related dewatering discharges within the Project site pursuant to RR 5.8-3. Typical BMPs for construction dewatering include infiltration of clean groundwater; on-site treatment using suitable treatment technologies; on-site or transport offsite for sanitary sewer discharge with local sewer district approval; or use of a sedimentation bag for small volumes of localized dewatering.

The analysis of potential impacts of construction activities, construction materials, and non-stormwater runoff on water quality during the construction phase focuses primarily on sediment (TSS and turbidity) and certain non-sediment related pollutants. Construction-related activities that are primarily responsible for sediment releases are related to exposing previously stabilized soils to potential mobilization by rainfall/runoff and wind. Such activities include removal of vegetation from the site, grading of the site, and trenching for infrastructure improvements.

Environmental factors that affect erosion include topographic, soil, and rainfall characteristics. Non sediment-related pollutants that are also of concern during construction relate to construction materials and non-stormwater flows and include construction materials (e.g., paint, stucco, etc.); chemicals, liquid products, and petroleum products used in building construction or the maintenance of heavy equipment; and concrete-related pollutants.

Construction impacts due to Project development will be minimized through compliance with the Construction General Permit. This permit requires the discharger to perform a risk assessment for the proposed development (with differing requirements based upon the determined risk level)

and to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP), which must include erosion and sediment control BMPs that will meet or exceed measures required by the determined risk level of the Construction General Permit, as well as BMPs that control the other potential construction-related pollutants. A Construction Site Monitoring Program that identifies monitoring and sampling requirements during construction is a required component of the SWPPP.

Preliminary analysis indicates that the Project will most likely be categorized as a Risk Level 2. BMPs required by the Construction General Permit will be incorporated assuming this level of risk; if final design analysis indicates that the Project will fall under Risk Level 3, the additional Level 3 permit requirements will be implemented as necessary.

Compliance with Construction Permit and Construction Impacts

Prior to the issuance of preliminary or precise grading permits, the landowner or subsequent project applicant will provide the County with evidence that a NOI has been filed with the State Water Resources Control Board. Such evidence will consist of a copy of the NOI stamped by the State Water Resources Control Board or Regional Water Board, or a letter from either agency stating that the NOI has been filed and a copy of the site's applicable Waste Discharge identification (WDID) number.

Construction on the Project site may require dewatering. For example, dewatering may be needed if water has been standing on site and needs to be removed for construction, vector control, or other reasons. Further, dewatering may be necessary if groundwater is encountered during grading, or to allow discharges associated with testing of water lines, sprinkler systems, and other facilities.

In general, the Construction General Permit authorizes construction dewatering activities and other construction-related non-stormwater discharges as long as they (a) comply with Section III.C of the General Permit; (b) do not cause or contribute to violation of any water quality standards, (c) do not violate any other provisions of the General Permit, (d) do not require a non-stormwater permit as issued by some RWQCBs, and (e) are not prohibited by a Basin Plan provision.

Additional BMPs will be implemented to protect receiving waters from dewatering and construction related non-stormwater discharges. Pursuant to RR 5.8-3, such discharges will be implemented in compliance with the Los Angeles RWQCB's General Waste Discharge Requirements (WDRs) under Order No. R4-2013-0095 (NPDES No. CAG994004) governing construction-related dewatering discharges within the Project development areas. Typical BMPs for construction dewatering include infiltration of clean groundwater; on-site treatment using suitable treatment technologies; on-site or transport offsite for sanitary sewer discharge with local sewer district approval; or use of a sedimentation bag for small volumes of localized dewatering. On this basis, the impact of Project construction-related runoff is less than significant.

Long-Term Operational Impacts

Surface Water Quality

Section 7 of the WQTR provided in Appendix H-2 of the Draft SEIR contains the water quality model predictions for pre- and post-Project runoff volumes and the concentrations and loads for pollutants of concern in stormwater runoff; a comparison of post-Project pollutant concentrations to existing water quality, as well as to Basin Plan and Toxics Rule criteria; and a qualitative

analysis of impacts for certain pollutants of concern. A summary of the analysis of stormwater runoff volumes and surface water quality pollutants of concern is provided below.

Post Development Stormwater Runoff for Modeled Pollutants of Concern

Stormwater Runoff Volumes

Table 5.8-10 shows the predicted changes in mean annual stormwater runoff volumes. Mean annual runoff volumes are expected to increase with development. The increase can be explained by the increase in percent imperviousness associated with development of the site, as well as by the decrease in infiltration capacity of existing site soils associated with the compaction of site soils during construction.

For modeling purposes, the overall imperviousness of the Project site's land uses in the existing condition was assumed to be approximately 1.3 percent. In contrast, in the post-development condition, the average imperviousness of the Project's modeled area would increase to approximately 24.2 percent.

Project BMPs include site design, source control, LID, and hydromodification control BMPs in compliance with the MS4 Permit and LID requirements. Most of the site design BMPs, especially the inclusion of parks, trails, or open space areas within the Project, reduce the impacts of the proposed development on increases in stormwater runoff volume. The LID and hydromodification control BMPs provide substantial runoff volume reduction via infiltration and evapotranspiration. LID BMPs are designed to infiltrate or evapotranspire the runoff from the 1.15 inch LID storm event, where feasible, in compliance with the LID Performance Standard.

Additionally, the Project's excess surface runoff will flow from the regional detention / retention basin through Grasshopper Creek to the Castaic Lagoon, where it will be stored and recharged into the Alluvial aquifer, benefiting groundwater supplies for the Project area.

TABLE 5.8-10
PREDICTED AVERAGE ANNUAL STORMWATER RUNOFF VOLUMES

Site Conditions	Average Annual Stormwater Runoff Volume (acre-ft)
Existing	276.5
Developed without BMPs[a]	721.4
Developed (with BMPs)	374.5
Change[b]	98.0

[a] This condition is not proposed for the Project, but was modeled solely to estimate the average annual runoff volume retained in the Project BMPs.
[b] Change is equal to Developed (with BMPs) minus Existing.

Source: Geosyntec 2015.

Total Suspended Solids (Sediment)

Table 5.8-11 shows the predicted average annual TSS concentration and loads. Conversion from open space, which has a relatively high concentration of TSS in runoff, to urban land uses with LID BMPs, which would have a much lower concentration of TSS in runoff due to less erosion from open space and the effective removal of TSS in the LID BMPs, would reduce the average TSS concentration in stormwater runoff from the Project site. TSS load is also predicted to decrease with development despite increased runoff volumes.

TABLE 5.8-11
PREDICTED AVERAGE ANNUAL TSS CONCENTRATION AND LOAD IN PROJECT RUNOFF

Site Conditions	Average Annual TSS Concentration (mg/L)	Average Annual TSS Load (tons/yr)
Existing	239.5	90.1
Developed	129.2	65.8
Change	-110.3	-24.3
Source: Geosyntec 2015.		

The predicted average annual TSS concentration in stormwater runoff is compared with receiving water objectives and the range of observed concentrations in Castaic Lake in Table 5.8-12. Although the TSS concentration is predicted to be greater than the observed average concentration in Castaic Lagoon, the concentration and load of TSS in stormwater runoff is predicted to decrease in the post-developed condition. As the Project would result in less sediment being discharged to Castaic Lagoon, the concentration of TSS in the Lagoon would not increase as a result of the Project, thus the Project would not be expected to cause a nuisance or adversely affect beneficial uses in Castaic Lagoon.

TABLE 5.8-12
COMPARISON OF PREDICTED TSS CONCENTRATIONS WITH WATER QUALITY CRITERIA AND OBSERVED CONCENTRATIONS IN CASTAIC LAGOON

Predicted Average Annual TSS Concentration in Project Runoff (mg/L)	Los Angeles Basin Plan Water Quality Objectives	California Toxics Rule Criteria	Range of Observed Concentrations in Castaic Lagoon[a] (mg/L)	Average Observed Concentration in Castaic Lagoon (mg/L)
129.2	Water shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses	NA	<0.1 – 10.4	2.6

[a] See Table 2-5 of the WQTR (Geosyntec 2015).
NA – not applicable
Source: Geosyntec 2015.

Based on the comprehensive site design, source control, and LID strategy; the predicted decrease in TSS concentration and load; and the comparison with Basin Plan benchmark objectives, potential impacts associated with TSS would be less than significant.

Total Phosphorus and Nitrogen Compounds

Comparison of Pre- and Post-Project Conditions

Table 5.8-13 shows the predicted average annual total phosphorus concentration and load in Project stormwater runoff. The average annual total phosphorus concentration and load are predicted to increase as a result of the Project. The predicted increase in concentration can be attributed to higher total phosphorus EMCs observed in monitoring data from urban land uses (representative of the post-development conditions) and the predicted treated stormwater effluent

values compared with concentrations in runoff from open space (the existing condition for the majority of the Project site). The predicted increase in total phosphorus loads is due to the combination of the predicted increase in total phosphorus concentration with the predicted increase in runoff volume (as load is equal to concentration multiplied by volume).

TABLE 5.8-13
PREDICTED AVERAGE ANNUAL TOTAL PHOSPHORUS CONCENTRATION AND ANNUAL LOAD IN PROJECT RUNOFF

Site Conditions	Average Annual Total Phosphorus Concentration (mg/L)	Average Annual Total Phosphorus Load (lbs/yr)
Existing	0.12	91
Developed	0.19	189
Change	0.07	98
Source: Geosyntec 2015.		

The predicted average annual nitrate + nitrite-N, ammonia, and total nitrogen concentrations and loads are summarized in Tables 5.8-14 through 5.8-16, respectively. The average annual nitrate + nitrite-N concentration is predicted to decrease in stormwater runoff as a result of the Project. The decrease can be attributed to higher EMCs observed in monitoring data from open space compared with urban land uses and low observed nitrate plus nitrite concentrations in effluent from LID BMPs. Average annual concentrations of ammonia and total nitrogen are predicted to increase, due to higher ammonia and TKN EMCs observed in monitoring data from urban land uses and the predicted LID BMP effluent values compared with concentrations in runoff from open space. The average annual nitrate + nitrite, ammonia, and total nitrogen loads are predicted to increase, due to the increase in runoff concentrations and/or volume predicted for the post-development condition.

TABLE 5.8-14
PREDICTED AVERAGE ANNUAL NITRATE + NITRITE CONCENTRATION AND LOAD IN PROJECT RUNOFF

Site Conditions	Average Annual Nitrate-N + Nitrite-N Concentration (mg/L)	Average Annual Nitrate-N + Nitrite-N Load (lbs/yr)
Existing	1.2	898
Developed	1.0	989
Change	-0.2	91
Source: Geosyntec 2015.		

TABLE 5.8-15
PREDICTED AVERAGE ANNUAL AMMONIA-N CONCENTRATION AND LOAD IN PROJECT RUNOFF

Site Conditions	Average Annual Ammonia Concentration (mg/L)	Average Annual Ammonia Load (lbs/yr)
Existing	0.1	87
Developed	0.2	238
Change	0.1	151
Source: Geosyntec 2015.		

TABLE 5.8-16
PREDICTED AVERAGE ANNUAL TOTAL NITROGEN-N CONCENTRATION AND LOAD IN PROJECT RUNOFF

Site Conditions	Average Annual Total Nitrogen Concentration (mg/L)	Average Annual Total Nitrogen Load (lbs/yr)
Existing	2.2	1653
Developed	2.4	2443
Change	0.2	790
Source: Geosyntec 2015.		

Comparison with Water Quality Criteria

Predicted total phosphorus and nitrogen compound concentrations are compared to the Basin Plan objectives, TMDL wasteload allocations for Santa Clara River Reach 5, and observed concentrations in Table 5.8-17. As shown in Table 5.8-18, the predicted average annual total phosphorus and nitrogen compound concentrations are greater than the range and average of the observed concentrations in Castaic Lagoon.

The average annual stormwater concentration of nitrate + nitrite-N is predicted to be considerably less than the concentration-based wasteload allocation for Santa Clara River Reach 5 and the Basin Plan objective. Likewise, the average annual stormwater concentration of ammonia is predicted to be considerably less than the TMDL wasteload allocation for Santa Clara Reach 5 and the Basin Plan water quality objective for Castaic Lagoon.

TABLE 5.8-17
COMPARISON OF PREDICTED TOTAL PHOSPHORUS AND NITROGEN COMPOUND CONCENTRATIONS WITH WATER QUALITY CRITERIA AND OBSERVED CONCENTRATIONS IN CASTAIC LAGOON

Nutrient	Predicted Average Annual Concentration in Project Runoff (mg/L)	Basin Plan Water Quality Objective[a] (mg/L)	Wasteload Allocations for MS4 Discharges into the Santa Clara River Reach 5 (mg/L)	Range of Observed Concentrations in Castaic Lagoon[b] (mg/L)	Average Observed Concentration in Castaic Lagoon (mg/L)[b]
Total Phosphorus	0.19	Waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses	NA	<0.01–0.17	0.04
Nitrate + Nitrite-N	1.0	5	6.8[c]	<0.01–1.01	0.33
Ammonia-N	0.2	2.0[d]	1.75[e]	<0.01–0.31	<0.01
Total Nitrogen	2.4	Waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses	NA	--	0.64[f]

[a] There are no CTR criteria for total phosphorus or nitrogen compounds.
[b] See Table 2-6.
[c] 30-day average.
[d] 4-day average, Early Life Stage present, average pH (8.5) and temperature (19 °C) in Castaic Lagoon.
[e] 30-day average in Reach 5 below Valencia.
[f] Total nitrogen was estimated using available nitrogen compound monitoring data. NA – not applicable
NA – not applicable

Source: Geosyntec 2015.

There are no numeric objectives for total phosphorus or total nitrogen in the Basin Plan. A narrative objective for biostimulatory substances in the Basin Plan states: "waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses."

The potential for Project runoff to impact total phosphorus and nitrogen compound concentrations in Castaic Lagoon is a function of: (1) the relative magnitudes of runoff volume and Castaic Lagoon storage volume; and (2) the relative magnitude of runoff concentrations and concentrations in Castaic Lagoon.

The significance of the increases in the load discharging into Castaic Lagoon depends on the Lagoon's current biological productivity and its assimilative capacity. The concept of a limiting nutrient may be used as an indicator of the Lagoon's assimilative capacity for nutrients. The limiting nutrient may be evaluated using the ratio of the Lagoon's total nitrogen and total phosphorus concentrations (TN:TP). If phosphorus or nitrogen is the limiting nutrient, an increase in the loading of the limiting nutrient would affect Lagoon water quality more than an increase in loading of the non-limiting nutrient.

Based on the average Castaic Lagoon concentrations in Table 5.8-18 (monitoring data collected at the Castaic Lake Outlet Tower), TN:TP is 16. TN:TP ratios between 10 and 17 are inconclusive about whether nitrogen or phosphorus is the limiting nutrient. In such cases, algal growth may be limited by micronutrients or some other environmental factor. Moreover, limnology is complex and there are potentially other variables that affect lake productivity and eutrophication, such as lake depth and stratification, suspended solids, dissolved organic matter, the hydraulic flushing rate (i.e., the rate and quantity of inputs from Castaic Lake and outflows to Castaic Creek), and the macrophyte and phytoplankton populations (such as zooplankton that graze on algae) and other factors that affect these biological organisms (such as the presence of toxicants).

TABLE 5.8-18
PREDICTED CHANGE IN AVERAGE CONCENTRATION OF NUTRIENTS IN CASTAIC LAGOON WITH PROJECT RUNOFF

Nutrient	Predicted Average Annual Concentration in Project Runoff (mg/L)	Predicted Average Concentration in Castaic Lagoon with Project Runoff (mg/L)	Average Observed Concentration in Castaic Lagoon (mg/L)[a]	Predicted Change in Average Concentration in Castaic Lagoon with Project Runoff (mg/L)
Total Phosphorus	0.19	0.05	0.04	0.01
Nitrate + Nitrite-N	1.0	0.29	0.25[b]	0.04
Ammonia-N	0.2	0.023	0.005[c]	0.015
Total Nitrogen	2.4	0.75	0.64[d]	0.11

[a] See Table 2-6.
[b] Nitrate + nitrate average concentration was calculated using available monitoring data for nitrate-N, nitrite-N, and nitrate+nitrite-N. This value is different than that shown in Table 2-6 for nitrate+nitrite-N, because is includes data reported for nitrate-N and nitrite-N as stand-alone values.
[c] Assumes an ammonia-N concentration of ½ of the detection limit (0.01 mg/L) in Castaic Lagoon.
[d] Total nitrogen average concentration in Castaic Lagoon was estimated using available nitrogen compound monitoring data.

Source: Geosyntec 2015.

Sources of nitrogen and phosphorus compounds in urban areas include atmospheric deposition (from sources such as vehicle emissions, industry, and agriculture), fertilizers, soil erosion, human waste (from leaking septic systems), pet waste, phosphorous containing detergents, and mishandling of leaves and grass clippings. Human waste as a source of nutrients is not expected

as the Project will discharge wastewater to the Valencia WRP. Discharge of nitrogen and phosphorus compounds will be reduced through the Project's source control measures, education of homeowners, and provision of waste receptacles in areas where dog walking occurs.

The modeling results are conservative in that the predicted loadings only reflect the pollutant removals in the LID BMPs and do not account for the additional load reductions resulting from source control measures. In addition, the nutrient concentrations used in the water quality model do not reflect the current landscape standards in the Los Angeles County Drought-Tolerant Landscaping Ordinance. Post-construction landscape designs must now comply with all of the following:

1. Turf areas shall not exceed 25 percent of the total landscaped area.
2. Non-invasive, drought-tolerant plant and tree species appropriate for the climate zone region shall be utilized in at least 75 percent of the total landscaped area.
3. Hydrozoning irrigation techniques shall be incorporated into the landscape design.

These landscape standards will greatly reduce nutrient concentrations and loads in post-development runoff in comparison to the landscape standards in place in the 1990's when the land use-based water quality data used in the model was collected by Los Angeles County. However, potential impacts related to the increase in nitrogen and phosphorus compounds entering Castaic Lagoon may be potentially significant based on the lagoon's biological productivity and its assimilative capacity. However, because fertilizers would be a significant source of nitrogen and phosphorous compounds entering Castaic Lagoon, implementation of MM 5.8-1, requiring implementation of an Integrated Pest Management (IPM) Plan, would reduce this potential impact to a less than significant level.

Metals

Projected loads and concentrations for the trace metals copper, lead, zinc, and iron are presented in Tables 5.8-19 through 5.8-24. As the CTR criteria apply to the dissolved form of the metal, the estimated loads and concentrations of the dissolved form of the metals are provided when feasible (for copper and zinc). Insufficient pollutant loading data is available for dissolved lead in the Los Angeles County land use-based monitoring data to model this constituent. Copper, lead, and zinc are the most prevalent metals typically found in urban runoff. Iron is not commonly associated with stormwater, but Santa Clara River Reach 5 is listed as impaired for this pollutant. Insufficient treatment data is available in the International BMP Database to model dissolved iron, so only total iron is analyzed in this WQTR. Other trace metals, such as cadmium, chromium, and mercury, are typically not detected in urban runoff or are detected at very low levels.

Post-development concentrations and loads of total and dissolved copper, total lead, total and dissolved zinc, and total iron are predicted to increase compared to pre-development conditions.

These results can be explained by the difference in EMC values observed in representative monitoring data from the pre-developed open space condition and the post-developed urban condition, in combination with pollutant removal expected in the Project's LID BMPs and the predicted increase in runoff volume.

Project BMPs include site design, source control, and LID BMPs in compliance with the MS4 Permit and LID Manual requirements. Specific site design BMPs that will be implemented to minimize increases in trace metals include directing drainage from impervious areas to landscaped and/or LID BMPs, and the selection of building materials for roof gutters and downspouts that do not include copper or zinc. Source control BMPs that target metals include

education for property owners, BMP maintenance, and street sweeping private streets and parking lots. The LID BMPs will also reduce trace metals in the runoff from the proposed Project. Only the effects of the LID BMPs are reflected in the model results.

TABLE 5.8-19
PREDICTED AVERAGE ANNUAL DISSOLVED COPPER CONCENTRATION AND LOAD

Site Conditions	Average Annual Dissolved Copper Concentration (µg/L)	Average Annual Dissolved Copper Load (lbs/yr)
Existing	0.9	0.7
Developed	4.1	4.1
Change	3.2	3.4

TABLE 5.8-20
PREDICTED AVERAGE ANNUAL TOTAL COPPER CONCENTRATION AND LOAD

Site Conditions	Average Annual Total Copper Concentration (µg/L)	Average Annual Total Copper Load (lbs/yr)
Existing	10.9	8.2
Developed	11.8	12.0
Change	0.9	3.8

TABLE 5.8-21
PREDICTED AVERAGE TOTAL LEAD CONCENTRATION AND ANNUAL LOAD

Site Conditions	Average Annual Total Lead Concentration (µg/L)	Average Annual Total Lead Load (lbs/yr)
Existing	3.3	2.5
Developed	4.2	4.3
Change	0.9	1.8

TABLE 5.8-22
PREDICTED AVERAGE ANNUAL DISSOLVED ZINC CONCENTRATION AND LOAD

Site Conditions	Average Annual Dissolved Zinc Concentration (µg/L)	Average Annual Dissolved Zinc Load (lbs/yr)
Existing	34.3	25.8
Developed	38.9	39.6
Change	4.6	13.8

TABLE 5.8-23
PREDICTED AVERAGE ANNUAL TOTAL ZINC CONCENTRATION AND LOAD

Site Conditions	Average Annual Total Zinc Concentration (µg/L)	Average Annual Total Zinc Load (lbs/yr)
Existing	34.9	26.3
Developed	53.3	54.3
Change	18.4	28.0

TABLE 5.8-24
PREDICTED AVERAGE TOTAL IRON CONCENTRATION AND ANNUAL LOAD

Site Conditions	Average Annual Total Iron Concentration (µg/L)	Average Annual Total Iron Load (lbs/yr)
Existing	1,005	756
Developed[a]	1,211	1,234
Change	206	478

[a] Effluent data for total iron are not available in the International BMP Database; total iron load in the developed condition is estimated by using TSS as a surrogate for calculating removal of particulate iron and assuming that there is no removal of dissolved iron via treatment in the BMP.

Comparison with Water Quality Criteria

A narrative objective for toxic substances in the LA Basin Plan states: "all waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life".

Comparison of the predicted runoff metal concentrations and the chronic (4-day average) CTR criteria for total and dissolved copper, total lead, total and dissolved zinc, and total iron are shown in Table 5.8-25, along with the observed concentrations in Castaic Lagoon and estimated concentrations in Castaic Lagoon with Project runoff (estimate per Equation 1 above). The CTR criteria are the applicable water quality objectives for protection of aquatic life. The CTR criteria are calculated on the basis of the hardness of the receiving waters. Lower hardness concentrations result in lower, more stringent CTR criteria. The average hardness value (157 mg/L as CaCO3) observed in the Castaic Lagoon was used to calculate the CTR criteria provided in Table 5.8-25.

Iron does not have a CTR criterion. The National Ambient Water Quality Criteria (NAWQC) recommended chronic criterion (4-day average) is 1,000 µg/L.

TABLE 5.8-25
COMPARISON OF PREDICTED TRACE METAL CONCENTRATIONS WITH WATER QUALITY CRITERIA AND OBSERVED CONCENTRATIONS IN CASTAIC LAGOON

Metal	Predicted Average Annual Concentration in Project Runoff (µg/L)	California Toxics Rule Criteria[a] (µg/L)	Average Observed Concentration in Castaic Lagoon[b] (mg/L)	Predicted Average Concentration in Castaic Lagoon with Project Runoff (mg/L)
Dissolved Copper	4.1	13.2	21.0	19.9
Total Copper	11.8	13.7	13.3	13.2
Total Lead	4.2	5.6	--	4.0[c]
Dissolved Zinc	38.9	170	8.9	10.8
Total Zinc	53.3	180	--	11.7[c]
Total Iron	1,211	NA	30.0	104.5

[a] Chronic criteria using average observed hardness in Castaic Lake (157 mg/L). Lead criterion is for total recoverable lead. There is no CTR criterion for iron.
[b] See Table 2-7 in the WQTR included as Appendix H-2.
[c] There are no monitoring data for total lead or total zinc; these values were calculated using the observed average concentration of dissolved lead and dissolved zinc in Castaic Lagoon.

Source: GeoSyntec 2015

Although the trace metal concentrations and loads are predicted to increase in Project runoff, comparison of the trace metal concentrations, both in Project runoff and in Castaic Lagoon with Project runoff, to the benchmark CTR criteria shows that all of the trace metal concentrations are below the benchmark water quality criteria, except for dissolved copper in Castaic Lagoon with Project runoff. Dissolved and total copper concentrations are predicted to decrease in Castaic Lagoon with Project runoff.

Iron does not have a CTR criterion. The NAWQC recommended chronic criterion (4-day average) is 1,000 µg/L. The presence of iron is due to the fact that it is an abundant element in the earth's crust (the fourth most abundant element by weight); iron silicate minerals are a component of most rocks, including basalt. Iron is an important component in soil adhesion, and is additionally important biologically. Vertebrate animals utilize iron's oxidation-reduction mechanisms to transport oxygen in the bloodstream. Iron pollution sources include industrial wastewater, mine leachate, and groundwaters with high iron content. At low pH levels (below 5.5), iron from these sources complexes with hydroxide, and forms precipitates which can coat gills of fish and cement streambeds, making them unsuitable for spawning. As the pH levels in Castaic Lagoon average 8.5 and the predicted concentration in Castaic Lagoon with Project discharges (104.5 mg/L) is well below the NAWQA criterion (1,000 mg/L), iron in Project discharges would not impact water quality in Castaic Lagoon.

Based on the comprehensive site design, source control, and LID BMP strategy and the comparison with the predicted water quality in Castaic Lagoon and benchmark water quality criteria, the Project will not have significant impacts resulting from trace metals.

Chloride

Table 5.8-26 shows the predicted average annual chloride concentrations and loads in stormwater runoff from the Project. The annual average chloride concentration is predicted to increase when compared to the existing conditions. Average annual chloride load also is expected to increase as a result of the increase in total annual runoff volume predicted for the Project.

TABLE 5.8-26
PREDICTED AVERAGE ANNUAL CHLORIDE CONCENTRATION AND LOAD

Site Conditions	Average Annual Chloride Concentration (mg/L)	Average Annual Chloride Load (tons/yr)
Existing	7.0	2.6
Developed	12.3	6.3
Change	5.3	3.7

Comparison with Water Quality Criteria

The predicted chloride concentration in post-development Project runoff is compared to the Los Angeles Basin Plan water quality objective, the observed concentration in Castaic Lagoon, and the predicted concentration in Castaic Lagoon with Project runoff in Table 5.8-27. The predicted average annual chloride concentration in stormwater runoff from the Project area is below the average observed concentration for this pollutant and is well below the Santa Clara River Reach 5 Basin Plan water quality objective and the TMDL WLA for Santa Clara River Reach 5 (100 mg/L for both). The average concentration of chloride in Castaic Lagoon is predicted to decrease slightly with Project runoff (3 mg/L).

TABLE 5.8-27
COMPARISON OF PREDICTED CHLORIDE CONCENTRATIONS WITH WATER QUALITY CRITERIA AND OBSERVED CONCENTRATIONS IN CASTAIC LAGOON

Pollutant	Predicted Average Annual Concentration in Project Runoff (mg/L)	Basin Plan Water Quality Objectives[a] (mg/L)	Wasteload Allocations for MS4 Discharges into the Santa Clara River Reach 5 (mg/L)	Average Observed Concentration in Castaic Lagoon (mg/L)	Predicted Average Concentration in Castaic Lagoon with Project Runoff (mg/L)
Chloride	12.3	100	100	60	57
[a] There is no CTR criterion for chloride.					

Based on the comprehensive site design, source control, and LID strategy, and comparison with benchmark receiving water criteria and Castaic Lake monitoring data, the Project would not have significant water quality impacts resulting from chloride in stormwater runoff. Impacts on chloride in wastewater discharges are addressed under Threshold 5.8-1b, Wastewater Discharges.

Turbidity

Turbidity is a measure of suspended matter that interferes with the passage of light through the water or in which visual depth is restricted. Turbidity may be caused by a wide variety of suspended materials, which range in size from colloidal to coarse dispersions, depending upon the degree of turbulence. In lakes or other waters existing under relatively quiescent conditions, most of the turbidity will be due to colloidal and extremely fine dispersions.

In rivers under flood conditions, most of the turbidity will be due to relatively coarse dispersions. Erosion of clay and silt soils may contribute to in-stream turbidity. Organic materials reaching

rivers serve as food for bacteria, and the resulting bacterial growth and other microorganisms that feed upon the bacteria produce additional turbidity. Nutrients in runoff may stimulate the growth of algae, which also contribute to turbidity.

Discharges of turbid runoff are primarily of concern during the construction phase of development. The Construction Stormwater Pollution Prevention Plan must contain sediment and erosion control BMPs pursuant to the Construction General Permit, and those BMPs must effectively control erosion and discharge of sediment, along with other pollutants, per the Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology (BAT/BCT) standards.

Additionally, fertilizer control and non-visible pollutant monitoring and trash control BMPs in the SWPPP will combine to help control turbidity during the construction phase.

In the post-development condition, placement of impervious surfaces will serve to stabilize soils and to reduce the amount of erosion that may occur from the Project during storm events, and will therefore decrease turbidity in runoff from the Project. Project BMPs, including source controls (such as common area landscape management, the Integrated Pest Management Program, and common area litter control) and LID BMPs, in compliance with the MS4 Permit and LID Manual requirements, will prevent or reduce the release of organic materials and nutrients (which might contribute to algal blooms) to receiving waters. Post-development nutrients in runoff are not expected to cause significant water quality impacts. Based on implementation of the construction phase and post-construction Project BMPs, runoff discharges from the Project will not cause increases in turbidity which would result in adverse effects to beneficial uses in the receiving waters. Based on these considerations, the water quality impacts of the Project on turbidity would be less than significant.

Pesticides

Pesticides in runoff may or may not increase in the post-development phase as a result of applications in and around buildings and in vegetated areas. However, proposed pesticide management practices, including source control, removal in LID BMPs, and advanced irrigation controls, in compliance with the requirements of the MS4 Permit and the County LID Manual, will minimize the presence of pesticides in runoff. Stormwater discharges from the Project are not expected to increase the in-stream concentration of pesticides. On this basis, the impact related to pesticides would be less than significant.

Additionally, for common area landscaping in commercial areas, multi-family residential areas, and parks, an IPM Plan will be incorporated into the Project as MM 5.8-1. The goal of an IPM program is to keep pest levels at or below threshold levels, reducing risk and damage from pest presence, while eliminating the risk from the pest control methods used. IPM programs achieve these goals through the use of low risk management options by emphasizing use of natural biological methods and the appropriate use of selective pesticides. In addition, selection of appropriate plants that will thrive under local climate and other conditions will reduce pesticide use. IPM programs also incorporate environmental consideration by implementing procedures that minimize intrusion and alteration of biodiversity in ecosystems. Although, as stated above, post-development impacts associated with pesticides would be less than significant, implementation of MM 5.8-1 would further ensure that no significant impacts would occur.

Pathogens

Pathogens are viruses, bacteria, and protozoa that can cause gastrointestinal and other illnesses in humans through body contact exposure. Fecal indicator bacteria (FIB), such as total and fecal coliform, enterococci, and *E. coli*, are used by regulatory agencies as indirect measures of the presence of pathogens, and by association, risk of human illness.

EPA updated its recreational water quality criteria in 2012, recommending that two indicators, *E. Coli* for fresh waters and enterococci for marine or fresh waters, be applied.18 The Regional Water Board subsequently revised the Basin Plan to incorporate the updated EPA criteria. In fresh waters designated for water contact recreation (REC-1), the Basin Plan criteria are for *E. Coli*, in the form of a geometric mean (GM) and a single sample not to exceed limit. Specifically, the *E. Coli* criteria is 126/100 mL for the geometric mean criterion and 235/100 mL for the single sample limit. The implementation provisions in the Basin Plan state that the geometric mean values should be calculated based on a statistically-sufficient number of samples (generally not less than five samples equally spaced over a 30-day period).

The single sample limit must be strictly applied, except in the context of a TMDL, where the Regional Water Board may implement the single sample objective by using a "reference system/antidegradation approach" or "natural sources exclusion approach." A reference system is defined as an area and associated monitoring point that is not impacted by human activities that may potentially affect bacteria densities in the receiving water body. Under the reference system approach, a certain frequency of exceedance of the single sample objective is permitted on the basis of the observed exceedance frequency in the selected reference system or the targeted water body, whichever is less. Under the natural source exclusion approach, after all anthropogenic sources of bacteria have been controlled such that they don't cause or contribute to an exceedance of the single sample objective and the natural sources have been identified and quantified, a certain frequency of exceedance of the single sample objective is permitted based on the residual exceedance frequency in the specific water body. These approaches recognize that there are natural sources of bacteria which may cause or contribute to exceedances of the single sample objective and acknowledge that it is not the intent of the Regional Board to require treatment of natural sources of bacteria from undeveloped areas.

Santa Clara River Bacteria TMDL

The Regional Water Board approved a Basin Plan amendment on July 8, 2010, to incorporate a TMDL for Indicator Bacteria for Reaches 5, 6 and 7 of the Santa Clara River and for the Santa Clara River Estuary (Resolution #R10-006). The TMDL, in effect as of March 21, 2012, provides allowable exceedance day-based WLAs for MS4 dischargers for *E. coli* in Reaches 3, 5, 6 and 7, and for fecal coliform, enterococcus, and total coliform in the Santa Clara River Estuary. These WLAs have been incorporated into the Los Angeles County MS4 Permit (Order No. R4-2012-0175). The Indicator Bacteria TMDL MS4 WLAs are applied in the form of allowable exceedance days as illustrated along with the TMDL implementation schedule in Table 5.8-28.

TABLE 5.8-28
***E. COLI.* TMDL IMPLEMENTATION SCHEDULE FOR SANTA CLARA RIVER**

Deadline	Limitations	Requirements
March 21, 2016	Receiving water limitations interim dry weather (single sample)	Annual allowable exceedance days: 17 days if daily sampling, 3 days if weekly sampling.
March 21, 2016	Receiving water limitations interim wet weather (single sample)	Annual allowable exceedance days: 61 days if daily sampling, 9 days if weekly sampling.
March 21, 2023	Effluent limitations dry weather	Daily maximum concentration not to exceed 235 MPN/cfu per 100 mL and geometric mean not to exceed 125 MPN/cfu per 100 mL.
March 21, 2023	Receiving water limitations final dry weather (single sample)	Annual allowable exceedance days: 5 days if daily sampling, 1 day if weekly sampling.
March 21, 2023	Receiving water limitations final dry weather (geometric mean)	Geometric mean not to exceed 126/100 mL
March 21, 2029	Effluent limitations wet weather	Daily maximum concentration not to exceed 235 MPN/cfu per 100 mL, and geometric mean not to exceed 125 MPN/cfu per 100 mL.
March 21, 2029	Receiving water limitations final wet weather (single sample)	Annual allowable exceedance days: 16 days if daily sampling, 3 days if weekly sampling.
March 21, 2029	Receiving water limitations final wet weather (geometric mean)	Geometric mean not to exceed 126/100 mL
Note: Applicable to SCR Reach 5.		

The Regional Water Board indicated in the TMDL implementation schedule that they will reconsider the TMDL if, prior to four years after the effective date of the TMDL, one of the following occurs: (1) monitoring or any voluntary local reference system studies justify a revision, or (2) EPA publishes revised recommended bacteria criteria that affect the TMDL, or (3) the Regional Water Board adopts a separate Basin Plan amendment, suspending recreational uses in the Santa Clara River during high flows.

Factors That Affect FIB Concentrations

There are various confounding factors that affect the reliability of FIB as pathogen indicators. One primary factor is that there are numerous natural or non-anthropogenic (or “zoonotic”) sources of FIB in developed watersheds and their receiving water bodies, including birds and other wildlife, soils, and plant matter. Anthropogenic sources may include domesticated animals and pets, poorly functioning septic systems, sewer system overflows or spills, cross-connections between sewer and storm drains, and the utilization of outdoor areas or storm drains for human waste disposal by people without access to indoor sanitary facilities. All of these sources can contribute to the concentrations of FIB, but there is some debate as to whether source type affects human health risk.

A second confounding factor is that FIB can multiply in the environment if the substrate, temperature, moisture, and nutrient conditions are suitable. Some research indicates that bacteria presence and growth was observed in various substrates such as beach sands, wrack line (accumulation of kelp and other vegetative debris in the inter-tidal area of beaches), inter/sub-tidal sediments, and material deposited in storm drains. FIB monitoring in the Santa Ana River

indicate that the ubiquity of sources and potential regrowth far exceed the human sources of fecal bacteria generated by the entire population in the watershed (Surbeck et al., 2006). Regrowth of bacteria downstream of a package treatment plant utilizing ultraviolet (UV) radiation to disinfect dry weather flows in Aliso Creek was considered a prime factor in the rapid rebound of FIB concentrations downstream of the plant. Recent research also implicates storm drain biofilms as another urban source of FIB to receiving waters.

A third confounding factor is that the persistence of FIB may differ from those of various pathogenic viruses, bacteria, and protozoa. Viruses, for instance, are small, low in number, and difficult to inactivate, while protozoa may form protective cysts that are resistant to destruction and render them dormant but capable of reactivating in the future. Therefore, while some indicator bacteria may die off in the water column due to ultraviolet disinfection or other unfavorable environmental conditions (including predation and antagonism), pathogens occasionally may persist longer. So while the two previously described factors may result in indicator bacteria resulting in false positive indications of public health risk, there may also be instances when indicator bacteria result in false negative indications.

Epidemiological Studies

In southern California, the SCCWRP conducted three epidemiology studies between 2007 and 2009 at Doheny Beach in Dana Point, Avalon Beach on Santa Catalina Island, and at Surfrider Beach in Malibu. A key goal of these studies was to document the relationship between illness and traditional culture-based FIB (enterococcus, fecal coliform, and total coliforms) and three qPCR assays for enterococcus for beaches subject to urban runoff. The results from the Doheny Beach study indicated significant differences in diarrhea and other outcomes in swimmers compared to non-swimmers and in swimmers who experienced body immersion, head immersion, or swallowed water. When the source of FIB consistently exceeded water quality standards, traditional and rapid methods for enterococcus were both strongly related to illness. However fewer significant associations were measured during periods when a beach berm prevented urban runoff from flowing into the ocean. This illustrates the difficulty of consistently predicting human health associations at urban runoff impacted beaches using currently available indicators.

Effects of Land Use and Runoff on FIB Concentrations

Dry weather, non-storm stream flows from undeveloped watersheds tend to have lower concentrations of FIB than dry weather urban flows, although water quality standard exceedances still occur. For instance, a recent study by SCCWRP which monitored 15 unimpaired natural southern California streams weekly during dry weather for a year showed that about 18 percent of the samples exceeded daily and monthly bacterial indicator thresholds, although concentrations from these unimpaired streams were one to two orders of magnitude lower than levels found in developed watersheds (Tiefenthaler, et al., 2008). The study reported an average of the geometric means for *E. coli* in dry weather flows in each stream of 41 MPN/100 mL. The Santa Clara River bacteria TMDL WLAs are based on this and other SCCWRP reference stream and reference beach datasets, in acknowledgement of natural sources.

During wet weather, stormwater runoff can mobilize indicator bacteria from a number of watershed and instream sources, and, therefore, indicator bacteria concentrations tend to increase.

For example, median stormwater runoff monitoring results for the open space land use category include *E. Coli* concentrations of about 5,400 MPN/100 mL from the 2001-2005 Los Angeles River Watershed Wet Weather Study. Similar open land use data from the National Stormwater Quality Database indicate a median concentration of 7,200 MPN/100 mL.

Land use type and condition also affect runoff concentrations, and most studies show higher FIB concentrations in urban runoff than in open space runoff. Runoff from residential land uses from the Los Angeles River Watershed Wet Weather Study had a median *E. coli* concentration of about 6,300 MPN/100 mL and about 8,300 from the National Stormwater Quality Database. The median value of four flow-weighted average results was about 6,100 MPN/100mL for *E. coli* for the low density residential land use site.

These data represent urban areas that in general do not have source controls and LID BMPs, and therefore are not indicative of runoff from the proposed Project.

Project BMPs that Address Pathogen Indicators

The primary sources of pathogen indicators from the Project development would likely be sediment, pet wastes, wildlife, and regrowth in the storm drain itself. Other sources of pathogens and pathogen indicators, such as cross connections between sanitary and storm sewers, are unlikely given modern sanitary sewer installation methods and inspection and maintenance practices.

The levels of bacteria in runoff from the Project would be reduced by source controls and LID BMPs. The most effective means of controlling specific bacteria sources, such as pet and other animal wastes, is through source control. A key control is education of pet owners, and providing products and disposal containers that encourage and facilitate cleaning up after pets. Education regarding feeding (and therefore attracting) of waterfowl near waterbodies may also assist in managing wildlife sources. These BMPs are specified as PDFs for the Project.

Although there are limited data on the effectiveness of different types of stormwater treatment to manage pathogen indicators, treatment processes that help reduce pathogen indicators include sunlight (ultraviolet light) degradation, sedimentation, and filtration.

Bioretention and infiltration, LID stormwater treatment BMPs which provide filtration through soils, are examples of effective BMPs for addressing FIB. The City of Austin, Texas conducted a number of studies on the effectiveness of sedimentation/filtration treatment systems for treating stormwater runoff. Most of the structures were designed to treat one-half inch of runoff. Data from four sand filters indicated a range of removals from 37 percent to 83 percent for fecal coliform, and 25 percent to 81 percent for fecal streptococci. Research on the use of filtration to remove bacteria also has been conducted in Florida by the Southwest Florida Water Management District. Significant reductions in total and fecal coliform bacteria and the other pathogen indicators were observed between inflow and outflow samples for sand filtration. Percent reductions were measured using flow-weighted sampling techniques. Total coliform bacteria removals were approximately 70 percent, and fecal coliform bacteria reduction varied from 65 percent to 100 percent. Analysis of Enterococcus influent and effluent data for bioretention facilities indicate a significant difference between median influent concentrations of 605 MPN/100mL and the median effluent concentration of 234 MPN/100mL. These types of BMPs, along with infiltration in the regional detention / retention basins, are specified for incorporation into the Project to meet the LID Performance Standard.

In summary, without implementation of BMPs, the stormwater discharges from the Project could potentially exceed the REC-1 Basin Plan standard for FIB. However, the FIB concentrations in runoff from the Project would be reduced through the implementation of source control and LID BMPs. The Project will incorporate a number of source controls specific to managing FIB, including education of pet owners, education regarding feeding (and therefore attracting) of waterfowl near waterbodies, and providing products and disposal containers that encourage and facilitate cleaning up after pets. The Project will not include septic systems, and the sewer system

will be designed to current standards which minimize the potential for leaks. The Project, consistent with the MS4 permit requirements, includes a comprehensive set of site design, source control, and LID BMPs (i.e., infiltration facilities and bioretention), selected to manage pollutants of concern, including pathogen indicators. With these BMPs, it is anticipated that the Project will not result in substantial changes in pathogen or FIB concentrations in receiving waters causing a violation of the water quality standards or waste discharge requirements or otherwise substantially degrade water quality in the receiving waters. Water quality impacts related to pathogens would be less than significant.

Petroleum Hydrocarbons

Petroleum hydrocarbons are a broad class of compounds, most of which are non-toxic. Various forms of petroleum hydrocarbons (oil and grease) are common constituents associated with urban runoff. Petroleum hydrocarbons are hydrophobic (low solubility in water), have the potential to volatilize, and most forms are biodegradable. Polynuclear Aromatic Hydrocarbons (PAHs) are a class of hydrocarbons that can be toxic depending on the concentration levels, exposure history, and sensitivity of the receptor organisms and, therefore, are of most interest in terms of impacts to water quality and beneficial uses. Petroleum hydrocarbon sources in urban settings derive principally from transportation sources including emissions and leaks from vehicles and spill from fueling operations. These sources are located on impervious surfaces, including roads and parking lots and, therefore, PAHs can be considered a relatively mobile source. An additional source of petroleum hydrocarbons on the Project site may include leak or upset conditions associated with the existing crude oil pipeline located on the Project site.

During the construction phase of the Project, petroleum hydrocarbons in site runoff could result from construction equipment/vehicle fueling or spills. Construction-related impacts are addressed under Thresholds 5.8-1a, 5.8-2 and 5.8-3, Short-Term Construction Related Impacts. However, pursuant to the Construction General Permit, the Construction Stormwater Pollution Prevention Plan must include BMPs that address proper handling of petroleum products on the construction site, such as proper petroleum product storage and spill response practices, and those BMPs must effectively prevent the release of hydrocarbons to runoff per the BAT/BCT standards. PAHs that are adsorbed to sediment during the construction phase would be effectively controlled via the erosion and sediment control BMPs. For these reasons, construction-related impacts related to petroleum hydrocarbons on water quality are less than significant.

Additionally, all proposed petroleum pipeline relocation activities would be performed in accordance with all applicable rules and regulations set forth by the State Fire Marshal and pursuant to *Code of Federal Regulations* (Title 49 and Part 195), which would ensure that potential impacts to those workers associated with the relocation effort would be less than significant.

On the basis of the integrated source control and LID treatment strategy, the Project's impacts relative to petroleum hydrocarbons in the receiving waters are less than significant.

Trash and Debris

During the construction phase, there is potential for an increase in trash and debris loads due to lack of proper contractor good housekeeping practices at the construction site. Per the construction General Permit, the SWPPP for the site will include BMPs for trash control (catch basin inserts, good housekeeping practices, etc.). Compliance with the Permit requirements and inclusion of these BMPs, meeting BAT/BCT, included in the SWPPP will reduce impacts from trash and debris and, therefore, potential impacts would be less than significant.

Urban development tends to generate significant amounts of trash and debris. Trash refers to any human-derived materials including paper, plastics, metals, glass and cloth. Debris is defined as any organic material transported by stormwater, including leaves, twigs, and grass clippings. Debris can be associated with the natural condition. Trash and debris is often characterized as material retained on a 5 millimeter (mm) mesh screen. It contributes to the degradation of receiving waters by imposing an oxygen demand, attracting pests, disturbing physical habitats, clogging storm drains and conveyance culverts, and mobilizing nutrients, pathogens, metals, and other pollutants that may be attached to the surface. Sources of trash in developed areas can be both accidental and intentional. During wet weather events, gross debris deposited on paved surfaces can be transported to storm drains, where it can be eventually discharged to receiving waters. Trash and debris can also be mobilized by wind and transported directly into waterways.

Trash and debris in runoff are likely to increase in post-development if left unchecked. However, the Project BMPs, including source control and LID BMPs incorporated in compliance with the MS4 Permit and LID Manual requirements, would minimize the adverse impacts of trash and debris. Source controls such as street sweeping, public education, fines for littering, covered trash receptacles, and storm drain stenciling are effective in reducing the amount of trash and debris potentially mobilized during wet and dry weather. Common area litter control will include a litter patrol, covered trash receptacles, emptying of trash receptacles in a timely fashion, and noting trash violations by tenants/homeowners or businesses and reporting the violations to the owner/HOA for investigation. Catch basin inserts will be provided for high use parking lots. Trash and debris would be captured in catch basin inserts in commercial area parking lots and in the LID BMPs. On this basis, the Project's water quality impact due to trash and debris would be less than significant.

Methylene Blue Activated Substances

Methylene Blue Activated Substances (MBAS), which are related to the presence of detergents in runoff, may be incidentally associated with urban development due to commercial and/or residential vehicle washing or other outdoor washing activities. Surfactants disturb the surface tension of surface waters, which affects insects and can affect gills in aquatic life.

The presence of soap in runoff from the Project site would be controlled through source control BMPs, including a public education program on residential and charity car washing and the provision of a centralized car wash area directed to the sanitary sewer system in the multi-family residential areas. Other sources of soap, such as cross connections between sanitary and storm sewers, are unlikely given modern sanitary sewer installation methods and inspection and maintenance practices. Therefore, the Project's impact with respect to MBAS would be less than significant.

Toxicity

Pesticides, metals, PAHs, and other organic compounds (e.g., PCBs) can enter the aquatic food chain and cause acute or chronic toxicity in the form of lethal or sub-lethal effects, including survival, reproduction, prey avoidance, and others. Such effects are commonly measured by exposing sensitive organisms to water samples over a period of time and measuring the effects on the organisms.

The literature indicates that pesticides are a primary cause of most of the observed toxicity in receiving waters when organisms are exposed to urban runoff water samples or are exposed to sediments contaminated by urban runoff. Data from the SWAMP Stream Pollution Trends Second Year Report confirm that the primary class of pesticides causing toxicity are the pyrethroid pesticides.

In a more focused evaluation of data from streams and other receiving water bodies subject to urban runoff, studies determined that pyrethroids were commonly found at concentrations exceeding levels which cause toxicity to sensitive aquatic organisms in water. The average reported concentrations of bifenthrin, cyfluthrin, cyhalothrin, cypermethrin, and permethrin in water samples range from approximately one to more than three orders of magnitude above chronic criteria values referenced in the report (Ruby 2013). Similar conclusions were made for pyrethroid concentrations in sediment.

Based on the incorporation of source control and LID BMPs pursuant toMS4 Permit and LID Manual requirements and the impact analysis results presented in these sections, potential post-development impacts associated with acute and chronic aquatic toxicity would be less than significant.

Constituents of Emerging Concern

Constituents of Emerging Concern (CEC) concentrations in stormwater runoff can be expected to be reduced via treatment in the Project's LID BMPs, which would include unit processes to filter, sorb, and biologically transform CECs in stormwater runoff. However, expected effluent concentrations from LID BMPs are not known, nor are the effect of these concentrations on the aquatic ecosystem.

Given the thousands of chemicals that are potentially present in the aquatic environment and that information about CECs is rapidly evolving, developing a methodology to assess impacts from CECs in stormwater runoff (and wastewater) is being addressed via a phased monitoring approach at the state level approach. Implementation of a state-level program to evaluate the occurrence and effects of CECs in stormwater will result in the development of control measures that will reduce potential water quality impacts.

Potential Bioaccumulation

The Basin Plan contains a narrative objective for bioaccumulation which states that toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health. Certain toxic pollutants can bioaccumulate in fish and other organisms at levels that are harmful for both the organism, as well as the organisms that prey upon these species (including humans). An important pathway into the food chain is via sediments, as many bioaccumulative pollutants of concern are adsorbed to sediments. Pollutants that are known to bioaccumulate include certain pesticides, certain metals (e.g., selenium and mercury), PAHs, and certain synthetic organic compounds like PCBs and dioxins.

Bioaccumulative pollutants that are present in stormwater runoff from the Project may have the potential to accumulate in LID BMP vegetation and soils, potentially increasing the risk of exposure to wildlife and the food chain. The potential for bioaccumulation impacts from the proposed parcel-based and regional LID BMPs would be minimal. The vegetation and soil media in the LID BMPs will trap sediments and pollutants in the soils, which contain microorganisms that metabolize and transform pollutants, therefore reducing the potential for these pollutants to enter the food chain. The BMP facilities would not provide open water areas and are not likely to attract waterfowl. Bioaccumulation of pollutants in Castaic Lagoon is not of concern due to the low concentrations of pollutants, below the benchmark Basin Plan objectives and CTR criteria, predicted in the treated runoff. On this basis, impacts related to bioaccumulation and adverse effects on aquatic life or human health would be less than significant.

Dry Weather Runoff

Pollutants in dry weather flows could also be of concern because dry weather flow conditions occur throughout a large majority of the year, and because some of the TMDLs in downstream reaches of the Santa Clara River are applicable for dry weather conditions (e.g., nutrients and chloride).

Dry weather flows are typically low in sediment because the flow velocities are relatively low and coarse suspended sediment tends to settle out or to be filtered out by vegetation. As a consequence, pollutants that tend to be associated with suspended solids (e.g., phosphorus, some bacteria, some trace metals, and some pesticides) are typically found in very low concentrations in dry weather flows. Therefore, the focus of this analysis is on constituents that tend to be dissolved, such as nitrate and trace metals, or constituents that are so small as to be effectively transported, such as pathogens.

In order to minimize the potential generation and transport of dissolved constituents, landscaping in public and common areas will utilize drought tolerant vegetation that requires little watering and chemical application. Landscape watering in common areas, commercial areas, multiple family residential areas, and in parks, will use efficient irrigation technology utilizing evapotranspiration sensors to minimize excess watering and runoff.

In addition, educational programs and distribution of educational materials (source controls) will emphasize appropriate car washing locations (at commercial car washing facilities) and techniques (minimizing usage of soap and water); encourage low impact landscaping and appropriate watering techniques, appropriate swimming pool dechlorination and discharge procedures; and, discourage driveway and sidewalk washing. Illegal dumping will be discouraged by stenciling storm drain inlets and posting signs that illustrate the connection between the storm drain system and the receiving waters and natural systems downstream.

The parcel-based and regional LID BMPs will provide treatment for, and infiltrate, dry weather flows and small storm events. Water cleansing is a natural function of vegetation and biologically active media, offering a range of treatment mechanisms. Sedimentation and filtration of particulates is the major removal mechanism. However, the performance is enhanced as plant materials allow pollutants to come in contact with vegetation and soils containing microorganisms that metabolize and transform pollutants, especially nutrients and trace metals. Plants also take up nutrients in their root system. Pathogens would be removed through infiltration. Any oil and grease will be effectively adsorbed by the vegetation and soil within LID BMPs. Dry weather flows and small storm flows will infiltrate into the bottom of the LID BMPs after receiving treatment in the vegetation.

The LID BMPs will infiltrate or evapotranspire all expected dry weather runoff. It is expected that no dry weather discharge from the Project site to the receiving waters will occur. Based on source control BMPs reducing the amount of dry weather runoff and LID BMPs capturing and retaining the dry weather runoff that does occur, the impact from dry weather flows is less than significant.

Level of Significance without Mitigation: Significant Impact.

Recommended SCVAP EIR Mitigation Measure: None.

Level of Significance with SCVAP EIR Mitigation: Significant Impact.

Recommended 1992 EIR Mitigation Measures: None.

Level of Significance with 1992 EIR Mitigation: Significant Impact.

Recommended Project Specific Mitigation Measures:

MM 5.8-1 The Project will develop and implement an Integrated Pest Management Plan as a mitigation measure in accordance with the integrated pest management and pesticide and fertilizer application guidelines established by the University of California Division of Agriculture and Natural Resources Statewide Integrated Pest Management Program (http://www.ipm.ucdavis.edu/). The IPM Plan, which will serve to control nutrients and reduce pesticide use, will include the following components:

1. Roles and responsibilities. The IPM Plan will identify the key decision makers in the program, other key roles (such as the person responsible for recordkeeping), and the program funding mechanisms.
2. Pest identification. The IPM Plan will identify plant species and potential pests for these plant species. The Plan shall provide references to resources (e.g., existing field manuals) and identify tools (e.g., hand lens) that can be used to facilitate identification.
3. Practices to prevent pest incidence and reduce pest buildup. The IPM Plan will include a list of acceptable management strategies for each potential pest. For example, effective practices include modifying landscaping to be less conducive to pest survival, using pest-resistant plant varieties, using mulch to suppress weeds, encouraging naturally occurring biological controls, educating the public to be more tolerant of pests, removing pests mechanically or with barriers and traps, developing a list of pesticides that are less toxic to the environment, and developing formulations that will control the pest if other methods are not successful.
4. Monitoring to examine vegetation and surrounding areas for pests to evaluate trends and to identify when controls are needed. The IPM Plan will establish monitoring guidelines for the potential pests and beneficial insects. Monitoring procedures shall include regular visual inspections or checking with traps and methods to quantify observations. The monitoring program shall be used to evaluate when pests may become intolerable and to evaluate the level of effectiveness of controls.
5. Establishment of action thresholds that trigger control actions. The IPM Plan will establish injury levels and action thresholds for each potential pest that is listed in the plan. The injury level is the number of pests associated with intolerable damage. Action thresholds are the set of conditions required to trigger a control action, usually pesticide application.
6. Pest control methods. The IPM Plan will describe cultural, mechanical, environmental, and biological pest control methods and shall list pesticides authorized for use and the Safety Data Sheets for each pesticide. The Plan will include specific criteria for selecting pest management methods, for example, those that are least disruptive to natural controls and least damaging to water quality, and procedures for evaluating the effectiveness of the control method.
7. Fertilizer management. The IPM Plan will describe soil assessment techniques, fertilizer types, application methods, and proper storage and handling of fertilizers.

8. Pesticide management. The IPM Plan will discuss pesticide safety (e.g., Material Safety Data Sheets, precautionary statements, and protective equipment); regulatory requirements; spill mitigation; groundwater and surface water protection measures associated with pesticide use; and pesticide applicator certifications, licenses, and training (i.e., all pesticide applicators must be certified by the California Department of Pesticide Regulation). The IPM Plan will include a pesticide application guidelines/checklist. For example, the application equipment must be calibrated correctly and written records must be kept of any pesticide application.
9. Irrigation management. The IPM Plan will describe the low volume water approaches to landscape irrigation, such as drip type and sprinkler systems with SMART controllers, and shall also describe the training to be provided to landscape crews that will focus on applying water only when needed to enhance plant root growth, managing irrigation to avoid conditions conducive to disease development, and minimizing runoff containing pollutants.
10. Record keeping. The IPM Plan will describe the records that will be maintained for program implementation, including pest identification and monitoring results, when and where various pest suppression techniques were implemented, pesticide application records, observed side effects of the treatment on non-target species, and public complaints and positive feedback received.
11. Training. The IPM Plan will describe continuing education of pest management personnel.
12. Effectiveness evaluation. The IPM Plan will describe the methods to be used to evaluate the overall effectiveness of the program and the schedule for reviewing the Plan to incorporate new IPM technology.

Net Level of Significance: Less Than Significant.

Threshold 5.8-1b Would the project violate any waste discharge requirements?

Industrial Activities

The proposed Project contains approximately 13.9 acres of property zoned for light-industrial land uses. Industrial land uses are known to be a potential source of contaminated runoff, depending on the type of industrial activity on the site. A list of allowable land uses is included in Section III.F.1 of the *NorthLake Specific Plan*. These uses represent a modified listing of allowable land uses for the County of Los Angeles Light Manufacturing (M-1) zone, as found in Los Angeles County Zoning Ordinance.

However, because the Project site would include light-industrial land uses, the Project Applicant would need to obtain coverage under the Industrial Activities Storm Water General Permit (GISP) to ensure that storm water from the site would not adversely impact water quality. GISP requirements include the preparation of a SWPPP and a written monitoring program to guide efforts to control and monitor the quality of stormwater runoff from the light-industrial facility(s). Additionally, appropriate BMPs must be implemented that will achieve the performance standard of BAT/BCT. Compliance with the Standard Condition below would reduce potential water quality impacts to a level that is less than significant.

Wastewater Discharges

The Sanitation Districts do not currently provide wastewater services to the Project area. The Project falls within the sphere of influence of SCVSD, although it is not within the Sanitation District's current jurisdictional boundary. The Project site will be annexed into SCVSD, and coordination will occur with the Los Angeles County Consolidated Sewer Maintenance District for inclusion into its sewer maintenance system. Upon annexation, SCVSD would provide wastewater treatment services to the area. Water supplied to the Project site to be used for indoor purposes would be discharged into the public sewer system for treatment at the Saugus and Valencia WRPs.

Due to the regional concern over high levels of chloride in the water discharged from the treatment plants, the Regional Water Board has developed and adopted a chloride TMDL. The chloride TMDL is part of the Basin Plan. Additionally, SCVSD has an ordinance that prohibits the installation of self-regenerating water softener systems. Because the homes constructed within the Project site would not be equipped with these systems, the Project site's contribution of chloride to the Santa Clarita Valley's wastewater would be less than significant.

The proposed Project would generate wastewater from all associated land uses, including single-family residential, multi-family residential, recreation and support uses, commercial, and light industrial. The wastewater generated by residential and commercial land uses would not contain substantial pollutant concentration levels and would be in compliance with LARWQCB requirements. The light industrial land uses have the potential to generate wastewater effluent that violates waste discharge requirements due to the likely use of chemical and/or toxic substances in processing or manufacturing activities. Los Angeles County Code (Title 20, Division 2) requires that any business that generates, handles, and/or disposes of industrial wastewater must obtain an Industrial Waste Disposal Permit (IWDP) from the LADPW. An approved permit will include a list of requirements that the business is required to comply with. Failure to comply with permit requirements would lead to enforcement actions and possible revocation of the IWDP. Other land uses in the Specific Plan would not require an IWDP.

In order to comply with the Upper Santa Clara River Chloride TMDL, the SCVSD will need to add facilities because the existing treatment processes do not provide chloride removal. The Valencia WRP NPDES Permit (Order No. R4-2015-0071) includes requirements and deadlines for several implementation actions related to adding chloride removal facilities, which are required to be constructed by July 1, 2019. During this period, an interim effluent limitation for chloride, which is a three-month rolling average that reflects the Saugus WRP and Valencia WRP monthly effluent flows and chloride concentrations, but not to exceed a maximum of 230 mg/L, is in effect. The Valencia WRP discharges have been in compliance with this interim effluent limitation.

Pursuant to RR 5.8-2, the Valencia WRP and the proposed Project, must comply with this permit, which contains a chloride effluent limitation that is protective of water quality and beneficial uses in the Santa Clara River and will not result in the impairment of surface or groundwater quality. Additionally, the SCVSD has adopted an implementation plan and schedule that incorporates chloride source reduction actions and chloride load reduction through advanced treatment (e.g., reverse osmosis) of the Valencia WRP effluent that will mitigate the effect of chloride accumulation in surface and groundwater. Therefore, the Project's chloride contribution to treated wastewater discharges would not pose a significant impact to water quality or beneficial uses.

CECs are also another area of concern coming from effluent discharged from municipal wastewater treatment plants. Although most CECs occur in trace concentrations in wastewater treatment plant effluent, the large volume discharged to receiving waters in California throughout

the year can results in total mass loadings that are comparable to regulated environmental contaminants (e.g., heavy metals).

The Valencia WRP treatment processes, including the reverse osmosis that will be installed to comply with the Chloride TMDL, will have good removal efficiencies of CECs that might arise in the Project's wastewater. Additionally, the Valencia NPDES Permit (Order No. R4-2015-0071) is protective of beneficial uses and water quality and aquatic life in the Santa Clara River. Extensive monitoring is required to ensure that all discharged WRP effluent would meet the NPDES Permit provisions; additionally, the NPDES Permit terms effectively require the WRP to address all known toxic concentrations of contaminants that could be found in the effluent. Thus, as further studies are concluded and more is known regarding chronic toxicity effects of emerging contaminants, the WRP must ensure that the treatment processes are adequate to meet protective treatment standards.

Compliance with all applicable LARWQCB, LADPW, and Sanitation Districts' wastewater quality requirements would ensure that potential impacts would be less than significant.

Level of Significance without Mitigation: Less than significant.

Recommended SCVAP EIR Mitigation Measures: None.

Level of Significance with SCVAP EIR Mitigation: Less than significant.

Recommended 1992 EIR Mitigation Measures: None.

Level of Significance with 1992 EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant. Compliance with all applicable regulations would ensure that impacts related to violating water quality or waste discharge requirements would be less than significant.

Threshold 5.8-4 Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Groundwater

According to Figure 3.12.2 of the SCVAP 2012 EIR, the NorthLake Specific Plan Project site is not underlain by a groundwater basin. As discussed in Section 5.6, Geology and Soils, groundwater/seepage was encountered in several borings excavated on the Project site, and generally at depths of 60 feet or greater. The seepage was typically minor and along fractures within the bedrock, or near the bottom of landslides. Minor surface water was observed in the bottom of Grasshopper Canyon due to recent rainfall. The pond area in the central lower portion of the site was full of muddy water, also due to the winter rains. The nearest basin is the Santa Clarita River Valley Basin, which is located south and east of the Project site near Castaic Lake and Lake Hughes. The proposed Project would introduce impervious surfaces to the Project site through development activities which would subsequently limit the amount of permeable surface area within the Project site. However, because the proposed development area is not located in

an area underlain by a groundwater basin, Project-related development would not directly interfere with groundwater recharge.

According to the WQTR, although precipitation recharge would decrease in the developed condition due to the increase in impervious area, the predicted increase in recharge in Castaic Lagoon due to the increase stormwater runoff volume would offset this decrease. Based on this analysis, the Project's impacts on groundwater recharge would be less than significant.

On a cumulative basis, a number of studies have documented long term stability of groundwater levels in both the Alluvial aquifer and the Saugus Formation aquifer despite urban growth and two extended periods of successive dry years. Future model scenarios incorporating planned development, including the Project and cumulative impact analysis area projects, through 2030 indicate continued long term stability of aquifer water levels. On this basis, the Project's cumulative impacts on groundwater recharge would be less than significant.

Level of Significance without Mitigation: Less than significant.

Recommended SCVAP EIR Mitigation Measures: None.

Level of Significance with SCVAP EIR Mitigation: Less than significant.

Recommended 1992 EIR Mitigation Measures: None.

Level of Significance with 1992 EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant. The proposed development area is not located in an area underlain by a groundwater basin; therefore, project-related development would not substantially interfere with groundwater recharge.

Threshold 5.8-5 Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site?

The Project site is characterized by a number of ephemeral drainages. Proposed development activities would alter the course of these drainages. Development of the proposed Project would also result in the conversion of on-site permeable surfaces to impermeable surfaces, which would alter the current drainage pattern of the Project site. By increasing the amount of impervious surfaces on the site, more surface runoff would be generated and the rate of runoff could increase. To manage surface runoff, the proposed Project would incorporate site-design BMPs as discussed previously in Section 5.8.5, Relevant Project Characteristics.

Construction Impacts

Development of the proposed Project would remove existing vegetation and result in the creation of manufactured slopes and exposed graded areas throughout the Project site, exposing the soils to wind and rain erosion. In accordance with the NPDES General Construction Permit issued by the SWRCB for Los Angeles County, the Project would be subject to erosion-control requirements contained in the County's Grading Ordinance and would be required to comply with established NPDES permit requirements for clearing, grading, and excavation activities prior to construction of the Project (refer to RRs 5.8-1 through 5.8-3). A NOI to be covered under the NPDES permit

will be filed with the SWRCB. Compliance with the permit requires conformance with applicable BMPs and development of a SWPPP and monitoring program plan. When construction is completed, the Applicant would be required to file a Notice of Termination with the SWRCB.

Post-construction erosion impacts could occur on manufactured slopes and other open space areas on-site unless landscaping or other erosion-control measures are implemented. Landscaping will substantially decrease the possibility of erosion. Lastly, the Project grading must satisfy the requirements set forth by the LADPW, which will ensure that hillsides and manufactured slopes are stable and not subject to erosion.

Because the Project is required to comply with NPDES permit requirements, MMs 3.9.8 and 3.9.9 of the SCVAP EIR are no longer applicable to the Project.

Operational On-Site Impacts

The proposed Project would include implementation of several drainage features, including benches, downdrains, swales, catch basins, storm drain pipes, inlets/outlets, an energy dissipator, debris basin, and elevated inlets, to ensure that off-site and on-site sediment does not affect downstream properties; these features have been incorporated into Project design. The desilting inlets/elevated inlets would prevent sediment and debris (bulked flows) from entering the storm drain system on the Project site. Energy dissipators would reduce the energy of the stormwater flows in order to reduce the potential for erosion. Additionally, the development of the Project site will increase the impervious cover on the Project site, which will substantially decrease the amount of silt and vegetative debris in the stormwater runoff. Finally, catch basin filters, centralized units (or comparable technologies) that are designed to remove sediment, floatables, and the pollutants adsorbed onto these pollutants are required upstream of all discharges to natural areas by the County's NPDES permit. Therefore, stormwater runoff into Grasshopper Creek will meet all applicable regulatory water quality criteria and will not adversely affect the native vegetation in this area. As noted in Section 4.0, Project Description, regulatory agency permits are being sought by the Project Applicant from the USACE, the California RWQCB for the Los Angeles Region, and the USFWS. The provisions of these permits also require that runoff from developed areas not adversely affect the quality of natural resources downstream of stormwater discharge locations.

Operational Off-Site Impacts

All Project site drainage would be collected within the Project site by the storm drain system and released via a single outlet located in the southern portion of the Project site into an undeveloped area of lower Grasshopper Canyon (refer to Exhibit 4-10, Drainage and Storm Water System of this SEIR). After passing through lower Grasshopper Canyon within the Applicant's property (both within the Specific Plan area and the adjacent 140-acre parcel that is not a part of the proposed Project), drainage would flow easterly onto the Castaic State Recreation Area (SRA) property.

The results of the hydrology analysis, which are based on the storm water system planned for the entire NorthLake development, are summarized below in Table 5.8-29, Post-Grading Hydrology for Specific Plan.

TABLE 5.8-29
POST-GRADING HYDROLOGY FOR SPECIFIC PLAN

Area (Acres)	Qb (Cubic Feet per Second)	Qbb (Cubic Feet per Second)	DPV (cubic yards)
2,154.4	**2,730.5**	**2739.9**	**2,050**
Qb: 50 year burned design flow; Qbb: 50 year burned and bulked design flow; DPV: Debris Production Volume Source: Sikand 2017.			

As shown in Table 5.8-29, the debris production volume (DPV) from the Project area is 2,050 CY in the post-grading condition, which represents a substantial decrease in DPV from the 143,392 CY in the pre-grading condition, as shown previously in Table 5.8-1. Therefore, the proposed Project would result in an overall 141,342 CY reduction in DPV. Additionally, the total runoff from the Project area is 2,739.9 cubic feet per second (cfs) in the post-grading condition, which represents a decrease in flow from the 4,064.8 cfs in the pre-grading condition, as shown previously in Table 5.8-1. Therefore, the proposed Project would result in an overall 1,324.9 cfs decrease in the peak flow from a 50-year capital storm event, thereby ensuring that the Project would not modify the downstream drainage pattern; potential impacts would therefore be less than significant. All on- and off-site flood control improvements necessary to serve the NorthLake Specific Plan will be constructed to the satisfaction of the County of LADPW, Flood Control Division.

Changes in stormwater runoff characteristics from a developed Project site can adversely affect a downstream portion of a watershed, even when the volume of runoff from the site itself does not exceed the existing conditions in accordance with County requirements. For instance, the same volume of water carrying a reduced amount of sediment will have a higher velocity, and therefore a greater potential to erode the stream channel as it flows downstream through the watershed.

According to the WQTR, Grasshopper Creek, Castaic Creek, and Marple Creek would all receive flows from developed areas within the Project. As discussed previously in Section 5.8.5, Relevant Project Characteristics, the Project would minimize impervious areas and preserve open space to the extent feasible, development would be located preferentially on poorly infiltrating soils, and existing riparian corridors would be conserved while avoiding in-stream constrictions.

As part of the project and to accommodate wet weather flow, distributed volume and flow would be implemented for the portions of development that discharge to Castaic Creek and Marple Creek and regional basins that incorporate outlet structures designed to mimic pre-development in-stream sediment transport capacity would be implemented for the portion of the development that discharges to Grasshopper Creek. As detailed in the WQTR, the hydromodification control performance standard would be achieved with implementation of these facilities. Therefore, impacts associated with wet weather flows would be less than significant.

In order to prevent the discharge of dry weather urban runoff, the Project would include the use of native and/or non-invasive, climate appropriate vegetation and smart irrigation controls as well as parcel-based and regional LID BMPs as noted previously in Section 5.8.5 Relevant Project Characteristics. As part of the WQTR, a dry weather water balance was performed which indicated that all dry weather flows would be infiltrated or removed by evapotranspiration via the proposed LID BMPs, which would also provide hydrologic source control. Therefore, impacts associated with dry weather flows would be less than significant.

Level of Significance without Mitigation: Less than significant.

Recommended SCVAP EIR Mitigation Measures: None.

Level of Significance with SCVAP EIR Mitigation: Less than significant.

Recommended 1992 EIR Mitigation Measures: None.

Level of Significance with 1992 EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant.

Threshold 5.8-6 Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

The results of the hydrology analysis, which are based on the storm water system planned for the entire NorthLake development, are summarized above in Table 5.8-29, Post-Grading Hydrology for Specific Plan.

As discussed previously and shown in Table 5.8-29, the proposed Project would result in an overall 1,324.9 cfs decrease in the peak flow from a 50-year capital storm event, thereby ensuring that the Project would not increase downstream flooding risks; potential impacts would therefore be less than significant. All on- and off-site flood control improvements necessary to serve the NorthLake Specific Plan will be constructed to the satisfaction of the County of LADPW.

At buildout of the Project site, a total of 6 water tanks (including one existing tank) and associated pump stations with a combined capacity of approximately 13.35 million gallons (MG) would be located on a total of three water tank sites along the western portion of the Project site (Exhibit 4-7, Water Service). The northernmost site would include two new tanks on a graded pad at an elevation of 2,115 feet above mean sea level (msl) with a total capacity of 5.10 MG; the central site would include two new tanks on a graded pad at an elevation of 1,856 feet above msl with a total capacity of 4.6 MG; and the southernmost site, an existing site, would include one existing 3.0 MG tank and one new 0.65 MG tank on a pad with an elevation of 1,630 feet above msl. These five proposed and one existing tanks would be located at higher elevations than the development on the Project site in order to provide an adequate level of water pressure for domestic, commercial, and fire-suppression activities. In the unlikely event that any of these tanks were to severely rupture, the associated overland flow could potentially result in flooding on- and off-site.

Sikand previously analyzed the potential for water tank break in association with the evaluation and approval of the formerly proposed Castaic High School Project which was proposed to be located immediately east of the NorthLake Specific Plan Project site. According to Sikand, the extent of flooding anticipated from the rupture of one of two 3.0-MG tanks at an elevation of 1,980 feet above msl and at the same location as the proposed northernmost water tank site. As described above, the water tanks proposed for the site analyzed in the tank break analysis would now include two tanks at an elevation of 2,115 feet above msl and a total combined capacity of 5.1 MG. Additional water tanks of varying sizes would be located further south on two other tank sites at lower elevations than the northernmost site.

Sikand determined that a substantial break in one of the 3.0-MG water tanks would release this volume of water outward in all directions for a distance of approximately 400 feet. Once the waters

reach a radius of 400 feet, the depth of the water would be approximately 8 inches. This depth would be doubled (i.e., 16 inches in depth) in the unlikely event that both tanks completely failed simultaneously. A more plausible scenario would involve a minor rupture that would release water over time, but for the sake of a conservative analysis, flooding at a depth of 16 inches was assumed.

The locations of these water tanks would be separated by more than 1,600 feet from the nearest proposed residential block of homes. The land area between the proposed location of the homes and the water tanks would be primarily naturally vegetated, undeveloped land that would slow and absorb some of the water flow prior to reaching the homes. Water flow over this area would have the potential to dislodge debris and sediment as it flowed downhill, which would further slow the progression of the water. Water flow approaching the vicinity of the proposed homes would be buffered by the proposed NorthLake Boulevard, which would serve as a diversion. Water flowing down from the tank location would likely flow down NorthLake Boulevard and would be deposited into the storm drain system through the inlets along the curbs. An additional measure of safety would be provided by the fenced (likely brick walls) rear yards of the homes adjacent to this portion of NorthLake Boulevard. Fencing and backyards would further serve to protect homes in the case of a complete tank rupture. Therefore, the tank break analysis determined that potential on-site impacts associated with flooding from the rupture of one of these tanks would be less than significant.

The two tanks would be located on a ridgeline approximately 200 feet east of the existing Ridge Route Road. Therefore, in the unlikely event of complete tank rupture, Ridge Route Road would have the potential to be flooded with up to 16 inches of water. However, this would not be considered a significant impact because no habitable structures would be located within the potential flooding area; therefore, the potential rupture of a water tank would not impact off-site structures. The only potential impact would be to any motorists that might be in the precise path of the overland flow. However, potential flooding along Ridge Route Road would be quickly dissipated through the engineered curvature of the roadway, which is designed to disperse water to either side of the street. Therefore, although very short-term road hazards to Ridge Route Road motorists may occur, the likelihood of a full tank rupture occurring is minimal and potential impacts would be short-term (less than one hour) in duration. The reservoir tanks would be located and designed to be in compliance with the Uniform Building Code (UBC), American Water Works Association and American National Standards Institute specifications, and/or soil engineer recommendations to ensure that reservoir tank construction would be designed to withstand potential seismic activity. Therefore, potential off-site flooding impacts associated with water tank rupture would be less than significant.

Level of Significance without Mitigation: Less than significant.

Recommended SCVAP EIR Mitigation Measures: None.

Level of Significance with SCVAP EIR Mitigation: Less than significant.

Recommended 1992 EIR Mitigation Measures: None.

Level of Significance with 1992 EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant.

Threshold 5.8-7 Would the project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

According to the SCVAP 2012 EIR, Compliance with applicable policies of the SCVAP 2012 related to utilizing building materials that allow infiltration, reduce impervious surfaces, and implementation of detention and retention basins or ponds and ephemeral swales would avoid potential impacts associated with storm drain capacity. The proposed Project would generate increased amounts of storm water runoff due to the increase in impervious surface area. As part of the Project, site-design BMPs would be incorporated in order to (1) minimize urban runoff; (2) minimize impervious footprint; (3) conserve natural areas; and (4) minimize directly connected impervious areas. There is one existing 42-inch storm drain (with an allowable flow rate of 134 cfs) on the Project site, located near Northlake Elementary School, which would be extended to serve the proposed Project. There are no County-designated flood hazard areas within the NorthLake Specific Plan area. The proposed Project will include a storm drain system that is designed to accommodate stormwater flows from the Project site, in accordance with County Flood Control District requirements. The proposed drainage system is depicted in Exhibit 4-9 in Section 4.0, Project Description.

Additionally, compliance with RRs 5.8-1 through 5.8-3 and standard County plan check process requirements, including the requirement that all onsite drainage improvements of inlet/outlet structures and storm drains be subject to County approval, would reduce impacts related to storm drain capacity to less than significant levels through reduction of storm water runoff volume and construction of adequately sized storm water collection systems. Because the Project would be required to comply with existing County codes, ordinances, and tentative map conditions, MMs 3.12-23, 3.12-24, 3.13-29, 3.13-31, and 3.13-32 of the SCVAP EIR would no longer apply.

Level of Significance without Mitigation: Less than significant.

Recommended SCVAP EIR Mitigation Measures: None.

Level of Significance with SCVAP EIR Mitigation: Less than significant.

Recommended 1992 EIR Mitigation Measures: None

Level of Significance with 1992 EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant.

Threshold 5.8-8 Would the project *c*onflict with the Los Angeles County Low Impact Development Ordinance (L.A. County Code, Title 12, Ch. 12.84)?

The concept of Low Impact Development (LID) was created to ensure that new development is designed in consideration of overall environmental conditions, including regional water quality. LID is a land-use planning approach that incorporates “green infrastructure” concepts such as zero runoff, rainfall harvesting, groundwater recharge, biofiltration, native landscapes, green streets, and other measures to promote water quality protection in new development. The goal of LID is to protect a community’s natural, pre-development water flow in order to minimize ecological impacts from urbanization. Consistent with the analysis provided in the SCVAP 2012 EIR and as discussed previously under Thresholds 5.8-1a, 5.8-2 and 5.8-3 and detailed in Section 5.8.5, Relevant Project Features, applicable LID features would be implemented throughout

Project, pursuant to the Los Angeles County Low Impact Development Ordinance. Compliance with the LID Ordinance would ensure implementation of Low Impact Development standards on development sites, including but not limited to minimizing impervious surface area and promoting infiltration, in order to reduce the flow and velocity of stormwater runoff throughout the watershed. As discussed previously, development of the NorthLake Specific Plan Project would modify the site's drainage pattern and increase runoff, thereby requiring implementation of BMPs to address drainage impacts. The Project would comply with the County's LID Ordinance; therefore, a less than significant impact would occur.

Level of Significance without Mitigation: Less than significant.

Recommended SCVAP EIR Mitigation Measures: None.

Level of Significance with SCVAP EIR Mitigation: Less than significant.

Recommended 1992 EIR Mitigation Measures: None.

Level of Significance with 1992 EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant.

5.8.8 CUMULATIVE IMPACTS

The following analyses are summarized from the WQTR prepared for the proposed Project and included as Appendix H-2 to this SEIR.

Surface Water Quality Cumulative Impacts

Although the quantitative analyses in the WQTR only reflect predicted pollutant levels for the Project, other related projects would be subject to the same state, regional, and County water quality regulations and controls that govern stormwater discharges from the NorthLake Project and these other projects have the potential to result in increases in runoff volumes and pollutant loads and concentrations that could affect water quality in receiving waters. However, it is likely that the other related projects would have similar pollutant concentrations in runoff after treatment because they are subject to the same water quality regulations and controls. Also, because the pollutant concentrations are well below the Basin Plan benchmark water quality thresholds and TMDL wasteload allocations, a potential incremental increase in pollutant concentrations in runoff from the other, non-modeled projects is not expected to result in any cumulative violation of established water quality thresholds. Therefore, the NorthLake project will not make a cumulatively considerable contribution to a significant cumulative impact on surface water quality.

The proposed Project and other projects in the cumulative impact study area would be subject to State, regional, and County requirements, such as MS4 Permit and LID Manual requirements; Construction General Permit requirements; General Dewatering Permit requirements; and benchmark Basin Plan water quality objectives, CTR criteria, and TMDLs wasteload allocations, which are designed to assure that regional development does not adversely affect water quality. Any future urban development occurring in the cumulative impact study area also must comply with these requirements. Future projects would be evaluated individually to determine appropriate BMPs and treatment measures to avoid or mitigate impacts to water quality. In addition, the County or City (as appropriate) would review all construction projects on a case-by-case basis to ensure that local and regional drainage surface water quality is protected. Therefore, based on

the compliance with all applicable laws, rules, and regulations, no significant cumulative impacts to surface water quality are anticipated.

Hydromodification Cumulative Impacts

The proposed Project includes hydromodification control BMPs and that future development projects within the Project's watersheds will control flow in compliance with the MS4 Permit similarly to the Project, the Project's contribution to cumulative hydromodification impacts to Grasshopper Creek, Marple Creek, Castaic Creek, and the Santa Clara River will be less than significant (i.e., less than cumulatively considerable).

Groundwater Cumulative Impacts

A number of studies, including those by the Upper Santa Clara River watershed water purveyors, have documented long term stability of groundwater levels in both the Alluvial aquifer and the Saugus Formation aquifer. This long term (several decades) stability of the Upper Santa Clara River aquifers has occurred simultaneously with urban growth, as well as two extended periods of successive dry years. Based on a calibrated model of surface water and groundwater interactions for the period 1975 to 2005, groundwater levels in the Upper Santa Clara River aquifers have been relatively stable even with growth and increased water use, indicating that recharge of the aquifers has kept pace with groundwater extraction. Additionally, future model scenarios incorporating planned development, including the Project and cumulative impact analysis area projects, through 2030 indicate continued long term stability of aquifer water levels. Therefore, the proposed Project's cumulative impact on groundwater recharge is less than significant.

5.8.9 IMPACT CONCLUSION

All potential impacts to hydrology and water quality would be less than significant with compliance of the recommended mitigation measures and current standard conditions of approval as indicated.

5.8.10 REFERENCES

Geosyntec Consultants (Geosyntec). 2015 (September). *NorthLake Specific Plan Water Quality Technical Report*. Oakland, CA: Geosyntec.

Los Angeles, County of, Department of Public Works (LACDPW). 2014 (February). *Low Impact Development Standards Manual.* Alhambra, CA: LACDPW. https://dpw.lacounty.gov/ldd/lib/fp/Hydrology/Low%20Impact%20Development%20Standards%20Manual.pdf.

Sikand. 2017 (April). *Drainage Concept Report for Vesting TTM No. 73336 (NorthLake Phase 1) in the Unincorporated Area of Los Angeles County*. Van Nuys, CA: Sikand.

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5.9 LAND USE

This section of the Supplemental Environmental Impact Report (SEIR) describes potential land use impacts relative to the NorthLake Specific Plan Project.

5.9.1 METHODOLOGY

This section of the Draft SEIR describes land use resources relative to the proposed Project. Sources used as a technical guide and incorporated by reference include the following:

- Southern California Association of Governments *Regional Comprehensive Plan*
- Southern California Association of Governments *Regional Housing Needs Assessment*
- Southern California Association of Governments *Regional Transportation Plan/Sustainable Communities Strategy*
- South Coast Air Quality Management District *Air Quality Management Plan*

5.9.2 BACKGROUND INFORMATION

1992 NorthLake Specific Plan Environmental Impact Report

The following summary reflects conditions existing at the time of preparation and certification of the 1992 NorthLake Specific Plan EIR (1992 SP EIR), which is incorporated by reference), and is included as background information to provide a context for the scope of this SEIR analysis. Although the 1992 SP EIR did not include a separate analysis of land use, it did provide an analysis of the potential impacts associated with the implementation of the NorthLake Specific Plan.

Implementation of the proposed Specific Plan would have resulted in the development of a master-planned community consisting of 2,337 single-family dwelling units; 1,286 multi-family units; 169,884 square feet of mixed highway and community commercial uses; 545,689 square feet of light industrial uses; an 18-hole championship golf course and a clubhouse with a tennis and swimming facility; and approximately 476 acres of open space. The Specific Plan also provided for a public library site, two public elementary school and park sites and a fire station. The 1992 SP EIR summarized the environmental impacts associated with the implementation of the Specific Plan, as described above, and the adopted mitigation measures would reduce or eliminate those impacts.

The EIR found that the proposed land use concepts of the 1992 NorthLake Specific Plan were in conformance with both the County's General Plan, and the Santa Clarita Valley Area Plan, which is a refinement of the County General Plan for this area. Because the land use concepts in the proposed Project are not significantly different from those in the 1992 Specific Plan, then they too are in conformance with the County's General Plan and Santa Clarita Valley Area Plan.

2012 Santa Clarita Valley Area Plan Environmental Impact Report

The following summary reflects conditions existing at the time of preparation of the 2012 Santa Clarita Valley Area Plan (SCVAP 2012) EIR (which is incorporated by reference), and is included as further background information to provide a context for the scope of this SEIR analysis.

This section presents information on the existing and proposed land uses for the County's Planning Area. Existing land uses include Open Space, Rural Land, Residential, Commercial, and Industrial. The NorthLake Specific Plan is identified as an approved specific plan within the SCVAP 2012 area and is assumed to construct up to 3,623 residential units. The proposed Land Use Map would set aside large areas of open space to be adequately buffered from residential, commercial, and industrial development. Transit Oriented Development would be encouraged through the development of walkable communities with access to train and transit systems. The proposed Land Use Map also indicates a reduction in Rural Residential Land Uses; however, it was concluded that the proposed Area Plan would not physically divide an established community. Additionally, the SCVAP 2012 EIR found that implementation of the proposed SCVAP 2012 policies would ensure consistency with all applicable plans and planning programs, including the Air Quality Management Plan, the Congestion Management Plan, SCAG's Regional Transportation Plan and Compass/Growth Visioning Principles. It was also determined that the SCVAP 2012 area does not contain any areas falling within the purview of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan.

5.9.3 EXISTING CONDITIONS

On-Site Land Uses

The 1,330-acre Specific Plan area is undeveloped, naturally vegetated land. Existing uses include cattle grazing throughout the Specific Plan area, so the area is disturbed, and several utilities and easements are also located on site. These include water tanks; electrical transmissions lines and easements; oil pipelines and easements; natural gas and water lines; and a telecommunications line.

Specifically, 2 water storage tanks (one 1.5-million and one 3-million gallon), which serve existing development to the south, are situated in the western and southwestern portion of the project site along Ridge Route Road. A single pipeline easement traverses the easterly ridge of Grasshopper Canyon and carries two underground oil pipelines. One 14-inch diameter high pressure line, operated by Pacific Pipeline, is actively used for liquid petroleum (crude oil) conveyance. A second pipeline, under ownership of ARCO and 10-inches in diameter, is inactive. An underground telecommunications and cable line runs in an easement immediately east and adjacent to the oil pipeline easement. Both these easements run the entire north-south length of the Specific Plan site. Several easements and utilities are also located in the vicinity of westerly ridge of Grasshopper Canyon and Ridge Route Road. These include a Southern California Edison (SCE) easement with two transmission lines, and a third set of transmission lines just east of the easement. In that same vicinity is a separate Gas Company easement with a 34-inch diameter underground natural gas line, which runs along the westerly margin of the site. Water lines from the water tank run south along the Ridge Route Road alignment.

Surrounding Land Uses

The proposed Project site is generally bound by the community of Castaic to the south, the Castaic Lake State Recreation Area (SRA) to the east, and the Interstate 5 (I-5) freeway to the west. The project site is surrounded primarily by undeveloped land, with the exception of the freeway commercial and single-family residential uses which are located to the south of the project site near the I-5 ramps. An active brickyard (Castaic Brick) is located just east of the southern portion of the Specific Plan area.

Castaic – The community of Castaic, located approximately 40 miles northwest of downtown Los Angeles, has a population of approximately 19,015 persons. Primary access to the Castaic community is via the I-5, which runs north-south to the west of the community. Additional access is available via State Route 126 (SR-126) to the south of the community. The community is also home to the Castaic Regional Sports Complex, a 51-acre site on Castaic Road that houses athletic fields, a gymnasium, community rooms, and a kitchen for community use.

Castaic Lake State Recreational Area – Castaic Lake is a reservoir of the State Water Project, serving as one of the largest recreational lakes in the State Water Project system and is the terminus of its west branch. The Castaic Lake SRA contains 2 lakes with 29 miles of shoreline in a 12,658-acre area managed by the County of Los Angeles Department of Parks and Recreation. A major attraction is the 425-foot tall Castaic Dam. Lower lake is for non-power boating and canoeing. Swimming season on lower lake runs from mid-May to mid-September. Upper lake is for sailing, power boating, water and jet skiing, and fishing. The lake is stocked with bass, trout and catfish.

Land Use Designations

The Project site is designated "Specific Plan" and site-specific land uses are tied to the Land Use Plan and Development Standards included in the adopted 1992 NorthLake Specific Plan. As approved, the Specific Plan provides for up to 3,623 residential dwelling units[1] on approximately 600 gross acres, an additional 50 acres of industrial, and 13 acres of commercial uses. Approximately 643.3 acres of open space, 23 acres of schools, and sites for key community facilities are also permitted and/or required under the provisions of the Specific Plan. Exhibit 4.17-1, Existing Land Use Plan (1992 Specific Plan), shows the approved Land Use Plan for the adopted 1992 Specific Plan. The Specific Plan guides both the land use categories for the Project site as well as the zoning.

Land use designations of surrounding properties provided in the Santa Clarita Valley Area Plan include RL5 (Rural Land 5, 1 du/5 ac), OS-BLM (Open Space - Bureau of Land Management), and RL10 (Rural Land 10, 1 du/10 ac) to the north; IL (Light Industrial), CM (Major Commercial), H2 (Residential 2, 0-2 du/ac), and H18 (Residential 18, 9-18 du/ac) to the south; OS-PR (Open Space Parks and Recreation), OS-W (Water), RL5, RL10, and IL to the east; and RL1 (Rural Land 1, 1du/1ac), RL5, IL, and H5 (Residential 5, 0-5 du/ac) to the west.

Zoning Designations

Zoning designations surrounding the Specific Plan site are A-2-2 (Light Agriculture), M-1 (Light Manufacturing [brickyard]), MPD (Manufacturing industrial planned development), RPD (Residential Planned Development), and M-1-DP (M-1 Development Program), C3 (Commercial), OS (Open Space), and W (Watershed).

1 The 1992 Specific Plan provided for 3,623 dwelling units (du) allocated within the planning areas and with flexibility to add up to an additional 360 du for a total of 3,983 du (see pages III-6 and V-5 of the 1992 Specific Plan).

5.9.4 RELEVANT PLANS, POLICIES AND REGULATIONS

Federal

State

Senate Bill SB 375

Senate Bill (SB) 375, signed by California Governor Schwarzenegger on September 30, 2008, provides a planning process that coordinates land use planning, regional transportation plans, and funding priorities in order to help California meet greenhouse gas (GHG) reduction goals established in Assembly Bill (AB) 32 (discussed in detail in Section 4.7, Greenhouse Gas Emissions). SB 375 requires regional transportation plans, developed by Metropolitan Planning Organizations (MPOs) like SCAG, to incorporate a "sustainable communities strategy" (SCS) in its regional transportation plan (RTP). The SCS is intended to demonstrate how the coordination of land use and transportation planning efforts may achieve GHG emissions reduction targets set by AB 32. If an SCS cannot achieve the GHG emissions target, the MPO is required to adopt an "alternative planning scenario" (APS) that will demonstrate what would need to be done to achieve the GHG emissions reduction target and to define the barriers to accomplishing the reduction.

Local

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the Metropolitan Planning Organization (MPO) for

Counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. This region encompasses a population exceeding 18 million persons in an area of more than 38,000 square miles. SCAG divides Los Angeles County into nine SCAG subregions, and the Project site is located in the North Los Angeles County subregion. As the designated MPO, SCAG is mandated by the federal government to develop plans for transportation, growth management, hazardous waste management, and air quality. SCAG's organizational responsibilities include (SCAG 2015):

- Maintain a continuous, comprehensive, and coordinated planning process (the "3 Cs") resulting in a Regional Transportation Plan (RTP) and a Federal Transportation Improvement Program (FTIP)
- Develop a Sustainable Communities Strategy (SCS) to address greenhouse gas emissions as an element of the RTP
- Develop demographic projections
- Develop integrated land use, housing, employment, transportation programs and strategies for the South Coast Air Quality Management Plan
- Co-lead agency for air quality planning in the Central Coast and Southeast Desert air basin districts
- Responsible for developing and ensuring that the Regional Transportation Plan and the Federal Transportation Improvement Program conform to the purposes of the State Implementation Plans for specific transportation-related criteria pollutants, per the Clean Air Act
- Authorized regional agency for intergovernmental review of proposed programs for federal financial assistance and direct development activities

- Review environmental impact reports for projects having regional significance to ensure they are in line with approved regional plans
- Develop an area-wide, waste treatment management plan
- Responsible for preparation of the Regional Housing Needs Assessment
- Along with the San Diego Association of Governments and the Santa Barbara County/Cities Area Planning Council, SCAG is responsible for preparing the Southern California Hazardous Waste Management Plan

SCAG has developed a number of plans to achieve regional objectives, and applicable plans are discussed below.

Regional Comprehensive Plan

SCAG developed the Regional Comprehensive Plan (RCP) to address the Southern California region's challenges related to land use and housing, open space and habitat, water, energy, air quality, solid waste, transportation, security and emergency preparedness, and the economy. The RCP vision seeks to improve the mobility of all residents through an efficient transportation system; to foster livability in safe and healthy communities; to enable prosperity for all people by promoting economic vitality through job training and education; and to promote sustainability for future generations by promoting responsible development and growth that uses natural resources efficiently.

The RCP includes goals, outcomes, and an action plan of policies and initiatives that may be used by SCAG, State and local governments, transportation commissions, resource agencies and conservation groups, the private sector, and the general public in the following endeavors (SCAG 2008):

- Developing long-range regional plans and strategies that provide for efficient movement of people, goods and information; enhance economic growth and international trade; and improve the environment and quality of life.
- Providing quality information services and analysis for the region.
- Using an inclusive decision-making process that resolves conflicts and encourages trust.
- Creating an educational and work environment that cultivates creativity, initiative, and opportunity.

Regional Housing Needs Assessment

SCAG's RHNA provides an allocation of the existing and future housing needs by jurisdiction, which is based on income level; existing housing needs within each city and county; and the fair share allocation of the projected regional population growth. The RHNA is used for land use planning; developing local housing programs; prioritizing local resource allocation; addressing identified existing housing deficiencies; and accommodating future housing needs resulting from population, employment, and household growth. The RHNA shows that unincorporated Los Angeles County has a future housing need of 30,145 dwelling units (SCAG 2012a).

Regional Transportation Plan/Sustainable Communities Strategy

In the past, SCAG prepared the Regional Transportation Plan with an emphasis on mobility. However, the current *2012–2035 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS) places greater importance on sustainability. The RTP/SCS does not exclude mobility as its primary goal, but has created a vision that incorporates new solutions that focus more on the region's future needs for "mobility, economy, and sustainability" (SCAG 2012b).

One of the RTP/SCS's commitments toward a "sustainable future" is to reduce the amount of emissions produced from transportation sources through the operation of low or no emission transportation systems by 2035. The benefits of this strategy will ensure "energy security, increased public support for infrastructure, GHG reduction, and economic development" (SCAG 2012b). The RTP/SCS also focuses on the economy with expectations of shortening the gap between the regional transportation system and economic vitality.

To address the mobility challenge of the region's continuing roadway congestion, transportation investments will be made in transit; passenger and high-speed rail; active transportation; transportation demand management; transportation systems management; highways; arterials; goods movement; aviation and airport ground access; and operations and maintenance projects. These will indirectly create investment opportunities in the region. The RTP/SCS also seeks to reduce GHG emissions by 16 percent in 2035; to create closer "high quality" transit for households; to decrease roadway congestion; to improve safety; and to generate over 500,000 jobs per year. This will improve and establish a platform for sustainable living situations for the region's existing and future population (SCAG 2012b). The Federal Transportation Improvement Project (FTIP) is a prioritized list of transportation projects that implement the RTP/SCS.

South Coast Air Quality Management District

The Project site is located in Los Angeles County, in the SoCAB, where the SCAQMD is the agency principally responsible for comprehensive air pollution control. As a regional agency, the SCAQMD works directly with SCAG, County transportation commissions, and local governments and cooperates actively with all federal and State government agencies. The SCAQMD develops rules and regulations; establishes permitting requirements for stationary sources; inspects emissions sources; and enforces such measures through educational programs or fines when necessary.

Air Quality Management Plan

In response to federal and State requirements to implement measures to achieve the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS), the SCAQMD is responsible for reducing emissions from stationary (area and point), mobile, and indirect sources. It has responded to this requirement by preparing a sequence of AQMPs. An AQMP establishes a program of rules and regulations directed at attaining the NAAQS and CAAQS.

On December 7, 2012, the SCAQMD adopted the 2012 AQMP, which is a regional and multi-agency effort (SCAQMD, CARB, SCAG, and USEPA). The 2012 AQMP incorporates the latest scientific and technical information and planning assumptions including SCAG's 2012 RTP/SCS; updated emission inventory methods for various source categories; and SCAG's latest growth forecasts. The primary purposes of the 2012 AQMP are to demonstrate attainment of the federal 24-hour PM2.5 standard by 2014 and to update the USEPA-approved 8-hour Ozone Control Plan. On December 20, 2012, the 2012 AQMP was submitted to CARB and the USEPA

for concurrent review and approval for inclusion in the SIP (SCAQMD 2013). The 2012 AQMP was approved by the CARB on January 25, 2013 (CARB 2014).

South Coast Air Quality Management District Rules

The project will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions. SCAQMD Rule 403 establishes these procedures. They include applying water or chemical stabilizers to disturbed soils; managing haul road dust by applying water; covering all haul vehicles before transporting materials; restricting vehicle speeds on unpaved roads to 15 miles per hour (mph); and sweeping loose dirt from paved site access roadways used by construction vehicles. In addition, Rule 403 requires that vegetative ground cover be established on disturbance areas that are inactive within 30 days after active operations have ceased. Alternatively, an application of dust suppressants can be applied in sufficient quantity and frequency to maintain a stable surface. Rule 403 also requires grading and excavation activities to cease when winds exceed 25 mph.

SCAQMD Rule 402, Nuisance, states that a project 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.

SCAQMD Rule 445 has been adopted to reduce the emissions of particulate matter from wood-burning devices, and prohibits the installation of such devices in any new development.

SCAQMD Rule 1113 governs the sale of architectural coatings and limits the VOC content in paints and paint solvents. Although this rule does not directly apply to the project, it does dictate the VOC content of paints available for use during building construction.

SCAQMD Rule 201 requires a "Permit to Construct" prior to the installation of any equipment "the use of which may cause the issuance of air contaminants . . ." and Regulation II provides the requirements for the application for a Permit to Construct. Rule 203 similarly requires a Permit to Operate. . Rule 219, Equipment not Requiring a Written Permit Pursuant to Regulation II, identifies "equipment, processes, or operations that emit small amounts of contaminants that shall not require written permits . . .".

Los Angeles County General Plan

The County of Los Angeles Board of Supervisors indicated its intent to approve the General Plan Update in March 2015. The General Plan 2035 serves as the land use policy for the unincorporated areas of Los Angeles County and was developed in accordance with five guiding principles: smart growth; sufficient community services and infrastructure; strong and diverse economy; excellent environmental resource management; and healthy, livable and equitable communities. The General Plan discusses the Santa Clarita Valley Planning Area and its opportunity areas. The Elements of the General Plan discuss issues affecting the County and outline goals, policies, and implementation programs that address the needs of the County and achieve its long range vision for growth and development. The Los Angeles County General Plan is comprised of 10 elements: the Land Use Element; the Mobility Element; the Air Quality Element; the Conservation and Natural Resources Element; the Parks and Recreation Element; the Noise Element; the Safety Element; the Public Services and Facilities Element, the Economic Development Element; and the Housing Element. Applicable policies are listed in Table 5.9-2, General Plan Consistency Analysis, along with a discussion of the Project's consistency with these policies.

Los Angeles County 1980 General Plan Development Monitoring System

The Development Monitoring System (DMS) is a system set in place by the 1980 County General Plan to manage growth within the County's planning area. As part of the General Plan Update process, the DMS has been replaced by a different approach to managing land use, growth, and infrastructure development. Specifically, the growth management strategy of General Plan 2035 does not identify urban expansion areas. Rather, growth is directed through goals, policies, and programs that seek to achieve the following:

- discourage sprawling development patterns;
- protect areas with hazard, environmental and resource constraints;
- encourage infill development in areas near transit, services and existing infrastructure; and
- make a strong commitment to ensuring adequate services and infrastructure.

DMS no longer applies to projects, including this Project, evaluated under the new General Plan update; however, the Project's consistency with applicable General Plan goals, policies, and programs and the Project's ability to be supplied necessary services is evaluated throughout this SEIR.

Santa Clarita Valley Area Plan 2012

The Santa Clarita Valley Area Plan 2012 (SCVAP 2012), also known as One Valley One Vision (OVOV), was adopted in 2012 and serves as an extension of the General Plan to reflect local needs. The SCVAP 2012 guides the regulation of development within the unincorporated portions of the Santa Clarita Valley by providing focused goals, policies, and maps for the area. The NorthLake Specific Plan is incorporated into the SCVAP 2012 as an adopted Specific Plan; therefore, the SCVAP 2012 assumes development of the NorthLake Specific Plan as part of its Land Use Plan. Further, the *Final Program EIR for the County of Los Angeles' Proposed Santa Clarita Valley Area Plan One Valley One Vision 2012* assumes and analyzes the future development of the NorthLake Specific Plan as part of the EIR analysis.

Because the SCVAP 2012 is an Area Plan, it includes the following elements: Land Use, Circulation, Conservation and Open Space, Safety, and Noise. The SCVAP 2012 does not include elements that are required to be addressed on a Countywide basis, such as a Housing Element. The policies contained within the SCVAP 2012 are intended to be implemented and managed by the County of Los Angeles through adoption of the SCVAP 2012 as a part of the Los Angeles County General Plan. Individual elements are addressed where applicable throughout this EIR.

Land Use Element– The Land Use Element exists as a long-term blueprint for development of property to meet the Santa Clarita Valley's future needs. A Land Use Map is included to address future development within the planning area. The Land Use Map has been designed to minimize development issues associated with various types, intensities, qualities, and locations of future uses within the planning area. The Land Use Element also identifies the standards and targets for residential population density and building intensity.

As previously discussed, the SCVAP 2012 includes the NorthLake Specific Plan as an adopted specific plan and assumes development pursuant to the NorthLake Specific Plan land use plan. As noted in the Land Use Element, as the NorthLake Specific Plan area is developed pursuant to approved Specific Plan, the SCVAP 2012 will integrate the resulting land uses into the SCVAP 2012 area's development pattern and circulation network.

According to the Land Use Element, The Northlake Specific Plan was approved for 3,623 residential units, both single family and multi-family, on 1,330 acres located two miles north of Castaic. The plan also calls for 450 acres of open space, school sites, and a golf course; however, the project proponents have requested revisions to the proposed Project amenities that are under review by Los Angeles County. These revisions involve modifying the recreation element from a golf course to multiple parks and recreation features as discussed in Section 3.0, Project Description, and evaluated as part of this SEIR. When developed, this Project will be considered a part of the Castaic village community.

The Santa Clarita Valley Area Plan 2012 land use designations for surrounding areas include Rural Land [RL5, RL10, Open Space Parks and Recreation (OS-PR) and Bureau of Land Management (OS-BLM) to the north; Open Space Parks and Recreation (OS-PR), Water (OS-W), and Rural Land (RL5) to the east; isolated areas of Rural Land (RL5 and RL1) to the west; and Light Industrial (IL), Industrial Office (IO), Large Lot Residential [H2 (0-2 du/ac)], and Rural Land [RL1 (1 du/1 ac)] to the south.

West of I-5, the Santa Clarita Valley Area Plan 2012 designations are Light Industrial (IL), Rural Land (RL5 and RL20), Suburban Residential (H5), and Open Space Conservation (OS-C). To the south and southeast, the Area Plan shows Rural Land (RL1, RL2), Suburban Residential (H5), and Community Serving (P-CS) uses.

Circulation Element– The Circulation Element identifies major transportation facilities in the planning area and includes future plans for a comprehensive circulation system to accommodate the SCVAP 2012 land use plan. Specifically, the Circulation Element focuses on major streets (highways), rail and public transit routes, stations and terminals, and airport facilities. Goals and policies are set forth to encourage a reduction of vehicle trips and use of other transportation modes, including public transit, cycling and walking. The Circulation Element is addressed in Section 5.11, Traffic and Circulation.

Conservation and Open Space Element– The Conservation and Open Space Element is intended to ensure preservation of an open space greenbelt around large portions of the Santa Clarita Valley. Additionally, this element contains goals and policies related to preservation of water quality, historic and cultural resources, and scenic views, as well as the provision of recreational facilities to enhance the quality of life for the residents of the Santa Clarita Valley. The Conservation and Open Space Element is addressed in Sections 5.1 Air Quality, 5.2 Biological Resources, and 5.3 Cultural Resources.

Noise Element– The primary purpose of the Noise Element is to ensure that residents of the Santa Clarita Valley are not exposed to health risks or nuisances due to noise generated from freeways and high-volume roadways, airports, industrial and recreational uses, special events, and other noise sources. This element includes policies that address sound attenuation, including features such as setbacks, noise barriers, and buffering to protect the public health, safety, and welfare of the Santa Clarita Valley area residents. The Noise Element also identifies likely sensitive receptor uses within the planning area, including residences, schools, hospitals, preschools, and other uses where high noise levels area considered to be a nuisance or a hazard. The Noise Element is addressed in Section 5.10, Noise.

Safety Element– The goal of the Safety Element is to minimize the exposure of residents to health risks due to air pollution, earthquakes, wildland fires, or other environmental hazards. The Safety Element includes maps that identify known hazards in the Santa Clarita Valley planning area as well as policies to address these and other potential hazards that may occur as the area develops. The Safety Element is addressed in Sections 5.1 Air Quality, 5.5 Fire Hazards, 5.6 Geology and Soils, and 5.8 Hydrology and Water Quality.

NorthLake Specific Plan Goals Objectives and Policies

The NorthLake Specific Plan, adopted in June 1992, establishes comprehensive guidance and regulations for development of the 1,330 acres of the Specific Plan area. The Specific Plan provides for 3,623 dwelling units, including 2,337 single- and 1,286 multi-family units[2]. The Specific Plan also provides for 13.2 acres of commercial use, 50.1 acres of industrial use, 643.3 acres of recreation/open space, as well as schools, parks, and other facilities.

The Specific Plan's goals, objectives, and policies supersede and replace those outlined both generally in the Los Angeles County General Plan and specifically for the area north of Castaic in the Santa Clarita Valley Area Plan 2012. The Specific Plan establishes the type, location, intensity, and character of development within the planning area as well as the required infrastructure to support the development.

County of Los Angeles Zoning Code and NorthLake Specific Plan Zoning

Land use, population density, lot coverage, and building sizes and locations on the project site are regulated through the County's Zoning Code (County of Los Angeles Municipal Code, Title 22, Zoning Code). According to the Zoning Code, zoning designations within the project area are replaced by the NorthLake Specific Plan. Wherever the Specific Plan is silent, the applicable Zoning Code regulates, and wherever there is a potential conflict in interpretation the most restrictive interpretation applies.

Currently, the Specific Plan designations (not otherwise described in the County Zoning Code) for the project site include SF-1 (Single Family), SF-2 (Single Family Low Density), SF-E (Single Family – Estate), SF-G (Single Family – Golf), MF (Multiple Family), MF-G (Multiple Family – Golf), C-C (Community Commercial), C-H (Highway Commercial), I (Light Industrial), OSR (Open Space), SCH (School/Park), and GF (Golf Facilities). Not all of the zones listed for the Specific Plan would be implemented for the proposed Project. The zones applicable to the proposed Project are detailed in the project description, and are derived from the approved Specific Plan (on file with the Department of Regional Planning).

Los Angeles County Green Building Program

In November 2013, the Board of Supervisors adopted the Los Angeles County Green Building Standards Code (Title 31) in response to the mandates set forth in Title 24 California Green Building Standards Code (CALGreen Code)(2010 Green Building Standards Code). Title 31 became effective on January 1, 2014. Title 22 (Planning and Zoning Code) Drought Tolerant Landscaping requirements are now found in Title 31. The purpose of Title 31 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 planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental air quality (Title 31 of the Los Angeles County Code). Notably, Title 31 requires all new buildings equal to or greater than 25,000 square feet (sf) to comply with the CALGreen Code (specifically, Section A5.601.2.4, Nonresidential Voluntary Measures for CALGreen Tier 1). These measures include, but are not limited to requirements for energy efficiency, parking for fuel-efficient vehicles, cool roofs, reduction of indoor potable water use, recycled content of construction materials, reduction in construction and demolition waste, and thermal insulation.

2 Approved Specific Plan planning areas contained 3,623 of the allowed 3,983 residential dwelling unit maximum. An additional 360 units remain to be allocated in Future Phase(s) to achieve the allowable 3,983 dwelling units maximum.

The County's drought-tolerant landscaping requirements establish minimum standards for the design and installation of landscaping using drought-tolerant plants and native plants that require minimal use of water. These requirements include the following: (1) a minimum of 75 percent of total landscaped area must utilize non-invasive drought-tolerant plant and tree species appropriate for the climate zone region; (2) a maximum of 25 percent of landscaped areas may be turf grass; and (3) hydrozoning irrigation techniques shall be incorporated into the landscape design. Title 31 also establishes development standards for new construction that would conserve water, energy, and natural resources; divert waste from landfills; minimize impacts to existing infrastructure; and promote a healthier environment.

Draft Tree Planting Ordinance

On June 25 and December 17, 2014, the Regional Planning Commission held public hearings on the proposed Tree Planting Ordinance that would amend Title 21 (Subdivisions) and Title 22 (Planning and Zoning) of the Los Angeles County Code to repeal the Drought-Tolerant Landscaping and Green Building requirements of Sections 21.24.430 and 21.24.440 and the elements of Parts 20 and 21 of Chapter 22.52 are now found in Title 31, and repeal Part 22 of Chapter 22.52 which is now found in Title 12.84, in order to establish tree planting requirements for new projects (LACDRP 2014c). The Board of Supervisors Hearing is pending a hearing date (LACDRP 2015a).

5.9.5 THRESHOLD CRITERIA

Thresholds Addressed in the Initial Study

The Initial Study prepared for the proposed project (included in Appendix A) and circulated with the NOP, concludes that project implementation would not result in significant impacts for the thresholds of significance listed below. Further analysis of these thresholds in this Draft SEIR is not required (a summary of the analysis presented in the Initial Study is provided in Section 7.1, Effects Determined Not to be Significant, of this Draft SEIR):

- Would the project physically divide an established community?
- Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

Thresholds Addressed in this Draft Supplemental Environmental Impact Report

The County of Los Angeles utilizes an Initial Study Questionnaire with Thresholds of Significance specific to the County. The Initial Study for the proposed Project concludes that additional analysis of the following thresholds of significance is required in this Draft SEIR. The project will be considered to have a significant effect related to land use if the project would:

- Be inconsistent with the applicable County plans for the subject property including, but not limited to, the General Plan, specific plans, local coastal plans, area plans, and community/neighborhood plans.
- Be inconsistent with the County zoning ordinance as applicable to the subject property.

5.9.6 RELEVANT PROJECT CHARACTERISTICS

As detailed in Section 4.0, Project Description, the Project will include a variety of recreational amenities such as an enhanced park network, a sports park, recreation facilities, and a greenbelt-trail loop system that is integrated with the adjacent open space trails system. A 1.4-acre site is designated as a future fire station site located within the residential component of Phase 1 of the proposed Project site. A total of 791.6 acres of land is proposed for recreation and open space purposes, consisting of a sports park; community and neighborhood parks; and an extensive greenbelt and trails system. Of this land, approximately 327.6 acres of undeveloped landscaped open space (i.e., graded slopes) will be provided throughout the Project site and an additional 297.2 acres will be set aside as undisturbed open space areas.

5.9.7 ENVIRONMENTAL IMPACTS

Impact Analysis

Threshold 5.9-1 Would the project be inconsistent with the applicable County plans for the subject property including, but not limited to, the General Plan, specific plans, local coastal plans, area plans, and community/neighborhood plans?

The proposed Project would implement the currently approved NorthLake Specific Plan and no amendments to this specific plan are proposed. Additionally, the NorthLake Specific Plan is included as an approved Plan in the SCVAP 2012 and it was determined, as part of the SCVAP 2012 EIR, that development of the SCVAP 2012, including the NorthLake Specific Plan, would be consistent with all applicable County plans.

An analysis of the proposed Project's consistency with existing regional and local plans (including applicable goals, objectives, and policies) is provided below.

Regional

Southern California Association of Governments

The fundamental goal of SCAG's 2012-2035 RTP/SCS and the Growth Vision effort is to make the SCAG region a better place to live, work, and play for all residents regardless of race, ethnicity, or income class. Table 5.9-1 provides the consistency analysis for the *NorthLake Specific Plan* and SCAG's Compass Growth Vision. The project's consistency with the 2012-2035 RTC/SCP is addressed in Section 5.11, Transportation/Traffic. As demonstrated through the analysis, implementation of the *NorthLake Specific Plan* would be consistent with the goals and policies of SCAGs regional planning programs.

TABLE 5.9-1
SCAG RTP/SCS CONSISTENCY ANALYSIS

GOAL	CONSISTENCY ANALYSIS
RTP/SCS G1: Align the plan investments and policies with improving regional economic development and competitiveness.	**Consistent.** The proposed Project implements the NorthLake Specific Plan. The NorthLake Specific Plan Design Standards and Guidelines intend to create environmentally-friendly, high-quality developments to establish a regional character that identifies the community. The NorthLake Specific Plan is designed to unify the Project site's character and develop a cohesive residential community. Through the utilization of an established set of Guidelines, implementation of the NorthLake Specific Plan would create a development that is aesthetically pleasing and complementary of the natural setting surrounding much of the Project site. The proposed Project has been designed in compliance with the applicable Standards and Guidelines outlined in the NorthLake Specific Plan and optimizes the development intensity on the project site while balancing the desire for low-impact development.
RTP/SCS G2: Maximize mobility and accessibility for all people and goods in the region. **RTP/SCS G3:** Ensure travel safety and reliability for all people and goods in the region.	**Consistent.** The proposed Project involves residential development with commercial and industrial components, active and passive parks, and preservation of open space on an approximate 1,330-acre site that is located approximately 1 mile from the I-5 interchange with Lake Hughes Boulevard. The proposed Project includes construction of on-site roadway improvements that would allow for efficient access to the project site and would benefit persons of all social and economic groups who utilize these roadways. Road improvements would meet established design requirements for public safety.
RTP/SCS G4: Preserve and ensure a sustainable regional transportation system. **RTP/SCS G5:** Maximize the productivity of our transportation system.	**Consistent.** The proposed Project contributes to and would be consistent with planned land use and growth assumptions in the Santa Clarita Valley planning area, as anticipated by the SCVAP 2012. The traffic analysis presented in Section 5.11, Traffic and Circulation, addresses potential impacts to regional transportation facilities. In addition to the construction of roadways, the Project applicant would pay applicable traffic mitigation fees (e.g., Castaic Bridge and Thoroughfare District fees) that would fund additional traffic improvements in the study area and maintenance of roadway infrastructure in the Project area.
RTP/SCS G6: Protect the environment and health for our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking).	**Consistent.** As discussed in Section 4.0, Project Description, the proposed Project would incorporate an extensive greenbelt and trail system connecting schools, parks, amenities, and neighborhoods throughout the community and the Castaic Lake Recreation Area. The Project's multi-use trails and neighborhood pedestrian trails would also be designed with the potential for future connections to the off-site Regional Trail system.
RTP/SCS G7: Actively encourage and create incentives for energy efficiency, where possible.	**Consistent.** The Project will comply with the Los Angeles County Green Building Program, which consists of the County's Green Building Standards Code and third-party certifications as required; all Mandatory Measures of the 2016 California Green Building Standards Code; the Los Angeles County's Healthy Design Ordinance; the SCVAP 2012 and applicable Castaic Area Community Design Standards. The Project will also meet or exceed all 2016 CALGreen Residential Mandatory measures in Chapter 4, Divisions 4.1 through 4.5 and Chapter 7 as applicable; 2016 CALGreen Tier 1 Prerequisite Measures and required minimum Tier 1 Elective Measures for Residential Uses. The Project will use tree canopy cover and light colored paving and roofing materials to reduce the potential heat island effect.MM 5.7-14 requires developers to provide educational information to each homeowner on (1) water conservation; (2) energy conservation, including the use of energy-efficient lighting and the limiting of outdoor lighting; (3) the capabilities of buildings to support solar electricity generation and/or solar water heating; (4) mobile source emission reduction techniques, such as use of alternative modes of transportation and zero- or low-emission vehicles; (5) the use of

TABLE 5.9-1
SCAG RTP/SCS CONSISTENCY ANALYSIS

GOAL	CONSISTENCY ANALYSIS
	solar heating, automatic covers, and efficient pumps and motors for pools and spas; and (6) recycling to all homeowners prior to individual purchase of property and again annually. MM 5.7-15 requires developers to provide educational information to each owner or tenant on (1) water conservation; (2) energy conservation, including the use of energy-efficient lighting and the limiting of outdoor lighting; (3) the capabilities of buildings to support solar electricity generation and/or solar water heating; (4) mobile source emission reduction techniques, such as use of alternative modes of transportation and zero- or low-emission vehicles; and (5) recycling to all homeowners prior to individual purchase of property and again annually. As discussed in Section 5.4, Energy, the regulations, plans, and polices adopted for the purpose of maximizing energy efficiency that are directly applicable to the Project include (1) California's Title 24 Energy Efficiency Standards for Residential and Nonresidential Buildings; (2) CALGreen Code; and (3) Title 31 of the County Code (the Los Angeles County Green Building Standards Code).
RTP/SCS G8: Encourage land use and growth patterns that facilitate transit and non-motorized transportation.	**Consistent.** Refer to the consistency analysis RTP/SCS G6, which addresses the project's components that facilitate non-vehicular circulation.
RTP/SCS G9: Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	**Consistent.** The proposed Project is not a transportation project and does not involve the construction of new or expansion of existing transit facilities beyond construction of an internal circulation system and limited improvements to the existing circulation network through implementation of recommended mitigation measures, as defined in Section 5.11, Traffic and Circulation. Therefore, security associated with regional transportation systems is not applicable to the proposed Project.
Source (policies): SCAG 2015.	

Local

Los Angeles County General Plan

All activities undertaken by a planning agency must be consistent with the goals and policies of the agency's general plan. As identified above, the proposed Project is consistent with the NorthLake Specific Plan land use designation of General Industrial and is therefore consistent with the General Plan land use designation (Specific Plan).

As discussed previously, the Los Angeles County General Plan identifies the NorthLake Specific Plan as an approved specific plan and assumes its future development. According to Policy LU 2.12 of the Land Use Element, existing specific plans are required to be updated to reflect the General Plan Land Use Legend as part of the comprehensive planning effort. However, the NorthLake Specific Plan is consistent with the General Plan Land Use Legend and no updates are required. Therefore, because the proposed Project is consistent with the NorthLake Specific Plan, it can be concluded that it is also consistent with the General Plan. However, as required by Section 15125(d) of the State CEQA Guidelines, Table 5.9-2 below addresses the proposed Project's consistency with the goals and policies as outlined in the General Plan. As identified through this consistency analysis, the proposed Project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.

TABLE 5.9-2
COUNTY GENERAL PLAN CONSISTENCY

Goal/Policy	Project Consistency
Guiding Principle	
1. Employ smart growth	**Consistent:** The Project would not be considered a transit-oriented project but would promote non-vehicular circulation through the inclusion of an extensive greenbelt and trail system connecting schools, parks, amenities, and neighborhoods throughout the community and the Castaic Lake Recreation Area. Additionally, the Project would not conflict with smart growth strategies for sustainable practices and the conservation of natural resources.
2. Ensure community services and infrastructure are sufficient to accommodate growth	**Consistent:** The Project would be adequately served by public services and utilities (see Section 4.0, Project Description, Section 7.1, Effects Determined Not To Be Significant and Section 5.14, Utilities and Service Systems).
3. Provide the foundation for a strong and diverse economy	**Consistent:** The Project would include 23.1 acres of industrial and commercial uses which would introduce employment opportunities within the Project site. Further, the proposed Project would provide a variety of housing opportunities to support the existing workforce of the Santa Clarita Valley encouraging less long-distance commuting.
4. Excellence in environmental resources management	**Consistent:** As discussed throughout this SEIR, impacts to environmental resources would be mitigated to the maximum extent feasible.
5. Provide healthy, livable and equitable communities	**Consistent:** The Project would comply with existing regulations related to public health and safety and would promote a healthy, active lifestyle through the inclusion of an extensive greenbelt and trail system connecting schools, parks, amenities, and neighborhoods throughout the community and the Castaic Lake Recreation Area.
Land Use Element Goal/Policy	
Policy LU 1.11: Require a General Plan amendment for any deviation from the intensities, densities, and uses allowed by the General Plan (to apply the appropriate designation from the General Plan Land Use Legend), unless allowances for flexibility are specified in the specific plan.	**Consistent:** As discussed in Section 4.0, Project Description, the proposed Project would not deviate substantially from the NorthLake Specific Plan and would be considered consistent with the specific plan. Although there is a slight variance between the approved and proposed densities and acreages (refer to Table 4-2, Land Use Area Comparison), the variance is not significant because the amount of development would be below, rather than above the maximum allowable development set forth in the Specific Plan, which is allowed for in Section V.C of the NorthLake Specific Plan and is not considered inconsistent.
Policy LU 1.13: Allow specific plans to include implementation procedures for flexibility, such as development phasing, and redistribution of intensities and uses, as appropriate.	
Policy LU 1.15: For existing specific plans, which are depicted with an "SP" land use designation, the General Plan Land Use Policy Map shall be amended as part of a comprehensive area planning effort, to identify existing specific plans using the Specific Plan Overlay.	**Consistent:** As discussed in Section 4.0, Project Description, the proposed Project involves the implementation of the previously approved NorthLake Specific Plan. The existing land use designation is called out as "SP" and is assumed in the Santa Clarita Valley Area Plan, which was determined to be consistent with the Los Angeles County General Plan.
Policy LU 2.1: Ensure that all community-based plans are consistent with the General Plan.	

TABLE 5.9-2
COUNTY GENERAL PLAN CONSISTENCY

Goal/Policy	Project Consistency
Policy LU 2.2: Ensure broad outreach, public participation, and opportunities for community input in community-based planning efforts.	**Consistent:** As detailed in Section 2.0, Introduction, the Notice of Preparation/Initial Study was distributed and made available for public review. Additionally, a scoping meeting was held on the Project site to present the proposed Project and solicit comments from the public and those comments were taken into consideration when this Draft SEIR was prepared. This document will also be made available for public review and a public hearing will be held at the time the Project is considered.
Policy LU 2.3: Consult with and ensure that applicable County departments, adjacent cities and other stakeholders are involved in community-based planning efforts.	
Policy LU 2.8: Coordinate with the Los Angeles County Department of Public Works and other infrastructure providers to analyze and assess infrastructure improvements that are necessary for plan implementation.	**Consistent:** This SEIR has been subject to review by all applicable County departments, including the Los Angeles County Department of Public Works. Additionally, the Project Applicant has been in contact with utility providers to coordinate necessary improvements to serve the proposed Project, as discussed in Section 5.12, Utilities.
Policy LU 5.1: Encourage a mix of residential land use designations and development regulations that accommodate various densities, building types and styles.	**Consistent.** The proposed Project would provide a variety of housing opportunities to support the existing workforce of the Santa Clarita Valley. Proposed housing types would accommodate a range of income levels and age groups, including multi-family residential uses, single-family residential uses, and opportunities for age-restricted residential communities.
Policy LU 5.2: Encourage a diversity of commercial and retail services, and public facilities at various scales to meet regional and local needs.	**Consistent:** The Project would include 23.1 acres of industrial and commercial uses. As discussed in Section 4.0, Project Description, these areas may be developed with a variety of commercial and industrial uses and, due to the proposed location of the uses, are intended to serve the immediate community and the future residents of the proposed Project.
Policy LU 5.3: Support a mix of land uses that promote bicycling and walking, and reduce VMTs.	**Consistent:** The Project would promote non-vehicular circulation through the inclusion of an extensive greenbelt and trail system connecting schools, parks, amenities, and neighborhoods throughout the community and the Castaic Lake Recreation Area.
Policy LU 5.5: Ensure that all households have access to a sufficient supply of quality early care and education and supervised school-age enrichment options for children from birth to age 13.	**Consistent:** As discussed in Section 4.0, Project Description, the Project site is within the service area of the Castaic Union School District and the William S. Hart Union High School District. The NorthLake Hills Elementary School is located on the Project site; a 23-acre potential school site is located within the Phase 2 area in the future (refer to Exhibit 4-1). Additionally, the Project would not preclude establishment of private early care, childcare and preschool sites throughout the Project site; there are approximately five child care sites, including commercial and private locations, located within three miles of the Project site. These uses are allowable uses under the Light Industrial and Community Commercial zones.
Policy LU 5.8: Encourage farmers markets, community gardens, and proximity to other local food sources that provide access to healthful and nutritious foods.	**Consistent:** The Project would comply with existing regulations related to public health and safety and would promote a healthy, active lifestyle through the inclusion of an extensive greenbelt and trail system connecting schools, parks, amenities, and neighborhoods throughout the community and the Castaic Lake Recreation Area. Although no grocery stores or markets are proposed as part of the Project, these uses would be

TABLE 5.9-2
COUNTY GENERAL PLAN CONSISTENCY

Goal/Policy	Project Consistency
	permitted within the Community Commercial Zone and the Project would not preclude the development of this type of use. Additionally, a variety of community-based events, including farmer's markets would be an allowed and encouraged use.
Policy LU 5.10: Encourage employment opportunities and housing to be developed in proximity to one another.	**Consistent.** As shown on Exhibit 4-1, Proposed Land Use Plan, in Section 4.0, Project Description, the Project proposes commercial and industrial uses in the southern portion of the Project site. Although these uses are not proposed immediately adjacent to the proposed residential uses, the Project would promote connectivity between uses through the proposed greenbelt and trail system as shown on Exhibit 4-6, Pedestrian Circulation and Trails and the proposed internal vehicular circulation system as shown on Exhibit 4-7, Mobility Plan.
Policy LU 6.1: Protect rural communities from the encroachment of incompatible development that conflict with existing land use patterns and service standards.	**Consistent.** The proposed Project would introduce development similar in size and scope to the community located to the south, along Ridge Route Road. Additionally, many of the amenities and uses proposed with the Project would be available to serve the existing residential community to the south.
Policy LU 6.2: Encourage land uses and developments that are compatible with the natural environment and landscape. **Policy LU 7.1:** Reduce and mitigate the impacts of incompatible land uses, where feasible, using buffers and other design techniques.	**Consistent.** As demonstrated on Exhibit 4-1, Proposed Land Use Plan, the proposed development areas of the Project are centrally located to the Project site, allowing much of the natural topography, environment, and landscape to remain along the edges of the Project site. The centralizing of development and preservation of the project boundaries would reduce potential incompatibilities with the surrounding, undeveloped areas.
Policy LU 9.2: Encourage patterns of development that promote physical activity. **Policy LU 9.3:** Encourage patterns of development that increase convenient, safe access to healthy foods, especially fresh produce, in all neighborhoods.	**Consistent:** The Project would comply with existing regulations related to public health and safety and would promote a healthy, active lifestyle through the inclusion of an extensive greenbelt and trail system connecting schools, parks, amenities, and neighborhoods throughout the community and the Castaic Lake Recreation Area. The trail system would also provide convenient access to the on-site commercial areas. Although no grocery stores or markets are proposed as part of the Project, these uses would be permitted within the Community Commercial Zone and the Project would not preclude the development of this type of use. Additionally, a variety of community-based events, including farmer's markets would be an allowed and encouraged use.
Policy LU 10.1: Encourage community outreach and stakeholder agency input early and often in the design of projects.	**Consistent.** As discussed in Section 2.0, Introduction, a public scoping meeting was held on April 8, 2015 to receive input on the environmental issues that should be addressed in the SEIR. Additionally, the Project Applicant has met with the neighbors, local stakeholders and interested parties throughout the planning process to introduce the Project and gather input.
Policy LU 10.2: Design development adjacent to natural features in a sensitive manner to complement the natural environment.	**Consistent.** As demonstrated on Exhibit 4-1, Proposed Land Use Plan, the proposed development areas of the Project are centrally located to the Project site, allowing much of the natural topography, environment, and landscape to remain along the edges of the Project site.

TABLE 5.9-2
COUNTY GENERAL PLAN CONSISTENCY

Goal/Policy	Project Consistency
Policy LU 10.4: Promote environmentally sensitive and sustainable design.	**Consistent:** New buildings would be designed and constructed to comply with the County's LID Ordinance, Green Building Standards Code, Green Building Ordinance see Section 5.7, Greenhouse Gas).
Policy LU 10.5: Encourage the use of distinctive landscaping, signage and other features to define the unique character of districts, neighborhoods or communities, and engender community identity, pride and community interaction.	**Consistent.** As discussed in Section II.J of the NorthLake Specific Plan, the Project would incorporate landscaping and theme signage that would be used to separate and distinguish different residential neighborhoods and commercial and industrial areas. The proposed Project would comply with the development standards set forth in Section III of the NorthLake Specific Plan.
Policy LU 10.6: Encourage pedestrian activity through the following: • Designing the main entrance of buildings to front the street; • Incorporating landscaping features; • Limiting masonry walls and parking lots along commercial corridors and other public spaces; • Incorporating street furniture, signage, and public events and activities; and • Using wayfinding strategies to highlight community points of interest.	**Consistent.** The Project would be consistent with Design Guidelines as set forth in Section IV. of the *NorthLake Specific Plan*, including the landscape development guidelines related to street frontage, pedestrian and bicycle use areas.
Policy LU 10.7: Promote public spaces, such as plazas that enhance the pedestrian environment, and, where appropriate, continuity along commercial corridors with active transportation activities.	
Policy LU 11.1: Encourage new development to employ sustainable energy practices, such as utilizing passive solar techniques and/or active solar technologies.	**Consistent:** New buildings would be designed and constructed to comply with the County's LID Ordinance, Green Building Standards Code, Green Building Ordinance (see Section 5.7, Greenhouse Gas). The Project will also commit to the installation of a 3-kilowatt (kW) solar panel system on 50 percent of residential dwelling units.
Policy LU 11.2: Support the design of developments that provide substantial tree canopy cover, and utilize light colored paving materials and energy-efficient roofing materials to reduce the urban heat island effect.	**Consistent.** The proposed Project would be developed consistent with the Design Guidelines of the NorthLake Specific Plan, including requirements for adequate shade trees throughout the Project's circulation system; minimum landscape requirements according to the land use; and use of light-colored paving materials, including brick pavers.
Policy LU 11.4: Encourage subdivisions to utilize sustainable design practices, such as maximizing energy efficiency through lot configuration; preventing habitat fragmentation; promoting stormwater retention; promoting the localized production of energy; promoting water conservation and reuse; maximizing interconnectivity; and utilizing public transit.	**Consistent.** The Project supports the Specific Plan's goal to foster compatible land use arrangements that contribute to reduced energy consumption and improved air quality by centrally locating the land uses so that potential connection to the greenbelt and trail systems reduces dependence on automobiles. The provision of residential, commercial, industrial, and recreational opportunities will make the final product of this project a self-sufficient community with a reduced dependence on the private automobile. The community has also been designed to centralize recreational and industrial facilities to minimize travel time. Additionally, as discussed in Section 4.0, Project Description, the Project would implement water conservation techniques, including use

TABLE 5.9-2
COUNTY GENERAL PLAN CONSISTENCY

Goal/Policy	Project Consistency
	of recycled water, SmartSense appliances, tankless water heaters, low flow shower heads, high efficiency dishwashers, grey water systems, and smart showers.
Policy LU 11.6: Ensure that subdivisions in VHFHSZs site open space to minimize fire risks, as feasible.	**Consistent.** As demonstrated on Exhibit 4-1, Proposed Land Use Plan, the proposed development areas of the Project are centrally located to the Project site, allowing much of the natural topography, environment, and landscape to remain along the edges of the Project site. The centralizing of development and preservation of the project boundaries in addition to compliance with the Fire Management Plan as discussed in Section 5.5, Hazards, would minimize fire risks.
Policy LU 11.8: Encourage sustainable subdivisions that meet green neighborhood standards, such as Leadership in Energy and Environmental Design-Neighborhood Development (LEED-ND).	**Consistent.** As discussed in Section 4.0, Project Description, the proposed Project would implement sustainability features in an effort to increase efficiency and minimize impacts on non-renewable resources. Specifically, the Project would comply with all applicable codes standards, including the County's Green Building Standards Code, CALGreen Code, California Department of Water Resources Model Water Efficient Landscape Ordinance, low impact development requirements, and California's 75 Percent Initiative related to solid waste. Additionally, the Project would implement additional water conservation techniques as described previously under Policy LU 11.4.
Mobility Element Goal/Policy	
Policy M 1.1: Provide for the accommodation of all users, including pedestrians, motorists, bicyclists, equestrians, users of public transit, seniors, children, and persons with disabilities when requiring or planning for new, or retrofitting existing, transportation corridors/networks whenever appropriate and feasible.	**Consistent.** As discussed in Section 4.0, Project Description, and shown on Exhibit 4-6, Pedestrian Circulation and Trails, the Project would include development of an extensive greenbelt and trail system connecting schools, parks, amenities, and neighborhoods throughout the community and the Castaic Lake Recreation Area. Additionally, as discussed in Section 5.10, Traffic, Access, and Circulation, public transportation would be provided to the Project site via existing Santa Clarita Transit fixed-route transit lines. Future bus transit routes are also anticipated to serve the Project.
Policy M 2.1: Provide transportation corridors/networks that accommodate pedestrians, equestrians and bicyclists, and reduce motor vehicle accidents through a context-sensitive process that addresses the unique characteristics of urban, suburban, and rural communities whenever appropriate and feasible.	
Policy M 2.4: Ensure a comfortable walking environment for pedestrians by implementing the following, whenever appropriate and feasible: • Designs that limit dead-end streets and dead-end sidewalks. • Adequate lighting on pedestrian paths, particularly around building entrances and exits, and transit stops. • Designs for curb ramps, which are pedestrian friendly and compliant with the American Disability Act (ADA). • Perpendicular curb ramps at locations where it is feasible. • Pedestrian walking speed based on the latest standard for signal timing. Slower speeds should be used when appropriate (i.e., near senior housing, rehabilitation centers, etc.)	**Consistent.** The Project would be consistent with Design Guidelines as set forth in Section IV of the NorthLake Specific Plan, including the landscape development guidelines related to street frontage, pedestrian and bicycle use areas. Additionally, as discussed in Section 4.0, Project Description, the Project would include an extensive greenbelt and trail system connecting schools, parks, amenities, and neighborhoods throughout the community and the Castaic Lake Recreation Area. Exhibit 4-6, Pedestrian Circulation and Trails, shows the location of the trail system, which includes multi-use trails and neighborhood pedestrian trails as well as potential future connections to the off-site Regional Trail system. The overall intent of the Landscape Concept, as defined in the NorthLake Specific Plan, is to provide a positive pedestrian environment through the use of pedestrian-friendly trails and safe streetscapes. Further, these Project features

TABLE 5.9-2
COUNTY GENERAL PLAN CONSISTENCY

Goal/Policy	Project Consistency
• Approved devices to extend the pedestrian clearance times at signalized intersections. • Accessible Pedestrian Signals (APS) at signalized intersections. • Pedestrian crossings at signalized intersections without double or triple left or right turn lanes. • Pedestrian signal heads, countdown pedestrian heads, pedestrian phasing and leading pedestrian intervals at signalized intersections. • Exclusive pedestrian phases (pedestrian scrambles) where turning volume conflicts with very high pedestrian volumes. • Advance stop lines at signalized intersections. • Pedestrian Hybrid Beacons. • Medians or crossing islands to divide long crossings. • High visibility crosswalks. • Pedestrian signage. • Advanced yield lines for uncontrolled crosswalks. • Rectangular Rapid Flashing Beacon or other similar approved technology at locations of high pedestrian traffic. • Safe and convenient crossing locations at transit stations and transit stops located at safe intersections.	demonstrate compliance with the Los Angeles County Healthy Design Ordinance which promotes physical activity in the form of walking, bicycling and exercise through design of the built environment.
Policy M 2.5: Ensure a comfortable bicycling environment by implementing the following, whenever appropriate and feasible: • Bicycle signal heads at intersections. • Bicycle signal detection at all signalized intersections. • Wayfinding signage. • Road diet techniques, such as lane narrowing, lane removal, and parking removal/restriction. • Appropriate lighting on all bikeways, including those in rural areas. • Designs, or other similar features, such as: shoulder bikeways, cycle tracks, contra flow bike lanes, shared use paths, buffered bike lanes, raised bike lanes, and bicycle boulevards.	**Consistent.** The proposed Project would provide adequate bicycling opportunities throughout the Project site, including both Class I bike lanes along portions of NorthLake Boulevard and Ridge Route Road and Class III Shared Bike Lanes along Ridge Route Road- North. The Class I bike lanes would follow the proposed roadway alignments while providing an extra measure of safety and security through physical separation from vehicular traffic, thus eliminating the need for Class II facilities.
Policy M 2.8: Connect trails and pedestrian and bicycle paths to schools, public transportation, major employment centers, shopping centers, government buildings, residential neighborhoods, and other destinations.	**Consistent.** As discussed in Section 4.0, Project Description, and shown on Exhibit 4-6, Pedestrian Circulation and Trails, the Project would include development of an extensive greenbelt and trail system connecting schools, parks, amenities, and neighborhoods throughout the community and the Castaic Lake Recreation Area. Additionally, as discussed in Section 5.10, Traffic, Access, and Circulation, public transportation would be provided to the Project site via existing Santa Clarita Transit fixed-route transit lines. Future bus transit routes are also anticipated to serve the Project.

TABLE 5.9-2
COUNTY GENERAL PLAN CONSISTENCY

Goal/Policy	Project Consistency
Policy M 2.9: Encourage the planting of trees along streets and other forms of landscaping to enliven streetscapes by blending natural features with built features.	**Consistent.** The Project would include an extensive greenbelt and trail system connecting schools, parks, amenities, and neighborhoods throughout the community and the Castaic Lake Recreation Area. Exhibit 4-6, Pedestrian Circulation and Trails, shows the location of the trail system, which includes multi-use trails and neighborhood pedestrian trails as well as potential future connections to the off-site Regional Trail system. The overall intent of the Landscape Concept, as defined in the NorthLake Specific Plan, is to provide a positive pedestrian environment through the use of pedestrian-friendly trails and safe streetscapes. Further, these Project features demonstrate compliance with the Los Angeles County Healthy Design Ordinance which promotes physical activity in the form of walking, bicycling and exercise through design of the built environment.
Policy M 2.10: Encourage the provision of amenities, such as benches, shelters, secure bicycle storage, and street furniture, and comfortable, safe waiting areas near transit stops.	
Policy M 4.1: Expand transportation options that reduce automobile dependence.	**Consistent.** As discussed in Section 4.0, Project Description, and shown on Exhibit 4-6, Pedestrian Circulation and Trails, the Project would include development of an extensive greenbelt and trail system connecting schools, parks, amenities, and neighborhoods throughout the community and the Castaic Lake Recreation Area. Additionally, as discussed in Section 5.10, Traffic, Access, and Circulation, public transportation would be provided to the Project site via existing Santa Clarita Transit fixed-route transit lines. Future bus transit routes are also anticipated to serve the Project.
Policy M 4.2: Expand shuttle services to connect major transit centers to community points of interest.	
Policy M 4.3: Maintain transit services within the unincorporated areas that are affordable, timely, cost-effective, and responsive to growth patterns and community input.	
Policy M 4.4: Ensure expanded mobility and increase transit access for underserved transit users, such as seniors, students, low income households, and persons with disabilities.	
Policy M 4.5: Encourage continuous, direct routes through a connected system of streets, with small blocks and minimal dead ends (cul-de-sacs), as feasible.	**Consistent.** The proposed Project has been designed to accommodate the site's natural topography to the extent feasible. Because of this, a traditional grid patterned layout of streets is not possible. However, as discussed in Section 4.0, Project Description, the Project will be designed to accommodate an interconnecting internal roadway system. Specifically, NorthLake Boulevard will serve as the backbone road within the Project's proposed roadway system and secondary collector streets will connect with NorthLake Boulevard, providing continuous routes to the extent feasible.
Policy M 4.7: Maintain a minimum LOS D, where feasible; however, allow LOS below D on a case by case basis in order to further other General Plan goals and policies, such as those related to environmental protection, infill development, and active transportation.	**Consistent.** Section 5.11, Traffic, Access, and Circulation, provides a full analysis of the proposed Project's anticipated traffic-related impacts. As stated in Section 5.11, intersections exceeding LOS D would require mitigation measures to reduce project-related impacts.
Policy M 4.15: Reduce vehicle trips through the use of mobility management practices, such as the reduction of parking requirements, employer/institution based transit passes, regional carpooling programs, and telecommuting.	**Consistent:** As discussed in Section 5.1, Air Quality, the proposed Project would include a commuter computer program developed for the NorthLake residents in an attempt to reduce commuter vehicle trips generated by the proposed Projects.
Air Quality Element Goal/Policy	
Policy AQ 1.1: Minimize health risks to people from industrial toxic or hazardous air pollutant emissions, with an emphasis on local hot spots, such as existing point sources affecting immediate sensitive receptors.	**Consistent.** As discussed in Section 5.1, Air Quality, the proposed Project would not result in the creation of a CO hot spot in the Project area.

TABLE 5.9-2
COUNTY GENERAL PLAN CONSISTENCY

Goal/Policy	Project Consistency
Policy AQ 1.2: Encourage the use of low or no volatile organic compound (VOC) emitting materials.	**Consistent:** As discussed in Section 5.1, Air Quality, the Project would comply with SCAQMD Rule 1113, which limits the volatile organic compound content of architectural coatings.
Policy AQ 1.3: Reduce particulate inorganic and biological emissions from construction, grading, excavation, and demolition to the maximum extent feasible.	**Consistent:** As discussed in Section 5.1, Air Quality, the Project would comply with SCAQMD Rule 403, Fugitive Dust, to reduce particulate emissions during construction, grading, excavation, and demolition.
Policy AQ 2.1: Encourage the application of design and other appropriate measures when siting sensitive uses, such as residences, schools, senior centers, daycare centers, medical facilities, or parks with active recreational facilities within proximity to major sources of air pollution, such as freeways.	**Consistent.** As discussed in Section 5.1, Air Quality, the proposed Project includes land that is within 500 feet of I-5. However, there are no residences or other sensitive land uses proposed within 500 feet of I-5.
Policy AQ 3.4: Participate in local, regional and state programs to reduce greenhouse gas emissions.	**Consistent.** As discussed in Section 5.7, Greenhouse Gas Emissions, the proposed Project would not only comply with State and County energy efficiency and bicycle parking requirements, but would exceed these requirements by incorporating voluntary measures from the CALGreen Code.
Policy AQ 3.5: Encourage energy conservation in new development and municipal operations.	**Consistent:** New buildings would be designed and constructed to comply with the County's Green Building Standards Code, Green Building Ordinance, as discussed in Sections 5.4, Energy, and 5.7, Greenhouse Gas. Further, MM 5.7-1 and MM 5.7-2 would provide residential and nonresidential owners and tenants information on energy conservation practices.
Policy AQ 3.6: Support rooftop solar facilities on new and existing buildings.	**Consistent.** As discussed in Section 5.7, Greenhouse Gas Emissions, the Project will commit to the installation of a 3-kilowatt (kW) solar panel system on 50 percent of residential dwelling units.
Conservation and Natural Resources Element Goal/Policy	
Policy C/NR 3.1: Conserve and enhance the ecological function of diverse natural habitats and biological resources.	**Consistent.** As demonstrated on Exhibit 4-1, Proposed Land Use Plan, the proposed development areas of the Project are centrally located to the Project site, allowing much of the natural topography, environment, and landscape to remain along the edges of the Project site. The centralizing of development and preservation of the project boundaries would allow for the conservation of natural habitats and reduce potential incompatibilities with surrounding, undeveloped areas containing biological resources.
Policy C/NR 3.3: Restore upland communities and significant riparian resources, such as degraded streams, rivers, and wetlands to maintain ecological function – acknowledging the importance of incrementally restoring ecosystem values when complete restoration is not feasible.	**Consistent.** As detailed in Section 5.2, Biological Resources, the Project would significantly impact sensitive vegetation communities, including riparian habitat. These impacts would be mitigated to less than significant levels through implementation of MMs 5.2-1 through 5.2-3 and 5.2-8 through 5.2-11 requiring biological monitoring during vegetation removal and preservation, creation, and enhancement of habitat.

TABLE 5.9-2
COUNTY GENERAL PLAN CONSISTENCY

Goal/Policy	Project Consistency
Policy C/NR 3.5: Ensure compatibility of development in the National Forests in conjunction with the U.S. Forest Service Land and Resource Management Plan.	**Consistent.** As an adjacent land-owner, the USFS has been notified of the proposed Project and comments have been solicited as part of the Notice of Preparation/Initial Study process. The USFS will also be provided the opportunity to review and comment on the Draft SEIR, as noted in Section 2.0, Introduction.
Policy C/NR 3.9: Consider the following in the design of a project that is located within an SEA, to the greatest extent feasible: • Preservation of biologically valuable habitats, species, wildlife corridors and linkages; • Protection of sensitive resources on the site within open space; • Protection of water sources from hydromodification in order to maintain the ecological function of riparian habitats; • Placement of the development in the least biologically sensitive areas on the site (prioritize the preservation or avoidance of the most sensitive biological resources onsite); • Design required open spaces to retain contiguous undisturbed open space that preserves the most sensitive biological resources onsite and/or serves to maintain regional connectivity; • Maintenance of watershed connectivity by capturing, treating, retaining, and/or infiltrating storm water flows on site; and • Consideration of the continuity of onsite open space with adjacent open space in project design.	**Consistent:** As discussed in Section 5.2, Biological Resources, the Project site is not located within an SEA. SEA boundaries with the region have recently been revised with approval of the Santa Clarita Valley Area Plan or the One Valley One Vision Plan. The study area is not located in a SEA. The closest SEA boundary to the study area is within Castaic Creek portion of the Santa Clara River SEA. This creek is a tributary to Santa Clara River, and is located approximately 4,470 feet southeast of the southernmost Project boundary.
Policy C/NR 3.10: Require environmentally superior mitigation for unavoidable impacts on biologically sensitive areas, and permanently preserve mitigation sites.	**Consistent.** As discussed in Section 5.2, Biological Resources, all potential impacts to biological resources, including riparian vegetation, streambeds, and wetlands would be fully mitigated through preservation, restoration, or enhancement on site or off site at a ratio identified in the USACE and CDFW permits/agreements for the project. It should be noted that the ratio would be no less than 2:1 for habitat restoration or preservation.
Policy C/NR 3.11: Discourage development in riparian habitats, streambeds, wetlands, and other native woodlands in order to maintain and support their preservation in a natural state, unaltered by grading, fill, or diversion activities.	**Consistent.** As discussed previously, all potential impacts to biological resources, including riparian vegetation, streambeds, and wetlands would be fully mitigated through preservation, restoration, or enhancement on site or off site at a ratio identified in the USACE and CDFW permits/agreements for the project. Although the Project would include development in riparian habitats, as shown on Exhibit 5.2-4, Project Impact Area, Project-related development would be concentrated to allow for preservation of nearly 300 acres of natural, open space area.

TABLE 5.9-2
COUNTY GENERAL PLAN CONSISTENCY

Goal/Policy	Project Consistency
Policy C/NR 5.1: Support the LID philosophy, which seeks to plan and design public and private development with hydrologic sensitivity, including limits to straightening and channelizing natural flow paths, removal of vegetative cover, compaction of soils, and distribution of naturalistic BMPs at regional, neighborhood, and parcel-level scales.	**Consistent:** The Project would comply with NPDES and County regulations, including the County's LID Ordinance, to reduce its impact on the local hydrology and prevent increases in runoff volume and velocity. Impacts to groundwater resources underlying the site would be avoided by obtaining water service from the Newhall County Water District (see Section 5.8, Hydrology and Water Quality and Section 5.12, Utilities).
Policy C/NR 5.2: Require compliance by all County departments with adopted Municipal Separate Storm Sewer System (MS4), General Construction, and point source NPDES permits.	
Policy C/NR 5.6: Minimize point and non-point source water pollution.	
Policy C/NR 5.7: Actively support the design of new and retrofit of existing infrastructure to accommodate watershed protection goals, such as roadway, railway, bridge, and other – particularly – tributary street and greenway interface points with channelized waterways**.**	
Policy C/NR 6.1: Support the LID philosophy, which incorporates distributed, post-construction parcel-level stormwater infiltration as part of new development	
Policy C/NR 6.2: Protect natural groundwater recharge areas and regional spreading grounds.	
Policy C/NR 7.1: Support the LID philosophy, which mimics the natural hydrologic cycle using undeveloped conditions as a base, in public and private land use planning and development design.	
Policy C/NR 12.1: Encourage the production and use of renewable energy resources.	**Consistent.** As discussed in Section 4.0, Project Description, the proposed Project would implement sustainability features in an effort to increase efficient use of renewable resources and minimize impacts on non-renewable resources. Specifically, the Project would comply with all applicable codes standards, including the County's Green Building Standards Code, CALGreen Code, California Department of Water Resources Model Water Efficient Landscape Ordinance, low impact development requirements, and California's 75 Percent Initiative related to solid waste. Additionally, the Project would implement additional water conservation techniques as described previously under Policy LU 11.4.
Policy C/NR 13.4: Encourage developments to be designed to create a consistent visual relationship with the natural terrain and vegetation.	**Consistent.** Project construction would include mass grading; re-contouring slopes; introducing residential and industrial structures; building streets; and constructing other appurtenant development associated with a new community. However, the proposed development areas of the Project are centrally located to the Project site, allowing much of the natural topography, environment, and landscape to remain along the edges of the Project site and be visible from the development area as well as from off-site areas. According to the *NorthLake Specific Plan,* adherence to the grading guidelines would minimize conflict within the constraints of existing topography while allowing for livable, attractive areas.
Policy C/NR 13.5: Encourage required grading to be compatible with the existing terrain.	

TABLE 5.9-2
COUNTY GENERAL PLAN CONSISTENCY

Goal/Policy	Project Consistency
Policy C/NR 13.9: Consider the following in the design of a project that is located within an HMA, to the greatest extent feasible: • Public safety and the protection of hillside resources through the application of safety and conservation design standards; • Maintenance of large contiguous open areas that limit exposure to landslide, liquefaction and fire hazards and protect natural features, such as significant ridgelines, watercourses and SEAs.	**Consistent.** As shown on Figure 9.8, Hillside Management Areas and Ridgeline Management Map, of the *Draft Los Angeles County General Plan 2035,* the project site is located in a Hillside Management Area (HMA) (greater than 25 percent slope). Because the *NorthLake Specific Plan* was approved and entitled for development prior to adoption of the updated Hillside Management Ordinance, development need only to comply with any hillside design standards in effect at the time that the *NorthLake Specific Plan* was approved and as further addressed in the SCVAP 2012. It should be noted that, although the Project would not be subject to the Hillside Management Ordinance, development would be subject to all engineering recommendations from the current and subsequent geotechnical investigations.
C/NR 14.1: Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible.	**Consistent:** The Project would protect any discovered archaeological and paleontological resources through the implementation of MMs (see Section 5.4, Cultural Resources).
Policy C/NR 14.5: Promote public awareness of historic, cultural, and paleontological resources.	
Policy C/NR 14.6: Ensure proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.	
Parks and Recreation Element Goal/Policy	
Policy P/R 1.2: Provide additional active and passive recreation opportunities based on a community's setting, and recreational needs and preferences.	**Consistent.** As discussed in Section 4.0, Project Description, over half of the proposed Project site is proposed as open space, recreation, and park uses. Proposed parks include public parks and recreation facilities, publicly accessible private parks, pedestrian circulation and trails, and open space. The Project would include a public community sports park and multiple passive parks.
Policy P/R 1.3: Consider emerging trends in parks and recreation when planning for new parks and recreation programs.	**Consistent.** The proposed Project would include a variety of parklands and recreational uses. The types and acreages of parks were determined in consultation with the Los Angeles County Department of Parks and Recreation, based on identified needs in the local community.
Policy P/R 1.5: Ensure that County parks and recreational facilities are clean, safe, inviting, usable and accessible.	**Consistent.** As discussed in Section 4.0, Project Description, proposed parks include both public and private facilities. The private facilities would be owned and maintained privately by the area homeowners associations. Public facilities would be owned and maintained by the Los Angeles County Department of Parks and Recreation
Policy P/R 1.7: Ensure adequate staffing, funding, and other resources to maintain satisfactory service levels at all County parks and recreational facilities.	**Consistent.** As part of the Project planning process, the Project Applicant consulted with the County of Los Angeles Parks Department to determine the anticipated demand for publicly-accessible parklands. Staff and other County parks and recreational facility resources are primarily funded through collection of property taxes, which would be assessed for all property owners within the proposed Project. Therefore, implementation of the proposed Project would result in an increase in population and an increase in property tax revenue to fund these County facilities.

TABLE 5.9-2
COUNTY GENERAL PLAN CONSISTENCY

Goal/Policy	Project Consistency
Policy P/R 1.10: Ensure a balance of passive and recreational activities in the development of new park facilities.	**Consistent.** As part of the project approximately 166.9 acres would be designated as parkland and other recreational facilities, including parks, enhanced parkways, trails, a sports park, and neighborhood parks. These areas would be developed as a combination of public and private parklands and recreational facilities which would serve the anticipated demand resulting from project development as well as a need for park and recreational facilities within the local project area.
Policy P/R 1.11: Provide access to parks by creating pedestrian and bicycle-friendly paths and signage regarding park locations and distances.	**Consistent.** The Project will include 91,150 linear feet of multi-use and neighborhood and pedestrian trails linking proposed land uses and connecting to the off-site regional trail system. Class I bike lanes will be provided along portions of NorthLake Boulevard and Ridge Route Road and Class III Shared Bike Lanes will be provided along Ridge Route Road- North. Additionally, the proposed mobility plan would minimize vehicular trips through the linkage of land use areas and site elements via a multi-modal system.
Policy P/R 3.1: Acquire and develop local and regional parkland to meet the following County goals: 4 acres of local parkland per 1,000 residents in the unincorporated areas and 6 acres of regional parkland per 1,000 residents of the total population of Los Angeles County.	**Consistent.** Based on an anticipated population increase of approximately 9,734 new residents, approximately 48.67 acres of parkland would be required to be consistent with the County standard of 5 acres of parkland per 1,000 residents as recommended by the SCVAP 2012. Approximately 791.6 acres of parks and open space are proposed within the NorthLake Specific Plan and, within these areas, approximately 166.9 acres would be designated as parkland and other recreational facilities, including parks, enhanced parkways, trails, a sports park, and neighborhood parks. As part of the project, a portion of this acreage would be designated as public parklands, consistent with the County Code and the Quimby Act.
Policy P/R 3.2: For projects that require zone change approvals, general plan amendments, specific plans, or development agreements, work with developers to provide for local and regional parkland above and beyond their Quimby obligations.	
Policy P/R 3.9: The Department of Parks and Recreation does not accept undeveloped park sites from developers. Developers are required to provide a developed park to the County on a "turn-key" basis and receive credit for the costs of developing the public park up to and against any remaining Quimby obligation, after accounting for the net acreage dedicated to the County.	
Policy P/R 3.8: Site new parks near schools, libraries, senior centers and other community facilities where possible.	**Consistent.** The proposed Project includes an extensive greenbelt and trail system connecting schools, parks, amenities, and neighborhoods throughout the community and the Castaic Lake Recreation Area. The proposed trail system includes approximately 91,150 linear feet of multi-use trails and neighborhood pedestrian trails as well as potential future connections to the off-site Regional Trail system.
Policy P/R 4.1: Create multi-use trails to accommodate all users.	
Policy P/R 4.6: Create new multi-use trails that link community destinations including parks, schools and libraries.	

TABLE 5.9-2
COUNTY GENERAL PLAN CONSISTENCY

Goal/Policy	Project Consistency
Policy P/R 6.1: Support the use of recycled water for landscape irrigation in County parks.	**Consistent.** A water budget will be developed for landscape irrigation use installed in conjunction with any new building that conforms to the California Department of Water Resources Model Water Efficient Landscape Ordinance. Although recycled water is not available at this time for the Project site, the proposed water system would include construction of distribution lines for recycled water that could be used in the future at such time that recycled water supplies become available.
Policy P/R 6.4: Ensure that new buildings on County park properties are environmentally sustainable by reducing carbon footprints, and conserving water and energy.	**Consistent.** The Project would comply with the County's Green Building Standards Code (Title 31) through planning and design of Project elements, implementation of energy efficiency measures, implementation of water efficiency and conservation measures, material conservation and resource efficiency, and reduction of potential air quality impacts. The proposed project will implement sustainable concepts as required by Title 31. A list of sustainable design features that would be incorporated into the project are detailed in Section 4.0, Project Description, of the SEIR.
Noise Element Goal/Policy	
Policy N 1.1: Utilize land uses to buffer noise-sensitive uses from sources of adverse noise impacts.	**Consistent.** As proposed, the site plan provides that residential lots would not be accessed directly from the NorthLake community's backbone streets, thus allowing units to be buffered by rear yards, community landscaping, and slope elevation changes. The primary local collector streets are proposed to include traffic-calming features. Traffic-calming measures include parkway treatment (landscaping and street width) and pedestrian-accommodating design. The design of the roadway system would discourage high or excessive vehicular speeds, thereby minimizing traffic noise. Local street access off the local collectors is limited. Cul-de-sac streets generally are designed to provide a pedestrian linkage to the community backbone pedestrian circulation system.
Policy N 1.2: Reduce exposure to noise impacts by promoting land use compatibility.	**Consistent.** As demonstrated on Exhibit 4-1, Proposed Land Use Plan, the proposed development areas of the Project are centrally located to the Project site, allowing much of the natural topography, environment, and landscape to remain along the edges of the Project site. Additionally, proposed land uses would be grouped according to their use, which would reduce potential incompatibilities related to noise with other land uses throughout the site or located to the south.
Policy N 1.3: Minimize impacts to noise-sensitive land uses by ensuring adequate site design, acoustical construction, and use of barriers, berms, or additional engineering controls through Best Available Technologies (BAT).	**Consistent.** Section 5.10, Noise, analyzes the potential noise impacts on proposed residential uses. As noted in MM 5.10-9, noise reduction measures in the form of physical barriers would be implemented to ensure compliance with the Noise Ordinance. Additionally, noise barriers will be employed to reduce construction-related noise at sensitive uses, including Northlake Elementary School or residential uses.

TABLE 5.9-2
COUNTY GENERAL PLAN CONSISTENCY

Goal/Policy	Project Consistency
Policy N 1.5: Ensure compliance with the jurisdictions of State Noise Insulation Standards (Title 24, California Code of Regulations and Chapter 35 of the Uniform Building Code), such as noise insulation of new multifamily dwellings constructed within the 60 dB (CNEL or L_{dn}) noise exposure contours.	**Consistent.** As discussed in Section 5.10, Noise, the Project would be required to comply with all applicable noise standards and regulations, including Title 24 and the Uniform Building Code. This would also include compliance with the County's Noise Ordinance which is intended to preserve areas where quiet environments are necessary for enjoyment, public health, and safety.
Policy N 1.6: Ensure cumulative impacts related to noise do not exceed health-based safety margins.	
Policy N 1.9: Require construction of suitable noise attenuation barriers on noise sensitive uses that would be exposed to exterior noise levels of 65 dBA CNEL and above, when unavoidable impacts are identified.	**Consistent.** Section 5.10, Noise, analyzes the potential noise impacts on proposed residential uses. As noted in MM 5.10-9, noise reduction measures in the form of physical barriers would be implemented to ensure compliance with the Noise Ordinance. Additionally, noise barriers may be employed to reduce construction-related noise at sensitive uses, including Northlake Elementary School or residential uses.
Policy N 1.10: Orient residential units away from major noise sources (in conjunction with applicable building codes).	
Policy N 1.11: Maximize buffer distances and design and orient sensitive receptor structures (hospitals, residential, etc.) to prevent noise and vibration transfer from commercial/light industrial uses.	
Policy N 1.12: Decisions on land adjacent to transportation facilities, such as the airports, freeways and other major highways, must consider both existing and future noise levels of these transportation facilities to assure the compatibility of proposed uses.	**Consistent.** Existing noise levels in the vicinity of the Project site derive exclusively from transportation sources, especially vehicular noise on the I-5 freeway. Another transportation source is Ridge Route Road, which traverses the western edge of the Project site in a north-south direction; however, traffic on this roadway is typically light and slow-moving, so it does not currently produce noise levels that would be incompatible with the proposed residential uses of the Project. The construction of residential developments would be limited to buildings with adequate ventilation and air filtration or discouraged at distances of 1,500 feet or less from freeways, depending upon traffic volume (SCVAP 2012 EIR MM 3.18-3).
Safety Element Goal/Policy	
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.	**Consistent.** As discussed in Section 5.6, Geology and Soils, a geotechnical report was prepared to support this SEIR (included as Appendix F to this SEIR) and provides site specific analysis related to faulting, landslides, and liquefaction or subsidence and identifies project-specific mitigation measures (MM 5.6-1 through 5.6-12 and recommendations to address any anticipated geotechnical issues that may occur during Project construction or long-term operation.
Policy S 3.1: Discourage high density and intensity development in VHFHSZs.	**Consistent.** As discussed in Section 5.5, Fire Hazards, Emergency Response, and Environmental Safety, the Project would comply with the Fire Management Program specific to the NorthLake Specific Plan which would require compliance with the County Fire Code and all other regulatory standards.
Policy S 3.2: Consider climate change implications in fire hazard reduction planning for FHSZs.	
Policy S 3.3: Ensure that the mitigation of fire related property damage and loss in FHSZs limits impacts to biological and other resources.	
Policy S 3.4: Reduce the risk of wildland fire hazards through the use of regulations and performance standards, such as fire resistant building materials, vegetation management, fuel modification and other fire hazard reduction programs.	

TABLE 5.9-2
COUNTY GENERAL PLAN CONSISTENCY

Goal/Policy	Project Consistency
Policy S 3.5: Encourage the use of low-volume and well-maintained vegetation that is compatible with the area's natural vegetative habitats.	**Consistent.** As discussed in Section 5.5, Fire Hazards, Emergency Response, and Environmental Safety the Project would comply with the Los Angeles County Fire Department's Fuel Modification Plan Guidelines which require establishment of a fuel modification plan consisting of various zones of drought-tolerant, low-fuel, volume plant species.
Policy S 3.6: Ensure adequate infrastructure, including ingress, egress, and peak load water supply availability for all projects located in FHSZs.	**Consistent.** As discussed in Section 5.12, Utilities, a water supply assessment was prepared for the proposed Project to ensure that water supplies could adequately serve the Project. As part of the WSA, fire flows were calculated and included in the anticipated demand; therefore, the Project would have adequate water supply to accommodate fire flow. Additionally, as discussed in Section 5.5, Fire Hazards, Emergency Response and Environmental Safety, based on coordination with the LACFD, the proposed Project includes three separate access points. The first access point to the Project site would be from the northerly intersection of Ridge Route Road and NorthLake Boulevard. NorthLake Boulevard would form a loop road that travels the length of the Project site and loops back to a second, southerly intersection with Ridge Route Road. This southerly intersection would provide a secondary point of access to the Project site. A third access point would be from the northwest, entering the site near the proposed North Ridge Route Park. Provision of these three access points would ensure adequate emergency vehicle access.
Policy S 3.7: Site and design developments located within FHSZs, such as in areas located near ridgelines and on hilltops, in a sensitive manner to reduce the wildfire risk.	**Consistent.** As demonstrated on Exhibit 4-1, Proposed Land Use Plan, the proposed development areas of the Project are centrally located within the Project site, allowing much of the natural topography, environment, and landscape to remain along the edges of the Project site. The centralizing of development and preservation of the project boundaries would reduce potential incompatibilities with the surrounding, undeveloped areas and would allow for proper buffering and implementation of adequate fuel modification areas, pursuant to the requirements detailed in Section 5.5, Fire Hazards, Emergency Response, and Environmental Safety.
Policy S 3.12: Support efforts to incorporate systematic fire protection improvements for open space, including facilitation of safe fire suppression tactics, standards for adequate access for firefighting, fire mitigation planning with landowners and other stakeholders, and water sources for fire suppression.	
Public Services and Facilities Element Policy	
Policy PS/F 1.1: Discourage development in areas without adequate public services and facilities.	**Consistent.** As discussed in Section 3.0, Environmental Setting, the Project site is largely undeveloped. However, the Project site is adjacent to existing development associated with the Castaic community immediately south and is located within an accessible area, adjacent to the I-5 Freeway and existing Ridge Route Road.
Policy PS/F 1.2: Ensure that adequate services and facilities are provided in conjunction with development through phasing or other mechanisms.	**Consistent:** Project impacts on public services would be less than significant (see Section 7.1, Effects Determined To Be Less Than Significant). Infrastructure improvements would be made on-site and off-site to serve the Project (see Section 4.0, Project Description and Section 5.12, Utilities and Service Systems). These improvements would include extension of water, wastewater, and storm drain systems as well as electric and natural gas lines throughout the Project site. These

TABLE 5.9-2
COUNTY GENERAL PLAN CONSISTENCY

Goal/Policy	Project Consistency
	on-site systems would connect to existing off-site systems and, payment of connection fees would ensure that off-site systems would have adequate capacity to accommodate the proposed Project.
Policy PS/F 1.3: Ensure coordinated service provision through collaboration between County departments and service providers.	**Consistent:** As part of the SEIR process, the Project Applicant and their designees have contacted and coordinated local and regional service providers, including County departments, to ensure adequate resources would be available to serve the proposed Project.
Policy PS/F 1.7: Consider resource preservation in the planning of public facilities.	**Consistent:** As part of the project design, proposed land uses are located in areas that minimize impacts to resources, including biological resources and natural topographic features, by concentrating development along the internal circulation system. This would help to preserve larger areas of undeveloped land and open space., not just within public facility areas. Exhibit 5.2-4, Project Impact Areas, show the proposed development areas and illustrates those areas, and corresponding biological resources, that would not be subject to impacts related to project implementation.
Policy PS/F 2.1: Support water conservation measures.	**Consistent:** The Project would implement water conservation measures required under the County's Green Building Standards Code (see Section 5.12, Utilities).
Policy PS/F 3.1: Increase the supply of water though the development of new sources, such as recycled water, gray water, and rainwater harvesting.	**Consistent:** The schematic storm drainage plan for the Project would allow treated stormwater to percolate into the ground and incrementally contribute to underlying groundwater resources, while the Project would obtain imported potable and recycled water to support Project operations (see Section 5.8, Hydrology and Water Quality).
Policy PS/F 4.1: Encourage the planning and continued development of efficient countywide sewer conveyance treatment systems.	**Consistent.** The Project would not involve the development of sewer treatment facilities; however, all wastewater collection systems would be designed to incorporate standard engineering practices. As noted in Section 5.6, Geology and Soils, all geologic hazards would be remediated prior to construction activities, including construction of utility systems.
Policy PS/F 4.3: Ensure the proper design of sewage treatment and disposal facilities, especially in landslide, hillside, and other hazard areas.	
Policy PS/F 5.1: Maintain an efficient, safe and responsive waste management system that reduces waste while protecting the health and safety of the public.	**Consistent.** As discussed in Section 5.12, Utilities, local regulations (e.g., AB 939 and the County of Los Angeles Construction and Demolition Debris Recycling and Reuse Ordinance) are in place to ensure that the amount of future solid waste generated by the project would be reduced to the maximum extent feasible.
Policy PS/F 5.2: Ensure adequate disposal capacity by providing for environmentally sound and technically feasible development of solid waste management facilities, such as landfills and transfer/processing facilities.	**Consistent.** As discussed in Section 5.12, Utilities, the Project would comply with all regulations related to solid waste reduction and recycling. Additionally, Section 5.12 contains a complete analysis to ensure that area landfills could adequately accommodate the Project.
Policy PS/F 5.5: Reduce the County's waste stream by minimizing waste generation and enhancing diversion.	**Consistent:** The Project would comply with the County's Green Building Standards Code and Construction and Demolition Debris Recycling and Reuse Ordinance and would implement waste reduction and recycling
Policy PS/F 5.6: Encourage the use and procurement of recyclable and biodegradable materials.	

TABLE 5.9-2
COUNTY GENERAL PLAN CONSISTENCY

Goal/Policy	Project Consistency
Policy PS/F 5.7: Encourage the recycling of construction and demolition debris generated by public and private projects.	measures per County policies (see Section 5.12, Utilities and Service Systems). Specifically, the Project will recycle and/or salvage a minimum of 65 percent of the non-hazardous construction and demolition debris or meet a local construction and demolition waste management ordinance. Additionally, in response to California's 75 Percent Initiative, at least 75 percent of all solid waste will be recycled or reused by 2020.
Policy PS/F 5.8: Ensure adequate and regular waste and recycling collection services.	
Policy PS/F 5.9: Encourage the availability of trash and recyclables containers in new developments, public streets, and large venues.	
Policy PS/F 6.1: Ensure efficient and cost-effective utilities that serve existing and future needs.	**Consistent.** The Project will involve the establishment of the necessary trunk lines and connections to provide water, sewer, storm water, natural gas, electricity, communication, and solid waste service to the proposed development.
Policy PS/F 6.4: Protect and enhance utility facilities to maintain the safety, reliability, integrity and security of utility services.	**Consistent.** With the exception of existing, above-ground utilities, all proposed utilities would be constructed underground to ensure the safety and security of the Project's resident population.
Policy PS/F 6.5: Encourage the use of renewable energy source in utility and telecommunications networks.	**Consistent.** The proposed Project supports installation of photovoltaic and other renewable energy equipment on public facilities, in concert with significant energy conservation efforts.
Policy PS/F 6.6: Encourage the construction of utilities underground, where feasible.	**Consistent.** With the exception of existing, above-ground utilities, all proposed utilities would be constructed underground.
Policy PS/F 6.8: Encourage projects that incorporate onsite renewable energy systems.	**Consistent.** As discussed in Section 5.7, Greenhouse Gas Emissions, the Project will commit to the installation of a 3-kilowatt (kW) solar panel system on 50 percent of residential dwelling units.
Economic Development Element Goal/Policy	
Policy ED 2.2: Utilize adequate buffering and other land use practices to facilitate the compatibility between industrial and non-industrial uses.	**Consistent.** As shown on Exhibit 4-1, Proposed Land Use Plan, the proposed industrial uses would be located in the southern portion of the Project site and would not border any residential uses. Additionally, the types of industrial uses allowed would be limited to non-polluting, light industrial uses such as business parks.
Policy ED 2.3: Ensure environmental justice in economic development activities.	**Consistent.** The proposed Project's Land Use Plan, as shown on Exhibit 4-1, would not place minority and low-income populations in areas that would disproportionately subject them to environmental impacts. The Project is designed to avoid land use compatibilities to the extent feasible, regardless of the type of land use or anticipated occupants, as detailed throughout this SEIR.
Policy ED 2.4: Ensure high standards of development and encourage environmentally sustainable practices in economic development activities.	**Consistent.** The proposed project would be developed consistent with the design guidelines as set forth in the NorthLake Specific Plan, which would ensure a consistent design and quality throughout the proposed Project site. Additionally, in instances where the NorthLake Specific Plan is silent, the Project would be consistent with Los Angeles County Code requirements.

TABLE 5.9-2
COUNTY GENERAL PLAN CONSISTENCY

Goal/Policy	Project Consistency
Policy ED 2.5: Encourage employment opportunities to be located in proximity to housing.	**Consistent.** As discussed in Section 4.0, the Project proposes development of industrial and commercial uses which would provide employment opportunities to a portion of the future Project residents. Additionally, the proposed trail system would provide pedestrian access to these areas from the proposed residential uses.

Table 5.9-3, below, addresses the Project's consistency with the Santa Clarita Valley Area Plan.

TABLE 5.9-3
SANTA CLARITA VALLEY AREA PLAN 2012 CONSISTENCY

Goal/Policy	Consistency Analysis
Land Use Element	
Policy LU-1.2.8: In Castaic, promote expansion of neighborhood commercial uses to serve local residents; address traffic congestion; ensure compatibility between highway-oriented commercial uses and nearby residential uses; and maintain community character in accordance with the County's Castaic Area Community Standards District.	**Consistent.** As identified in Section 4.0, Project Description, the project would include 9.2 acres of commercial development. Due to the proximity and ease of access to the Project site from the local Castaic community, it is anticipated that the commercial areas would serve the Castaic Area as well as future residents of the Project. The proposed commercial development would be subject to design guidelines set forth in the NorthLake Specific Plan and, when the Specific Plan is silent, would be subject to County of Los Angeles Zoning Code requirements. Therefore, the Project would not be subject to the Castaic Area Community Standards, but compliance with the NorthLake Specific Plan design guidelines would ensure that the community character be maintained.
Policy LU-1.3.6: Encourage retention of natural drainage patterns and the preservation of significant riparian areas, both of which are commonly located in hillside areas.	Consistent. To the extent feasible, the Project site's existing topography and natural drainage patterns would be preserved. The proposed Land Plan includes development which would be concentrated within the central portion of the Project site, thereby preserving approximately 297.2 acres of natural, undisturbed open space area, including hillside areas.
Policy LU-2.2.2: Identify sites and areas with historical or cultural value to the community, and ensure that uses in or adjacent to these areas will not impact their historical integrity.	**Consistent.** As discussed in Section 5.3, Cultural Resources, a full Cultural Resources Report and Paleontological Resources Report were prepared for the proposed Project to evaluate impacts associated with the currently proposed Project. According to these reports, no significant historical resources occur within the Project site. These reports, including recommended mitigation measures, are summarized in Section 5.3 of this Draft SEIR.

TABLE 5.9-3
SANTA CLARITA VALLEY AREA PLAN 2012 CONSISTENCY

Goal/Policy	Consistency Analysis
Policy LU-3.3.8: Within multiple family residential projects comprised of multiple buildings, ensure that project designs include crime prevention measures such as delineating public and private open space, designs for defensible space, easy surveillance by residents of all outdoor and indoor common areas, lack of dead end aisles or paths, and similar measures.	**Consistent.** The proposed multi-family residential uses would be constructed to maximize an open feel through use of strategically placed public and private open space as discussed in Section IV.D of the NorthLake Specific Plan. Additionally, lighting will be designed in conformance with the NorthLake Specific Plan design guidelines (refer to NorthLake Specific Plan Section IV.C) and would be required to provide adequate illumination for the safety and comfort of vehicular and pedestrian traffic.
Policy LU-3.4.8: Require architectural design treatment along all sides of new housing to promote continuity of architectural scale and rhythm and avoid the appearance of blank walls (360 degree enhancement).	**Consistent.** The proposed project would comply with Section IV.D of the NorthLake Specific Plan requiring that residential units incorporate a variety of setbacks to avoid long expanses of sheer, blank wall.
Policy LU-4.2.2: Achieve a balanced ratio of jobs to housing through business expansion and economic development programs, with a goal of at least 1.5 jobs per household.	**Consistent.** As discussed in Section 4.0, Project Description, the proposed Project includes development of commercial and industrial areas within the Project site, thus providing employment opportunities for the residents of the Project. Additionally, the Project would be consistent with regional projections of population and housing growth for Los Angeles County. Although the Project would not provide for a balanced ratio of jobs to housing, the Project would contribute to the regional balance through provision of a variety of housing types to accommodate the County's existing and projected population.
Policy LU-5.1.1: Require safe, secure, clearly-delineated, adequately-illuminated walkways and bicycle facilities in all commercial and business centers.	**Consistent.** As discussed in Section 4.0, Project Description, and shown on Exhibit 4-6, Pedestrian Circulation and Trails, the Project would include development of an extensive greenbelt and trail system connecting schools, parks, amenities, and neighborhoods throughout the community and the Castaic Lake Recreation Area. The proposed commercial and industrial uses would be located adjacent to and directly accessible from Ridge Route Road, thus enabling connection to the proposed trail system (refer to Exhibit 4-6) and local transit stops.
Policy LU-5.1.2: Require connectivity between walkways and bikeways serving neighborhoods and nearby commercial areas, schools, parks, and other supporting services and facilities.	
Policy LU-5.1.3: Ensure that adequate bus turnouts, served by walkways and comfortable, safe, convenient waiting facilities, are provided for transit users within residential, shopping, and business developments.	The SCT is the primary bus service operator in the Castaic community. SCT provides two fixed-route transit lines within close proximity to the Project site: Routes 1 and 636. SCT Route 1 provides service between Castaic and Val Verde to the McBean Regional Transit Center with 11 stops near the Project site. Route 1 also stops through the Valencia Commerce Center and Valencia Industrial Center. Route 636 is a supplemental school day service route between West Ranch High School and the Castaic area with 13 stops within the Project site. Future bus transit routes are anticipated to be introduced in the Project area in order to provide services for the new Castaic Middle School.

TABLE 5.9-3
SANTA CLARITA VALLEY AREA PLAN 2012 CONSISTENCY

Goal/Policy	Consistency Analysis
Policy LU-5.2.3: Promote location of non-polluting businesses providing employment opportunities in proximity to neighborhoods, to encourage walking to work.	**Consistent.** As noted in Section 4.0, Project Description, the Project would construct an extensive greenbelt and trail system connecting schools, parks, amenities, and neighborhoods throughout the community and the Castaic Lake Recreation Area. This trail system would also connect to the proposed Commercial and Industrial uses, thereby providing a pedestrian route to access on-site employment areas.
Policy LU-6.1.3: Ensure that new development in hillside areas is designed to protect the scenic backdrop of foothills and canyons enjoyed by Santa Clarita Valley communities, through requiring compatible hillside management techniques that may include but are not limited to density-controlled development (clustering) subject to the limitations in Policy LU-1.3.5; contouring and landform grading; revegetation with native plants; limited site disturbance; avoidance of tall retaining and build-up walls; use of stepped pads; and other techniques as deemed appropriate.	**Consistent.** Project construction would include mass grading; re-contouring slopes; introducing residential and industrial structures; building streets; and constructing other appurtenant development associated with a new community. However, the proposed development areas of the Project are centrally located to the Project site, allowing much of the natural topography, environment, and landscape to remain along the edges of the Project site and be visible from the development area as well as from off-site areas. According to the NorthLake Specific Plan, adherence to the grading guidelines would minimize conflict within the constraints of existing topography while allowing for livable, attractive areas.
Policy LU-6.2.2: Provide and enhance trail heads where appropriate with landscaping, seating, trash receptacles, and information kiosks.	**Consistent.** As noted in Section 4.0, Project Description, the Project would construct an extensive greenbelt and trail system connecting schools, parks, amenities, and neighborhoods throughout the community and the Castaic Lake Recreation Area. Additionally, the Project would construct approximately 2.39 acres in off-site trail connections. These connections would be consistent with the visual appearance of on-site trails and would include appropriate signage, trash receptacles, and seating/rest areas.
Policy LU-6.4.6: Through the environmental review and development review processes, evaluate impacts on historic and cultural sites from proposed development and require appropriate mitigation.	**Consistent.** As discussed in Section 5.3, Cultural Resources, a full Cultural Resources Report and Paleontological Resources Report were prepared for the proposed Project to evaluate impacts associated with the currently proposed Project. These reports, including recommended mitigation measures, are summarized in Section 5.3 of this Draft SEIR.
Policy LU-6.5.3: Require architectural enhancement and articulation on all sides of buildings (360 degree architecture), with special consideration at building entrances and corners, and along facades adjacent to major arterial streets.	**Consistent.** Buildings associated with the proposed Project would be designed in compliance with the design guidelines set forth in Section IV.D of the NorthLake Specific Plan. Specifically, buildings would be designed to achieve interesting building massing through the combination of projecting balconies, recessed porches, entries and enclosures.
Policy LU-7.3.1: Promote the use of permeable paving materials to allow infiltration of surface water into the water table.	**Consistent.** If it is feasible and technically appropriate to infiltrate all of the water quality design volume, infiltration BMPs will be used. Infiltration BMPs include bioretention (without an underdrain), permeable pavement, infiltration galleries, basins or trenches, or an equivalent infiltration BMP.

TABLE 5.9-3
SANTA CLARITA VALLEY AREA PLAN 2012 CONSISTENCY

Goal/Policy	Consistency Analysis
Policy LU-7.3.2: Maintain stormwater runoff onsite by directing drainage into rain gardens, natural landscaped swales, rain barrels, permeable areas and use of drainage areas as design elements, where feasible and reasonable.	**Consistent.** The proposed Project would include implementation of several drainage features, including benches, downdrains, swales, catch basins, storm drain pipes, inlets/outlets, an energy dissipator, debris basin, and elevated inlets, to ensure that off-site and on-site sediment does not affect downstream properties; these features have been incorporated into Project design.
Policy LU-7.3.3: Seek methods to decrease impermeable site area where reasonable and feasible, in order to reduce stormwater runoff and increase groundwater infiltration, including use of shared parking and other means as appropriate.	**Consistent.** Development of the proposed Project would result in the conversion of on-site permeable surfaces to impermeable surfaces, which would alter the current drainage pattern of the Project site. By increasing the amount of impervious surfaces on the site, more surface runoff would be generated and the rate of runoff could increase. To manage surface runoff, the proposed Project would incorporate site-design BMPs. According to the SCVAP 2012 EIR, preliminary calculations indicated that the installation of drainage infrastructure and water quality management BMPs combined with the implementation of the identified mitigation measures have the potential to reduce existing peak flows for the Project site.
Policy LU-7.3.4: Implement best management practices for erosion control throughout the construction and development process**.**	**Consistent.** The Construction General Permit requires the SWPPP to include BMPs to be selected and implemented based on the determined project risk level to effectively control erosion and sediment to the BAT/BCT.
Circulation Element	
Policy C-1.1.1: Reduce dependence on the automobile, particularly single-occupancy vehicle use, by providing safe and convenient access to transit, bikeways, and walkways.	**Consistent.** As discussed in Section 4.0, Project Description, and shown on Exhibit 4-6, Pedestrian Circulation and Trails, the Project would include development of an extensive greenbelt and trail system connecting schools, parks, amenities, and neighborhoods throughout the community and the Castaic Lake Recreation Area. Additionally, as discussed in Section 5.10, Traffic, Access, and Circulation, public transportation would be provided to the Project site via existing Santa Clarita Transit fixed-route transit lines. Future bus transit routes are also anticipated to serve the Project.
Policy C-1.1.2: Promote expansion of alternative transportation options to increase accessibility to all demographic and economic groups throughout the community, including mobility-impaired persons, senior citizens, low-income persons, and youth.	
Policy C-1.1.4: Promote public health through provision of safe, pleasant, and accessible walkways, bikeways, and multi-purpose trail systems for residents.	
Policy C-1.1.6: Provide adequate facilities for multi-modal travel, including but not limited to bicycle parking and storage, expanded park-and-ride lots, and adequate station and transfer facilities in appropriate locations.	
Policy C-1.1.7: Consider the safety and convenience of the traveling public, including pedestrians and cyclists, in design and development of all transportation systems.	**Consistent.** The proposed Project would implement the approved Access and Circulation Plan, including integrating non-vehicular uses such as pedestrian and bicycle facilities. The proposed Project would include roadway improvements, including sidewalks and on-site bike racks; it is also located near existing bus routes.
Policy C-1.2.2: Create walkable communities, with paseos and walkways connecting residential neighborhoods to multi-modal transportation services such as bus stops and rail stations.	**Consistent.** As discussed in Section 4.0, Project Description, and shown on Exhibit 4-6, Pedestrian Circulation and Trails, the Project would include development of an extensive greenbelt and trail system connecting schools, parks, amenities, and neighborhoods throughout the community and the Castaic Lake Recreation Area.

TABLE 5.9-3
SANTA CLARITA VALLEY AREA PLAN 2012 CONSISTENCY

Goal/Policy	Consistency Analysis
Policy C-1.2.3: Require that new commercial and industrial development provide walkway connections to public sidewalks and transit stops.	**Consistent.** The proposed commercial and industrial uses would be located adjacent to and directly accessible from Ridge Route Road, thus enabling connection to the proposed trail system (refer to Exhibit 4-6, Pedestrian Circulation and Trails) and local transit stops.
Policy C-1.2.8: Provide safe pedestrian connections across barriers, which may include but are not limited to major traffic corridors, drainage and flood control facilities, utility easements, grade separations, and walls.	**Consistent.** The proposed trail system would be implemented to provide separation between potential hazards (i.e., vehicular traffic) and pedestrian and/or trail users. As shown on Exhibit 4-6, Pedestrian Circulation and Trails, a landscaped shoulder would physically separate the trail from the adjacent roadway.
Policy C-1.3.5: Continue coordinating with Caltrans on circulation and land use decisions that may affect Interstate 5, State Route 14, and State Route 126, and support programs to increase capacity and improve operations on these highways.	**Consistent.** As discussed in Section 5.11, Traffic, Access, and Circulation, the Project Applicant would be required to coordinate with Caltrans regarding necessary improvements within Caltrans right of way.
Policy C-2.1.2: Enhance connectivity of the roadway network to the extent feasible given the constraints of topography, existing development patterns, and environmental resources, by constructing grade separations and bridges; connecting discontinuous streets; extending secondary access into areas where needed; prohibiting gates on public streets; and other improvements as deemed appropriate based on traffic analysis.	**Consistent.** The proposed Project provides for the establishment of an interconnecting internal roadway system, including NorthLake Boulevard, a proposed north-south-trending arterial accessed from Ridge Route Road, that would serve as the backbone road within the Project's proposed roadway system, secondary collector streets that would connect with NorthLake Boulevard, and access to individual neighborhoods that would be provided by a system of local streets.
Policy C-2.1.3: Protect and enhance the capacity of the roadway system by upgrading intersections to meet level of service standards, widening and/or restriping for additional lanes, synchronizing traffic signals, and other means.	**Consistent.** Section 5.11, Traffic, Access, and Circulation, provides a summary of the Traffic Impact Analysis prepared for the proposed Project. Additionally, this section identifies necessary improvements that would be required to protect and enhance the internal and surrounding circulation system. This Traffic Impact Analysis addressed both project-specific impacts as well as cumulative impacts associated with anticipated future development projects.
Policy C-2.2.3: Coordinate circulation plans of new development projects with each other and the surrounding street network, within both City and County areas.	
Policy C-2.2.4: Strive to maintain a Level of Service (LOS) D or better on most roadway segments and intersections to the extent practical; in some locations, a LOS E may be acceptable, or a LOS F may be necessary, for limited durations during peak traffic periods.	
Policy C-2.2.8: Local street patterns should be designed to create logical and understandable travel paths for users and to provide access between neighborhoods for local residents while discouraging cut-through traffic; cul-de-sac length should not exceed 600 feet, and "dog-leg" cul-de-sacs with one or more turns between the bulb and the outlet should be avoided where possible.	**Consistent.** Because the proposed Project has been designed to accommodate the site's natural topography to the extent feasible, a traditional grid patterned layout of streets is not possible. However, as discussed in Section 4.0, Project Description, the Project will be designed to accommodate an interconnecting internal roadway system. Specifically, NorthLake Boulevard will serve as the backbone road within the Project's proposed roadway system and secondary collector streets will connect with NorthLake Boulevard, providing continuous routes to the extent feasible.

TABLE 5.9-3
SANTA CLARITA VALLEY AREA PLAN 2012 CONSISTENCY

Goal/Policy	Consistency Analysis
Policy C-6.1.1: For recreational riders, continue to develop Class 1 bike paths, separated from the right-of-way, linking neighborhoods to open space and activity areas.	**Consistent.** As discussed in Section 4.0, Project Description, the Project would include Class I bike lanes along portions of NorthLake Boulevard and Ridge Route Road.
Policy C-6.1.2: For long-distance riders and those who bicycle to work or services, provide striped Class 2 bike lanes within the right-of-way, with adequate delineation and signage, where feasible and appropriate.	**Consistent.** The proposed Project would provide adequate bicycling opportunities throughout the Project site, including both Class I bike lanes along portions of NorthLake Boulevard and Ridge Route Road and Class III Shared Bike Lanes along Ridge Route Road- North. The Class I bike lanes would follow the proposed roadway alignments while providing an extra measure of safety and security through physical separation from vehicular traffic, thus eliminating the need for Class II facilities.
Policy C-6.2.1: Require bicycle parking, which can include bicycle lockers and sheltered areas, at commercial sites and multi-family housing complexes for use by employees and residents, as well as customers and visitors.	**Consistent.** An Access and Circulation Plan was approved as part of the 1992 NorthLake Specific Plan. The Access and Circulation Plan provides circulation and design standards for the layout of arterial highways and local collector streets in support of the NorthLake land use plan. The proposed Project would implement the Access and Circulation Plan, including integrating non-vehicular uses such as pedestrian and bicycle facilities. The proposed Project would include roadway improvements, including sidewalks and on-site bike racks; it is also located near existing bus routes. Additionally, Transportation Demand Management as discussed in Section 4.0, Project Description would be implemented as part of the Project. These measures would include providing services for bicycle commuters, including showers and bicycle parking facilities.
Policy C-6.2.3: Promote the inclusion of services for bicycle commuters, such as showers and changing rooms, as part of the review process for new development or substantial alterations of existing commercial or industrial uses, where appropriate.	
Policy C-7.1.9: Promote pedestrian-oriented street design through traffic-calming measures where appropriate, which may include but are not limited to bulb-outs or chokers at intersections, raised crosswalks, refuge islands, striping, and landscaping.	**Consistent.** The proposed trail system would be implemented to provide separation between potential hazards (i.e., vehicular traffic) and pedestrian and/or trail users. As shown on Exhibit 4-6, Pedestrian Circulation and Trails, a landscaped shoulder would physically separate the trail from the adjacent roadway.
Conservation and Open Space Element	
Policy CO-1.1.3: In making land use decisions, encourage development proposals that preserve natural ecosystem functions and enhance the health of the surrounding community.	**Consistent.** As demonstrated on Exhibit 4-1, Proposed Land Use Plan, the proposed development areas of the Project are centrally located to the Project site, allowing much of the natural topography, environment, and landscape to remain along the edges of the Project site. The centralizing of development and preservation of the project boundaries would allow for the conservation of natural habitats and reduce potential incompatibilities with surrounding, undeveloped areas containing biological resources.
Policy CO-1.5.1: Promote the use of environmentally-responsible building design and efficiency standards in new development, and provide examples of these standards in public facilities, pursuant to the County's Green Building Program.	**Consistent.** As discussed in the SCVAP 2012 EIR, all newly constructed buildings in California are subject to the requirements of the CALGreen Code; therefore, the Project would be required to comply with the CALGreen Code, as adopted by Los Angeles County as L.A. County Code Title 31.

TABLE 5.9-3
SANTA CLARITA VALLEY AREA PLAN 2012 CONSISTENCY

Goal/Policy	Consistency Analysis
Policy CO-2.2.1: Locate development and designate land uses to minimize the impact on the Santa Clarita Valley's topography, minimizing grading and emphasizing the use of development pads that mimic the natural topography in lieu of repetitive flat pads, to the extent feasible. (Guiding Principle #8)	**Consistent.** Project construction would include mass grading; re-contouring slopes; introducing residential and industrial structures; building streets; and constructing other appurtenant development associated with a new community. However, the proposed development areas of the Project are centrally located to the Project site, allowing much of the natural topography, environment, and landscape to remain along the edges of the Project site and be visible from the development area as well as from off-site areas. According to the *NorthLake Specific Plan,* adherence to the grading guidelines would minimize conflict within the constraints of existing topography while allowing for livable, attractive areas.
Policy CO-2.2.2: Ensure that graded slopes in hillside areas are revegetated with native drought tolerant plants or other approved vegetation to blend manufactured slopes with adjacent natural hillsides, in consideration of fire safety and slope stability requirements.	**Consistent.** Non-invasive drought-tolerant plant and tree species appropriate for the climate zone will be used in at least 75 percent of the total landscaped area. Landscape materials and design will be based on *The Drought Tolerant Garden Los Angeles County Handbook* or equivalent.
Policy CO-2.2.3: Preserve designated natural ridgelines from development by ensuring a minimum distance for grading and development from these ridgelines of 50 feet, or more if determined appropriate by the reviewing authority based on site conditions, to maintain the Santa Clarita Valley's distinctive community character and preserve the scenic setting.	**Consistent.** Open space is integrated throughout the proposed Project site to respond to topographical conditions; to preserve ridgelines and hillsides; to create a buffer adjacent to natural resources; to provide view amenities; to accommodate the greenbelt trail; and to separate residential neighborhood enclaves. Approximately 624.6 acres of open space will remain undeveloped on the Project site. Much of this open space area consists of interior and perimeter slopes. The largest expanses of undeveloped open space will be located along the edges of the Project site, including areas to the north, west, south, and east.
Policy CO-2.2.4: Identify and preserve significant geological and topographic features through designating these areas as open space or by other means as appropriate.	
Policy CO-2.2.5: Promote the use of adequate erosion control measures for all development in hillside areas, including single family homes and infrastructure improvements, both during and after construction.	**Consistent.** The Project would be in compliance with the NPDES permit, and erosion potential during construction of the Project would be managed with Best Management Practices (BMPs) implemented on the Project site as part of a Storm Water Pollution Prevention Plan (SWPPP) during construction activities to minimize erosion impacts.
Policy CO-2.2.6: Encourage building and grading designs that conform to the natural grade, avoiding the use of large retaining walls and build-up walls that are visible from offsite, to the extent feasible and practicable.	**Consistent.** Project construction would include mass grading; re-contouring slopes; introducing residential and industrial structures; building streets; and constructing other appurtenant development associated with a new community. However, the proposed development areas of the Project are centrally located to the Project site, allowing much of the natural topography, environment, and landscape to remain along the edges of the Project site and be visible from the development area as well as from off-site areas. According to the NorthLake Specific Plan, adherence to the grading guidelines would minimize conflict within the constraints of existing topography while allowing for livable, attractive areas.

TABLE 5.9-3
SANTA CLARITA VALLEY AREA PLAN 2012 CONSISTENCY

Goal/Policy	Consistency Analysis
Policy CO-3.1.2: Avoid designating or approving new development that will adversely impact wetlands, floodplains, threatened or endangered species and habitat, and water bodies supporting fish or recreational uses, and establish an adequate buffer area as deemed appropriate through site specific review.	**Consistent.** As discussed in Section 5.2, Biological Resources, all potential impacts to biological resources, including riparian vegetation, streambeds, and wetlands would be fully mitigated through preservation, restoration, or enhancement on site or off site at a ratio identified in the USACE and CDFW permits/agreements for the project. It should be noted that the ratio would be no less than 2:1 for habitat restoration or preservation.
Policy CO-3.1.3: On previously undeveloped sites ("greenfields"), identify biological resources and incorporate habitat preservation measures into the site plan, where appropriate. (This policy will generally not apply to urban infill sites, except as otherwise determined by the reviewing agency).	
Policy CO-3.1.5: Promote the use of site-appropriate native or adapted plant materials, and prohibit use of invasive or noxious plant species in landscape designs.	**Consistent.** To ensure that no invasive, exotic plant species are used in any proposed landscaping and that suitable substitutes are proposed, the landscape designs would be submitted to LACDRP for review and approval by a qualified Biologist. Only native species from the Santa Clarita Valley region would be used in landscaping along the project boundaries adjacent to open space (MM 5.2-19). Additionally, **t**urf areas will not exceed 25 percent of the total landscaped area for residential uses associated with the proposed Project.
Policy CO-3.1.6: On development sites, preserve and enhance natural site elements including existing water bodies, soil conditions, ecosystems, trees, vegetation and habitat, to the extent feasible.	
Policy CO-3.1.7: Limit the use of turf-grass on development sites and promote the use of native or adapted plantings to promote biodiversity and natural habitat.	
Policy CO-3.1.8: On development sites, require tree planting to provide habitat and shade to reduce the heat island effect caused by pavement and buildings.	**Consistent.** The proposed Project would be developed consistent with the Design Guidelines of the NorthLake Specific Plan, including requirements for adequate shade trees throughout the Project's circulation system; minimum landscape requirements according to the land use; and use of light-colored paving materials, including brick pavers.
Policy CO-3.1.9: During construction, ensure preservation of habitat and trees designated to be protected through use of fencing and other means as appropriate, so as to prevent damage by grading, soil compaction, pollution, erosion or other adverse construction impacts.	**Consistent.** The site currently is almost devoid of trees entirely; however, the limits of disturbance would be clearly defined and marked in the field using lath and flagging or orange snow fencing (MM 5.2-12). This measure would promote the preservation of habitat designated to be protected.
Policy CO-3.1.10: To the extent feasible, encourage the use of open space to promote biodiversity.	**Consistent.** As described in Section 4.0, Project Description, approximately 624.6 acres of open space would remain undeveloped on the Project site. Much of this open space area consists of interior and perimeter slopes. The largest expanses of undeveloped open space will be located along the edges of the Project site, including areas to the north, west, south, and east. There would be approximately 327.6 acres of undeveloped landscaped open space (i.e., graded slopes) throughout the Project site. An additional 297.2 acres will be set aside as undisturbed open space areas within the Project site.

TABLE 5.9-3
SANTA CLARITA VALLEY AREA PLAN 2012 CONSISTENCY

Goal/Policy	Consistency Analysis
Policy CO-3.2.1: Protect wetlands from development impacts, with the goal of achieving no net loss (or functional reduction) of jurisdictional wetlands within the planning area.	**Consistent.** As indicated in Section 5.2, Biological Resources, development of the Project would impact 10.59 acres of USACE regulated streambeds, 15.04 acres of CDFW-regulated streambeds and riparian areas, and 10.59 acres of RWQCB-regulated waters. Impacts to the jurisdictional drainages, wetlands, and riparian vegetation are considered significant due to their protected status; however, a less than significant impact would be achieved through implementation of MM 5.2-2, MM 5.2-3, and MM 5.2-11.
Policy CO-3.2.3: Ensure protection of any endangered or threatened species or habitat, in conformance with State and federal laws.	**Consistent.** To the extent possible, endangered or threatened species (refer to Section 5.2, Biological Resources for a full analysis of biological impacts) would be protected through the preservation of open space areas throughout the Project site. However, where the Project is expected to impact endangered or threatened species and habitat, mitigation is proposed to reduce impacts to the extent feasible in compliance with State and federal laws.
Policy CO-3.3.3: Identify and protect one or more designated wildlife corridors linking the Los Padres and Angeles National Forests through the Santa Clarita Valley (the San Gabriel-Castaic connection). **Policy CO-3.3.5:** Encourage connection of natural open space areas in site design, to allow for wildlife movement.	**Consistent.** As discussed in Section 5.2, Biological Resources, many of wildlife species present on the site, either seasonal or as year round residents, are expected to breed on the Project site. Most of these species occur throughout the region and are expected to breed within potentially suitable habitat throughout the region. The Project site does not represent a unique breeding area or nursery site for these species other than special status species described separately. Additionally, because the Project site exists as an undeveloped site where wildlife movement is largely constrained due to existing barriers (I-5, Castaic Lake and Lagoon), the Project site does not represent an important component of regional movement in the area.. Therefore, implementation of the proposed Project would result in adverse but less than significant impacts on native wildlife nursery sites; MMs 5.2-8, MM 5.2-10, 5.2-11, and 5.2-13 would further reduce these impacts.
Policy CO-3.4.1: Coordinate with the United States Forest Service (USFS) on discretionary development projects that may have impacts on the National Forest.	**Consistent.** As an adjacent land-owner, the USFS has been notified of the proposed Project and comments have been solicited as part of the Notice of Preparation/Initial Study process. The USFS will also be provided the opportunity to review and comment on the Draft SEIR, as noted in Section 2.0, Introduction.
Policy CO-3.4.3: On the Land Use Map, maintain low density rural residential and open space uses adjacent to forest land, and protect the urban-forest interface area from overdevelopment.	**Consistent.** As shown on Exhibit 3-4, Local Vicinity – Aerial View, much of the Project site borders undeveloped areas, especially in the northern and eastern portions of the Project site. To the extent feasible, development would be limited along these edges. To the north where the Project site interfaces with USFS land, areas of the site have been set aside as preserved open space. In the areas proposed for development, low-density residential development is proposed.

TABLE 5.9-3
SANTA CLARITA VALLEY AREA PLAN 2012 CONSISTENCY

Goal/Policy	Consistency Analysis
Policy CO-3.5.1: Continue to plant and maintain trees on public lands and within the public right-of-way to provide shade and walkable streets, incorporating measures to ensure that roots have access to oxygen at tree maturity, such as use of porous concrete.	**Consistent.** The proposed Project would be consistent with the Landscape Concept as detailed in Section IV.C of the NorthLake Specific Plan, including a variety of trees along streetscapes and trails throughout the Project site.
Policy CO-3.5.2: Where appropriate, promote planting of trees that are native or climactically appropriate to the surrounding environment, emphasizing oaks, sycamores, maple, walnut, and other native species in order to enhance habitat, and discouraging the use of introduced species such as eucalyptus, pepper trees, and palms except as ornamental landscape features.	**Consistent.** As discussed in Section 5.2, Biological Resources, the proposed Project includes landscaping adjacent to the residential development, parks, and other areas of infrastructure. To ensure that no invasive, exotic plant species are used in any proposed landscaping and that suitable substitutes are proposed, the landscape designs would be submitted to LACDRP for review and approval by a qualified Biologist. Additionally, seeds from invasive species may be transported to natural areas and degrade the native vegetation, particularly along downstream riparian areas; however, implementation of MM 5.2-11 through MM 5.2-14 would reduce these impacts.
Policy CO-3.6.1: Minimize light trespass, sky-glow, glare, and other adverse impacts on the nocturnal ecosystem by limiting exterior lighting to the level needed for safety and comfort; reduce unnecessary lighting for landscaping and architectural purposes, and encourage reduction of lighting levels during non-business nighttime hours.	**Consistent.** A Lighting Plan would be prepared to demonstrate that lighting from the proposed Project shall be directed away from natural open space areas and any proposed biological resources mitigation sites. Land uses with high-intensity lighting would be relocated within the development to areas away from natural open space (MM 5.2-17).
Policy CO-3.6.2: Reduce impervious surfaces and provide more natural vegetation to enhance microclimates and provide habitat. In implementing this policy, consider the following design concepts: • Consideration of reduced parking requirements, where supported by a parking study and/or through shared use of parking areas; • Increased use of vegetated areas around parking lot perimeters; such areas should be designed as bioswales or as otherwise determined appropriate to allow surface water infiltration; • Use of connected open space areas as drainage infiltration areas in lieu of curbed landscape islands, minimizing the separation of natural and landscaped areas into isolated "islands"; and • Breaking up large expanses of paving with natural landscaped areas planted with shade trees to reduce the heat island effect, along with shrubs and groundcover to provide diverse vegetation for habitat.	**Consistent.** The proposed Project would be developed consistent with the Design Guidelines of the NorthLake Specific Plan, including requirements for adequate shade trees throughout the Project's circulation system; minimum landscape requirements according to the land use; and use of light-colored paving materials, including brick pavers. Additionally, on the Project site, approximately 60 percent of the area would be preserved as pervious surfaces in the form of undeveloped open space, manufactured slopes, recreation and parklands, which would allow for infiltration of surface water.
Policy CO-3.6.5: Ensure revegetation of graded areas and slopes adjacent to natural open space areas with native plants (consistent with fire prevention requirements).	**Consistent.** A revegetation program would be implemented in accordance with the landscape palette developed for the Specific Plan on all graded areas not utilized for improvements of structures.

TABLE 5.9-3
SANTA CLARITA VALLEY AREA PLAN 2012 CONSISTENCY

Goal/Policy	Consistency Analysis
Policy CO-4.1.2: Provide examples of water conservation in landscaping through use of low water use landscaping in public spaces such as parks, landscaped medians and parkways, plazas, and around public buildings.	**Consistent.** In accordance with the NorthLake Specific Plan, overall plant material selected for a given area would have compatible drought resistant characteristics, whenever possible, and irrigation programming would be designed to minimize water applications so that impacts to adjacent natural areas are minimized.
Policy CO-4.1.3: Require low water use landscaping in new residential subdivisions and other private development projects, including a reduction in the amount of turfgrass.	
Policy CO-4.1.5: Promote the use of low-flow and/or waterless plumbing fixtures and appliances in all new non-residential development and residential development of five or more dwelling units.	**Consistent.** As discussed in Section 5.7, Greenhouse Gas Emissions, the proposed Project would comply with the CALGreen Code that requires the use of low-flow plumbing fixtures. Further, as discussed in Section 5.7, Greenhouse Gas Emissions, MM 5.7-1 and MM 5.7-2 would provide residential and nonresidential owners and tenants information on water conservation.
Policy CO-4.1.7: Apply water conservation policies to all pending development projects, including approved tentative subdivision maps to the extent permitted by law. Where precluded from adding requirements by vested entitlements, encourage water conservation in construction and landscape design.	**Consistent.** As discussed in Section 5.7, Greenhouse Gas Emissions, MM 5.7-1 and MM 5.7-2 would provide residential and nonresidential owners and tenants information on water conservation. As discussed in Section 4.0, Project Description, A water budget will be developed for landscape irrigation use installed in conjunction with any new building that conforms to the California Department of Water Resources Model Water Efficient Landscape Ordinance. Additional water conservation techniques will include use of recycled water, SmartSense appliances, tankless water heaters, low flow shower heads, high efficiency dishwashers, grey water systems, and smart showers.
Policy CO-4.1.9: Support the development of additional facilities to store or bank stormwater, particularly on lands located outside the groundwater recharge areas that are depicted on Figure CO-10.	**Consistent.** As detailed in Section 5.8, Hydrology and Water Quality, the proposed Project would include a variety of drainage features which would serve to capture storm water runoff, allowing for percolation and infiltration into the Project site.
Policy CO-4.1.10: Support emerging methods and technologies for the on-site capture, treatment, and infiltration of stormwater and greywater, and amend the County Code to allow these methods and technologies when they are proven to be safe and feasible.	
Policy CO-4.2.1: In cooperation with the Sanitation District and other affected agencies, expand opportunities for use of recycled water for the purposes of landscape maintenance, construction, water recharge, and other uses as appropriate.	**Consistent.** The Project Applicant is currently coordinating with the Newhall County Water District regarding requirements for recycled water lines. As part of the Project, recycled water lines will be installed along with potable water lines to serve the proposed Project at the time recycled water supply becomes available.
Policy CO-4.2.2: Require new development to provide the infrastructure needed for delivery of recycled water to the property for use in irrigation, even if the recycled water main delivery lines have not yet reached the site, where deemed appropriate by the reviewing authority.	
Policy CO-4.2.3: Promote the installation of rainwater capture and gray water systems in new development for irrigation, where feasible and practicable.	**Consistent.** A water budget will be developed for landscape irrigation use installed in conjunction with any new building that conforms to the California Department of Water Resources Model Water Efficient Landscape Ordinance.

TABLE 5.9-3
SANTA CLARITA VALLEY AREA PLAN 2012 CONSISTENCY

Goal/Policy	Consistency Analysis
Policy CO-4.2.4: Protect areas with substantial potential for groundwater recharge as depicted on Figure CO-10, and promote recharge of groundwater basins throughout the watershed (excluding the river bed) to assure water quality and quantity. The greatest consideration should be given to the Alluvial Aquifer and Saugus Aquifer groundwater recharge areas, followed by groundwater recharge areas for other groundwater basins that are designated by the State of California.	**Consistent.** The proposed Project would introduce impervious surfaces to the Project site through development activities which would subsequently limit the amount of permeable surface area within the Project site. However, because the proposed development area is not located in an area underlain by a groundwater basin, Project-related development would not directly interfere with groundwater recharge.
Policy CO-4.2.6: Require that all new development proposals demonstrate a sufficient and sustainable water supply prior to approval.	**Consistent.** As discussed in Section 5.12, Utilities, a water supply assessment was prepared for the proposed Project to ensure that water supplies could adequately serve the Project.
Policy CO-4.3.1: On undeveloped sites proposed for development, promote onsite stormwater infiltration through design techniques such as pervious paving, draining runoff into bioswales or properly designed landscaped areas, preservation of natural soils and vegetation, and limiting impervious surfaces.	**Consistent.** As discussed in Section 5.8, Hydrology and Water Quality, and as shown on Exhibit 4-10, Drainage and Storm Water System, the Project would include implementation of various drainage facilities to accommodate stormwater flow and promote on-site infiltration, including benches, downdrains, swales, catch basins, energy dissipators, debris basins, and elevated inlets.
Policy CO-4.3.4: Encourage and promote the use of new materials and technology for improved stormwater management, such as pervious paving, green roofs, rain gardens, and vegetated swales.	**Consistent.** The Project would include development an interconnecting series of greenbelts and open space areas to accommodate and reduce stormwater runoff. As discussed in Section 5.8, Hydrology and Water Quality, this would reduce the amount of stormwater leaving the Project site.
Policy CO-4.3.5: Where detention and retention basins or ponds are required, seek methods to integrate these areas into the landscaping design of the site as amenity areas, such as a network of small ephemeral swales treated with attractive planting.	**Consistent.** As discussed in Section 5.8, Hydrology and Water Quality, the Project would include various water quality features that would be incorporated into the Project's open space and greenbelt areas, including swales and basins.
Policy CO-4.3.6: Discourage the use of mounded turf and lawn areas which drain onto adjacent sidewalks and parking lots, replacing these areas with landscape designs that retain runoff and allow infiltration.	**Consistent.** Turf areas will not exceed 25 percent of the total landscaped area for residential uses associated with the proposed Project.
Policy CO-4.3.7: Reduce the amount of pollutants entering the Santa Clara River and its tributaries by capturing and treating stormwater runoff at the source, to the extent possible.	**Consistent.** As discussed in Section 5.8, Hydrology and Water Quality, the Project would treat stormwater to reduce and remove pollutants prior to stormwater leaving the Project site.
Policy CO-4.4.1: Cooperate with the Los Angeles County Sanitation District and Regional Water Quality Control Board as appropriate to achieve Total Maximum Daily Load (TMDL) standards for chlorides in the Santa Clara River.	**Consistent.** As discussed in Section 5.8, Hydrology and Water Quality, the Project would be subject to local regulations and standards regarding chlorides.
Policy CO-4.4.3: Discourage the use of chemical fertilizers, herbicides, and pesticides in landscaping to reduce water pollution by substances hazardous to human health and natural ecosystems.	**Consistent.** Project landscape treatment programs and policies will be in compliance with the LID and County Green Program. Additionally, implementation of MM 5.8-1 would require implementation of an Integrated Pest Management Plan to keep pest levels at or below threshold levels, reducing risk and damage from pest presence, while eliminating the risk from the pest control methods used.

TABLE 5.9-3
SANTA CLARITA VALLEY AREA PLAN 2012 CONSISTENCY

Goal/Policy	Consistency Analysis
Policy CO-4.4.4: Promote the extension of sanitary sewers for all urban uses and densities, to protect groundwater quality, where feasible**.**	**Consistent.** According to Section 4.0, Project Description, and Section 5.12, Utilities, and as shown on Exhibit 4-9, the Project would include the expansion on the existing on-site wastewater collection system.
Policy CO-5.1.1: For sites identified on the Cultural and Historical Resources Map (Figure CO-6), review appropriate documentation prior to issuance of any permits for grading, demolition, alteration, or new development, to avoid significant adverse impacts. Such documentation may include cultural resource reports, Environmental Impact Reports, or other information as determined to be adequate by the reviewing authority.	**Consistent.** As discussed in Section 5.3, Cultural Resources, no significant archaeological or historical resources occur within the Project site.
Policy CO-5.1.2: Review any proposed alterations to cultural and historic sites identified in Table CO-1 or other sites which are so designated, based on the guidelines contained in the Secretary of the Interior's Standards for the Treatment of Properties (Title 36, Code of Federal Regulations, Chapter 1, Part 68, also known as 36 CFR 68), or other adopted County guidelines.	
Policy CO-5.1.3: As new information about other potentially significant historical and cultural sites becomes available, update the Cultural and Historical Resources Inventory and apply appropriate measures to all identified sites to protect their historical and cultural integrity.	
Policy CO-5.3.1: For any proposed Area Plan Amendment, Specific Plan, or Specific Plan Amendment, notify and consult with any California Native American tribes on the contact list maintained by the California Native American Heritage Commission that have traditional lands within the County's jurisdiction, regarding any potential impacts to Native American resources from the proposed action, pursuant to State guidelines.	**Consistent.** As discussed in Section 4.0, the proposed Project involves minor modifications to the NorthLake Specific Plan, none of which would require a Specific Plan amendment. Additionally, the Project would not involve an Area Plan Amendment; therefore consultation pursuant to Senate Bill 18 is not required. As discussed in Section 5.3, local representatives of Native American tribes were contacted regarding the Project.
Policy CO-5.3.2: For any proposed development project that may have a potential impact on Native American cultural resources, provide notification to California Native American tribes on the contact list maintained by the Native American Heritage Commission that have traditional lands within the County's jurisdiction, and consider the input received prior to a discretionary decision.	
Policy CO-5.3.3: Review and consider a cultural resources study for any new grading or development in areas identified as having a high potential for Native American resources, and incorporate recommendations into the project approval as appropriate to mitigate impacts to cultural resources.	**Consistent.** As discussed in Section 5.3, Cultural Resources, a full Cultural Resources Report and Paleontological Resources Report were prepared for the proposed project to evaluate impacts associated with the currently proposed Project. These reports, including recommended mitigation measures, are summarized in Section 5.3 of this Draft SEIR.
Policy CO-7.1.1: Through the mixed land use patterns and multi-modal circulation policies set forth in the Land Use and Circulation Elements, limit air pollution from transportation sources.	**Consistent.** The NorthLake Specific Plan would be a mixed-use development that would reduce vehicle miles traveled by facilitating shorter vehicle trips, bicycling, and walking between residential and nonresidential land uses thus reducing air pollution from transportation sources.

TABLE 5.9-3
SANTA CLARITA VALLEY AREA PLAN 2012 CONSISTENCY

Goal/Policy	Consistency Analysis
Policy CO-7.1.2: Support the use of alternative fuel vehicles.	**Consistent.** As discussed in Section 5.1, Air Quality, MM 5.1-12 and MM 5.1-14 would provide electric vehicle (EV) charging facilities and/or infrastructure facilitating the installation future EV charging stations at non-residential buildings, parking structures, and parking lots. MM 5.1-13 and MM 5.1-14 require preferential parking for alternative-fueled vehicles at residential buildings, parking structures, and parking lots.
Policy CO-7.1.3: Support alternative travel modes and new technologies, including infrastructure to support alternative fuel vehicles, as they become commercially available.	
Policy CO-7.2.1: Ensure adequate spacing of sensitive land uses from the following sources of air pollution: high traffic freeways and roads; distribution centers; truck stops; chrome plating facilities; dry cleaners using perchloroethylene; and large gas stations, as recommended by CARB.	**Consistent.** No sensitive land uses are proposed within 500 feet of I-5. Adequate spacing from distribution centers; truck stops; chrome plating facilities; dry cleaners using perchloroethylene; and large gas stations would be ensured by the SCAQMD permitting process as discussed in Section 5.1, Air Quality.
Policy CO-8.2.4: Establish maximum lighting levels for public facilities, and encourage reduction of lighting levels to the level needed for security purposes after business hours, in addition to use of downward-directed lighting and use of low-reflective paving surfaces.	**Consistent.** Consistent with the Lighting Design Guidelines of the NorthLake Specific Plan, lighting would be directed to minimize effects of glare and excessive light falling on adjacent sites. Additionally, plans for exterior light features would be subject to review by the County Department of Public Works.
Policy CO-8.2.5: Support installation of photovoltaic and other renewable energy equipment on public facilities, in concert with significant energy conservation efforts.	**Consistent.** As discussed in Section 5.7, Greenhouse Gas Emissions, the Project will commit to the installation of a 3-kilowatt (kW) solar panel system on 50 percent of residential dwelling units.
Policy CO-8.2.6: Promote use of solar lighting in parks and along paseos and trails, where practical.	**Consistent.** The proposed Project does not preclude the use of solar lighting in parks and along paseos and trails throughout the Project site. To the extent feasible, solar lighting would be installed on all public facilities, including park buildings and along trails.
Policy CO-8.2.7: Support the use of sustainable alternative fuel vehicles for machinery and fleets, where practical, by evaluating fuel sources, manufacturing processes, maintenance costs, and vehicle lifetime use.	**Consistent.** The proposed Project would be a primarily residential Project; therefore, the Project Applicant cannot require that future residents purchase a certain type of vehicle. However, the Project would not preclude the use of alternative fuel vehicles and would encourage use of EV vehicles through the option of having a charging station installed in single-family residential units. Additionally, as discussed in Section 5.1, Air Quality, MM 5.1-1 and MM 5.1-3 would provide electric vehicle (EV) charging facilities and/or infrastructure facilitating the installation future EV charging stations at non-residential buildings, parking structures, and parking lots. MM 5.1-2 and MM 5.1.3 require preferential parking for alternative-fueled vehicles at residential buildings, parking structures, and parking lots.
Policy CO-8.2.9: Reduce heat islands through installation of trees to shade parking lots and hardscapes, and use of light-colored reflective paving and roofing surfaces.	**Consistent.** The proposed Project would be developed consistent with the Design Guidelines of the NorthLake Specific Plan, including requirements for adequate shade trees throughout the Project's circulation system; minimum landscape requirements according to the land use; and use of light-colored paving materials, including brick pavers.

TABLE 5.9-3
SANTA CLARITA VALLEY AREA PLAN 2012 CONSISTENCY

Goal/Policy	Consistency Analysis
Policy CO-8.2.10: Support installation of energy-efficient traffic control devices, street lights, and parking lot lights.	**Consistent.** The proposed Project would comply with efficient lighting (including LEDs) for traffic, street, and other outdoor lighting purposes, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards.
Policy CO-8.2.11: Implement recycling in all public buildings, parks, and public facilities, including for special events.	**Consistent.** According to Section 5.12, Utilities, the Project would comply with the State Model Ordinance implemented in accordance with AB 1327 and require all commercial, industrial, and multifamily residential development to provide for collection of recyclable materials. Additionally, the independent waste hauler serving the proposed Project would provide recycling receptacles and pick-up service for single-family residential units. The Project will meet CalRecycle's 2020 statewide goal of 75 percent solid waste diversion, by reducing, recycling, and composting all generated waste.
Policy CO-8.2.13: Support trip reduction strategies for employees as described in the Circulation Element.	**Consistent.** The Project supports the *NorthLake Specific Plan* goal to foster compatible land use arrangements that contribute to reduced energy consumption and improved air quality by centrally locating the land uses so that potential connection to the greenbelt and trail systems reduces dependence on automobiles. The provision of residential, commercial, industrial, and recreational opportunities will provide opportunities for employment on-site and implementation of wireless technology would support opportunities for telecommuting and a reduced dependence on the private automobile for commuting. As discussed in Section 5.1, Air Quality, the proposed Project would include a commuter computer program developed for the NorthLake residents in an attempt to reduce commuter vehicle trips generated by the proposed Project.
Policy CO-8.2.14: Reduce extensive heat gain from paved surfaces through development standards wherever feasible.	**Consistent.** The proposed Project would be developed consistent with the Design Guidelines of the NorthLake Specific Plan, including requirements for adequate shade trees throughout the Project's circulation system; minimum landscape requirements according to the land use; and use of light-colored paving materials, including brick pavers.
Policy CO-8.3.1: Evaluate development proposals for consistency with the ordinances developed through the County's Green Building Program.	**Consistent.** As discussed in Section 5.7, Greenhouse Gas Emissions, the Project would be consistent with the County's Green Building Program.

TABLE 5.9-3
SANTA CLARITA VALLEY AREA PLAN 2012 CONSISTENCY

Goal/Policy	Consistency Analysis
Policy CO-8.3.2: Promote construction of energy efficient buildings through the certification requirements of the ordinances developed through the County's Green Building Program.	**Consistent.** The Project will comply with the Los Angeles County Green Building Program, which consists of the County's Green Building Standards Code and third-party certifications as required; all Mandatory Measures of the 2016 California Green Building Standards Code; the Los Angeles County's Healthy Design Ordinance; the SCVAP 2012 and applicable Castaic Area Community Design Standards. The Project will also meet or exceed all 2016 CALGreen Residential Mandatory measures in Chapter 4, Divisions 4.1 through 4.5 and Chapter 7 as applicable; 2016 CALGreen Tier 1 Prerequisite Measures and required minimum Tier 1 Elective Measures for Residential Uses.
Policy CO-8.3.4: Encourage new residential development to include on-site solar photovoltaic systems, or pre-wiring, in at least 50% of the residential units, in concert with other significant energy conservation efforts.	**Consistent.** As discussed in Section 5.7, Greenhouse Gas Emissions, the Project will commit to the installation of a 3-kilowatt (kW) solar panel system on 50 percent of residential dwelling units.
Policy CO-8.3.5: Encourage on-site solar generation of electricity in new retail and office commercial buildings and associated parking lots, carports, and garages, in concert with significant energy conservation efforts.	**Consistent.** The Project is committing to the equivalent of installing solar power equivalent to 3 kW per residential dwelling unit for 50 percent of the residential dwelling units. Additionally, the Project would provide 135 EV charging facilities at non-residential parking spaces within the community. Additionally, MM 5.7-14 requires developers to provide educational information to each homeowner on the capabilities of buildings to support solar electricity generation and/or solar water heating and the use of solar heating, automatic covers, and efficient pumps and motors for pools and spas. MM 5.7-15 requires developers to provide educational information to each nonresidential owner or tenant on the capabilities of buildings to support solar electricity generation and/or solar water heating.
Policy CO-8.3.6: Require new development to use passive solar heating and cooling techniques in building design and construction, which may include but are not be limited to building orientation, clerestory windows, skylights, placement and type of windows, overhangs to shade doors and windows, and use of light colored roofs, shade trees, and paving materials.	**Consistent.** The proposed Project would be developed consistent with the Design Guidelines of the NorthLake Specific Plan, including requirements for adequate shade trees throughout the Project's circulation system; minimum landscape requirements according to the land use; and use of light-colored paving materials, including brick pavers.
Policy CO-8.3.7: Encourage the use of trees and landscaping to reduce heating and cooling energy loads, through shading of buildings and parking lots.	**Consistent.** The proposed Project would be consistent with the Landscape Concept as detailed in Section IV.C. of the NorthLake Specific Plan, including a variety of trees along streetscapes and trails throughout the Project site.

TABLE 5.9-3
SANTA CLARITA VALLEY AREA PLAN 2012 CONSISTENCY

Goal/Policy	Consistency Analysis
Policy CO-8.3.8: Encourage energy-conserving heating and cooling systems and appliances, and energy-efficiency in windows and insulation, in all new construction.	**Consistent.** As stated in Section 5.4, Energy, on-site energy use would be reduced through compliance with the CalGreen Code, and other energy conservation programs and policies. As discussed in Section 5.4, Energy, the regulations, plans, and polices adopted for the purpose of maximizing energy efficiency that are directly applicable to the Project include (1) California's Title 24 Energy Efficiency Standards for Residential and Nonresidential Buildings; (2) CALGreen Code; and (3) Title 31 of the County Code (the Los Angeles County Green Building Standards Code).
Policy CO-8.3.9: Limit excessive lighting levels, and encourage a reduction of lighting when businesses are closed to a level required for security.	**Consistent.** Consistent with the Lighting Design Guidelines of the NorthLake Specific plan, lighting would be directed to minimize effects of glare and excessive light falling on adjacent sites. Additionally, plans for exterior light features would be subject to review by the County Department of Public Works.
Policy CO-8.3.12: Reduce extensive heat gain from paved surfaces through development standards wherever feasible.	**Consistent.** The proposed Project would be developed consistent with the Design Guidelines of the NorthLake Specific Plan, including requirements for adequate shade trees throughout the Project's circulation system; minimum landscape requirements according to the land use; and use of light-colored paving materials, including brick pavers.
Policy CO-8.4.2: Adopt mandatory residential recycling programs for all residential units, including single-family and multi-family dwellings.	**Consistent.** According to Section 5.12, Utilities, the Project would comply with the State Model Ordinance implemented in accordance with AB 1327 and require all commercial, industrial, and multifamily residential development to provide for collection of recyclable materials. Additionally, the independent waste hauler serving the proposed Project would provide recycling receptacles and pick-up service for single-family residential units.
Policy CO-8.4.3: Allow and encourage composting of greenwaste, where appropriate.	**Consistent.** The proposed Project does not preclude small-scale composting of greenwaste by individual residents.
Policy CO-8.4.4: Promote commercial and industrial recycling, including recycling of construction and demolition debris.	**Consistent.** According to Section 5.12, Utilities, the Project would comply with the State Model Ordinance implemented in accordance with AB 1327 and require all commercial, industrial, and multifamily residential development to provide for collection of recyclable materials.
Policy CO-8.4.5: Develop and implement standards for refuse and recycling receptacles and enclosures to accommodate recycling in all development.	**Consistent.** The NorthLake Specific Plan provides for design guidelines for refuse receptacles (Section IV. Design Guidelines). These same design guidelines would apply to recycling receptacles. MM 5.7-14 and MM 5.7-15 would provide residential and nonresidential owners and tenants information on recycling.
Policy CO-8.4.6: Introduce and assist with the placement of receptacles for recyclable products in public places, including at special events.	
Policy CO-8.4.7: Provide information to the public on recycling opportunities and facilities, and support various locations and events to promote public participation in recycling.	**Consistent.** MM 5.7-14 and MM 5.7-15 would provide residential and nonresidential owners and tenants information on recycling. Also, it is anticipated that the Project's independent waste hauler would provide information regarding recycling opportunities to its customers on a regular basis.

TABLE 5.9-3
SANTA CLARITA VALLEY AREA PLAN 2012 CONSISTENCY

Goal/Policy	Consistency Analysis
Policy CO-9.1.3: Provide local and community parks within a reasonable distance of residential neighborhoods.	**Consistent.** The NorthLake Specific Plan includes minimum criteria for the dedication of pocket parks associated with single-family development. Each pocket park is required to be a minimum of 10,000 square feet in size and shall be developed at a ratio of 1 park per 100 homes.
Policy CO-9.1.5: Promote development of more playfields for youth and adult sports activities, in conjunction with tournament facilities, where needed.	**Consistent.** Under the proposed Project, the public park system would be the centerpiece of the community, providing both programmed activity areas and passive green space. As shown on Exhibit 4-5, Parks and Recreation Plan, the Project proposes development of a community sports park, which would be located west of the proposed NorthLake Boulevard and within the Phase 1 development area. The NorthValley Park is proposed as a passive park in the northwest portion of the proposed Project site. Additionally, Vista Park is a proposed passive park located in the extreme eastern edge of the proposed Project site. Access to Vista Park would be via a proposed community trail.
Policy CO-9.1.11: Locate and design parks to address potential adverse impacts on adjacent development from noise, lights, flying balls, traffic, special events, and other operational activities and uses.	
Policy CO-9.1.13: Provide passive areas for natural habitat, meditation, bird-watching, and similar activities in parks, where feasible and appropriate, including meditation gardens, wildflower and butterfly gardens, botanic gardens, and similar features.	
Policy CO-9.2.1: Plan for a continuous and unified multi-use (equestrian, bicycling, and pedestrian/hiking) trail network for a variety of users, to be developed with common standards, in order to unify Santa Clarita Valley communities and connect with City, Regional, State, and Federal trails such as the dual-use (equestrian and hiking) Pacific Crest Trail.	**Consistent.** The proposed Project includes an extensive greenbelt and trail system connecting schools, parks, amenities, and neighborhoods throughout the community and the Castaic Lake Recreation Area. The proposed trail system includes approximately 91,150 linear feet of multi-use trails and neighborhood pedestrian trails as well as potential future connections to the off-site Regional Trail system.
Policy CO-9.2.2: Provide trail connections between paseos, bike routes, schools, parks, community services, streets, and neighborhoods.	
Policy CO-9.2.4: Ensure that new development projects provide trail connections to local and regional trail systems, where appropriate.	
Policy CO-9.2.6: Provide trails to scenic vistas and viewpoints.	
Policy CO-10.1.4: Maintain and acquire, where appropriate, open space to preserve cultural and historical resources.	**Consistent.** As discussed in Section 5.3, Cultural Resources, a full Cultural Resources Report and Paleontological Resources Report were prepared for the proposed Project to evaluate impacts associated with the currently proposed Project. These reports, including recommended mitigation measures, are summarized in Section 5.3 of this Draft SEIR.

TABLE 5.9-3
SANTA CLARITA VALLEY AREA PLAN 2012 CONSISTENCY

Goal/Policy	Consistency Analysis
Policy CO-10.2.1: Encourage provision of vegetated open space on a development project's site, which may include shallow wetlands and ponds, drought tolerant landscaping, and pedestrian hardscape that includes vegetated areas.	**Consistent.** Open space is integrated throughout the proposed Project site to respond to topographical conditions; to preserve ridgelines and hillsides; to create a buffer adjacent to natural resources; to provide view amenities; to accommodate the greenbelt trail; and to separate residential neighborhood enclaves. Approximately 624.6 acres of open space will remain undeveloped on the Project site. Much of this open space area consists of interior and perimeter slopes. The largest expanses of undeveloped open space will be located along the edges of the Project site, including areas to the north, west, south, and east. There will be approximately 327.6 acres of undeveloped landscaped open space (i.e., graded slopes) throughout the Project site. An additional 297.2 acres will be set aside as undisturbed open space areas within the Project site.
Policy CO-10.2.2: Encourage that open space provided within development projects be usable and accessible, rather than configured in unusable strips and left-over remnants, and that open space areas are designed to connect to each other and to adjacent open spaces, to the extent reasonable and practical.	
Safety Element	
Policy S-1.2.2: Restrict the land use type and intensity of development in areas subject to fault rupture, landslides, or liquefaction, in order to limit exposure of people to seismic hazards.	**Consistent.** As discussed in Section 5.6, Geology and Soils, a geotechnical report was prepared to support this SEIR and provides site specific analysis related to faulting, landslides, and liquefaction or subsidence and identifies project-specific mitigation measures and recommendations to address any anticipated geotechnical issues that may occur during Project construction or long-term operation.
Policy S-1.2.3: Require soils and geotechnical reports for new construction in areas with potential hazards from faulting, landslides, liquefaction, or subsidence, and incorporate recommendations from these studies into the site design as appropriate.	
Policy S-1.2.4: Enforce seismic design and building techniques in the County Building Code.	**Consistent.** The design and construction of structures and facilities on the Project site would adhere to the standards and requirements detailed in the California Building Code as well as the Los Angeles County Building Code, as discussed in Section 5.6, Geology and Soils.
Policy S-2.1.3: Promote the use of vegetated drainage courses and soft-bottom channels for flood control facilities to the extent feasible, in order to achieve water quality and habitat objectives in addition to flood control.	**Consistent.** The proposed Project would include implementation of several drainage features, including benches, downdrains, swales, catch basins, storm drain pipes, inlets/outlets, an energy dissipator, debris basin, and elevated inlets, to ensure that off-site and on-site sediment does not affect downstream properties; these features have been incorporated into Project design.
Policy S-2.1.5: Promote the joint use of flood control facilities with other beneficial uses where feasible, such as by incorporating detention basins into parks and extending trails through floodplains.	
Policy S-3.1.1: Coordinate on planning for new fire stations to meet current and projected needs.	**Consistent.** As discussed in Section 4.0, a 1.4-acre site will be conveyed to the Los Angeles County Fire Department for future development of a fire station to serve the Project site and surrounding areas (refer to Exhibit 4-1). The fire station site would be located along NorthLake Boulevard, as shown on Exhibit 4-7. Additionally, the Project Applicant will be responsible for payment of a Developer Fee as well as provision of water service which would reduce impacts to less than significant levels.

TABLE 5.9-3
SANTA CLARITA VALLEY AREA PLAN 2012 CONSISTENCY

Goal/Policy	Consistency Analysis
Policy S-3.1.2: Program adequate funding for capital fire protection costs and explore all feasible funding options to meet facility needs.	**Consistent.** In order to achieve fire protection for all residents of the County's Planning Area, the County Department of Public Works Building and Safety Division and LACoFD would enforce fire standards as they review building plans and conduct building inspections. Additional programs implemented to ensure compliance with established fire standards include: the maintenance of a Countywide Information Map, showing area of high fire hazard areas, and the provision of uniform fire improvement standards for various land uses. Fire stations would also be funded by the Joint Consolidated Annual Tax Bill (Fire Service Funding subsection). Additionally, the SCVAP 2012 EIR identifies mitigation measures that require payment of a Developer Fee as well as provision of water service. As discussed in Section 7.0, Other CEQA Topics, the proposed Project would be required to participate in the Developer Fee Program to the satisfaction of the County of Los Angeles Fire Department.
Policy S-3.1.3: Require adequate fire flow as a condition of approval for all new development, which may include installation of additional reservoir capacity and/or distribution facilities.	**Consistent.** As discussed in Section 5.12, Utilities, a water supply assessment was prepared for the proposed Project to ensure that water supplies could adequately serve the Project. As part of the WSA, fire flows were calculated and included in the anticipated demand; therefore, the Project would have adequate water supply to accommodate fire flow.
Policy S-3.2.1: Identify areas of the Santa Clarita Valley that are prone to wildland fire hazards and address these areas in fire safety plans. **Policy S-3.2.2:** Enforce standards for maintaining defensible space around structures through clearing of dry brush and vegetation.	**Consistent.** According to Section 5.5, Fire Hazards, the Project would comply with the Fire Management Program specific in the NorthLake Specific Plan which would require compliance with the County Fire Code and all other regulatory standards.
Policy S-3.2.3: Establish landscape guidelines for fire-prone areas with recommended plant materials, and provide this information to builders and members of the public.	**Consistent.** According to Section 5.5, Fire Hazards, a Landscape Plan and an Irrigation Plan would be developed in conjunction with the fuel modification plan. The Landscape Plan shall emphasize vegetation with a "low fuel potential" and require that all vacant graded lots located within the tract be cleared of brush to reduce fire hazard.
Policy S-3.2.4: Require sprinkler systems, fire resistant building materials, and other construction measures deemed necessary to prevent loss of life and property from wildland fires.	**Consistent.** The proposed Project would comply all applicable requirements for development within Very High Fire Hazard Severity Zone areas, including implementing fuel modification practices; using fire-resistant construction materials; and constructing adequate fire-prevention and suppression facilities for each structure (e.g., fire sprinklers, driveway access) and for use by the fire department (e.g., hydrant locations, fire flows and volumes, roadway access).
Policy S-3.2.5: Ensure adequate secondary and emergency access for fire apparatus, which includes minimum requirements for road width, surface material, grade, and staging areas.	**Consistent.** As part of the Project planning process, the Project Applicant has coordinated with the LA County Fire Department. All requested modifications to the Project, including provision of an emergency only access road from the north, have been included in the proposed Project as described in Section 4.0, Project Description. A 1.4-acre site will be conveyed to the Los Angeles County Fire Department for future development of a fire station to serve the Project site and surrounding areas

TABLE 5.9-3
SANTA CLARITA VALLEY AREA PLAN 2012 CONSISTENCY

Goal/Policy	Consistency Analysis
	(refer to Exhibit 4-1). The fire station site would be located along NorthLake Boulevard, as shown on Exhibit 4-7. NorthLake Boulevard will serve as the backbone road within the Project's proposed roadway system and secondary collector streets will connect with NorthLake Boulevard, providing continuous routes to the extent feasible. In compliance with the California Manual on Uniform Traffic Control Devices, Emergency Vehicle warning signs would be installed and, based on project design, adequate stopping sight distance would be provided for vehicles approaching the station driveways based on the design speed of NorthLake Boulevard.
Policy S-3.2.6: For areas adjacent to the National Forest, cooperate with the United States Forest Service regarding land use and development issues.	**Consistent.** The Project would comply with all applicable requirements for development within Very High Fire Hazard Severity Zone areas. As an adjacent land-owner, the USFS has been notified of the proposed Project and comments have been solicited as part of the Notice of Preparation/Initial Study process. The USFS will also be provided the opportunity to review and comment on the Draft SEIR, as noted in Section 2.0, Introduction.
Policy S-7.1.1: Regularly update emergency preparedness and response plans that are consistent with State plans.	**Consistent.** The Project site is not included as part of an adopted emergency response or emergency evacuation plan. However, the developers of the proposed project would be required to design, construct, and maintain structures, roadways, and facilities to comply with applicable local, regional, State, and/or federal requirements related to emergency access and evacuation plans.
Policy S-7.1.3: Ensure that evacuation routes are clearly posted throughout the Santa Clarita Valley.	
Noise Element	
Policy N-1.1.1: Use the Noise and Land Use Compatibility Guidelines contained in Figure N-8, which are consistent with State guidelines, as a policy basis for decisions on land use and development proposals related to noise.	**Consistent.** The Noise-Land Use Compatibility Guidelines were used to evaluate noise impacts to proposed development and to recommend mitigation measures where needed.
Policy N-1.1.2: Continue to implement the adopted Noise Ordinance and other applicable code provisions, consistent with state and federal standards, which establish noise impact thresholds for noise abatement and attenuation, in order to reduce potential health hazards associated with high noise levels.	**Consistent.** The adopted Noise Ordinance and other applicable code provisions, such as the State Building Code were used to evaluate noise impacts and to recommend mitigation measures where needed.
Policy N-1.1.3: Include consideration of potential noise impacts in land use planning and development review decisions.	**Consistent.** Noise impacts are addressed in Section 5.10, Noise, of the SEIR. Section 5.10, Noise, of the SEIR includes mitigation measures for construction and long-term operations that control noise sources adjacent to noise sensitive land uses.
Policy N-1.1.4: Control noise sources adjacent to residential, recreational, and community facilities, and those land uses classified as noise sensitive.	
Policy N-2.1.1: Encourage owners of existing noise-sensitive uses, and require owners of proposed noise sensitive land uses, to construct sound barriers to protect users from significant noise levels, where feasible and appropriate.	**Consistent.** Section 5.10, Noise, of the SEIR includes mitigation measures for construction of noise barriers to protect future noise-sensitive uses where necessary.

TABLE 5.9-3
SANTA CLARITA VALLEY AREA PLAN 2012 CONSISTENCY

Goal/Policy	Consistency Analysis
Policy N-2.1.5: Encourage employers to develop van pool and other travel demand management programs to reduce vehicle trip-generated noise in the planning area.	**Consistent.** As described in Section 5.1, Air Quality, the proposed Project would include a commuter computer program developed for the NorthLake residents to reduce commuter vehicle trips.
Policy N-3.1.1: Require that developers of new single-family and multi-family residential neighborhoods in areas where the ambient noise levels exceed 60 CNEL provide mitigation measures for the new residences to reduce interior noise levels to 45 CNEL, based on future traffic and railroad noise levels.	**Consistent.** For single family and duplex residences adjacent to Ridge Route Road, Northlake Boulevard, A Street, B Street, or E Street, and for multi-family residences adjacent to Ridge Route Road and Northlake Boulevard, the Developer would be required to submit a noise analysis to the County demonstrating that projected exterior noise levels at areas where residents would reasonably be expected to spend more than one hour, such as back yards, would not exceed 65 dBA CNEL. This standard is based on Policy N-3.1.2 of the SCVAP 2012. Noise abatement may be achieved by setbacks, berms, and walls. The noise analysis shall also demonstrate that interior noise levels in all habitable rooms would of duplexes and multi-family residences would not exceed 45 dBA CNEL, as required by the California Building Code (MM 5.10-9).
Policy N-3.1.2: Require that developers of new single-family and multi-family residential neighborhoods in areas where the projected noise levels exceed 65 CNEL provide mitigation measures (which may include noise barriers, setbacks, and site design) for new residences to reduce outdoor noise levels to 65 CNEL, based on future traffic conditions. This requirement would apply to rear yard areas for single-family developments, and to private open space and common recreational and open space areas for multi-family developments.	
Policy N-3.1.3: Through enforcement of the applicable Noise Ordinance, protect residential neighborhoods from noise generated by machinery or activities that produce significant discernable noise exceeding recommended levels for residential uses.	**Consistent.** The Project would be constructed in accordance with Section 12.08.440 of the County Code, which prohibits construction activities that generate noise that could create a disturbance across a residential or commercial property line from occurring between 7:00 PM and 7:00 AM on weekdays, or at any time on Sunday or a federal holiday. For the proposed Project, this limit would apply to noise-generating construction activities within ¼ mile of a residential, school, or commercial receptor (RR 5.10-1).
Policy N-3.1.4: Require that those responsible for construction activities develop techniques to mitigate or minimize the noise impacts on residences, and adopt standards that regulate noise from construction activities that occur in or near residential neighborhoods.	
Policy N-3.1.5: Require that developers of private schools, childcare centers, senior housing, and other noise sensitive uses in areas where the ambient noise level exceeds 65 dBA (day), provide mitigation measures for these uses to reduce interior noise to acceptable levels.	
Policy N-3.1.7: Ensure that design of parks, recreational facilities, and schools minimize noise impacts to residential neighborhoods.	
Policy N-4.1.1: Implement and enforce the applicable Noise Ordinance to control noise from commercial and industrial sources that may adversely impact adjacent residential neighborhoods and other sensitive uses.	**Consistent.** As shown on Exhibit 4-1, Land Use Plan, the industrial and commercial components of the Project site would not be located adjacent to residential neighborhoods. Additionally, through implementation of potential design features identified in Section 5.10, Noise, noise from these areas would not significantly impact Northlake Elementary School.
Policy N-4.1.2: Require appropriate noise buffering between commercial or industrial uses and residential neighborhoods and other sensitive uses.	
Policy N-4.1.3: Adopt and enforce standards for the control of noise from commercial and entertainment establishments when adjacent to residential neighborhoods and other sensitive uses.	

NorthLake Specific Plan

As discussed previously, the proposed Project would involve development pursuant to the *NorthLake Specific Plan*, and no amendments would be required. The approved Specific Plan is a concept plan, and not intended to be a precise plan of development. The proposed Project sets forth a development plan which would allow for partial development of the entire Specific Plan site. A Vesting Tentative Tract Map (No. 073336) is requested to subdivide approximately 737 acres within the Phase 1 area of the *NorthLake Specific Plan* into 700 individual lots. The remainder of the specific plan site would be subject to future development approvals not to exceed the maximum development potential defined in Section 4.0, Project Description.

The proposed Project includes a reduction in development area; however, the land use plan is consistent with the land use concept and overall intent of the Specific Plan. The residential portions of the proposed Project have been redesigned from the original *NorthLake Specific Plan* to fit the existing landforms more closely, resulting in less site disturbance, and the planning areas have been arranged in smaller parcels, creating an opportunity for residents to identify more closely with their individual neighborhoods. Exhibit 4-1, Proposed Land Use Plan, depicts the proposed land use plan. The approved Specific Plan allows for a total maximum of 3,623 units; the Project proposes development of 3,150 residential units, including a mix of single-family and multi-family units.

Commercial and industrial land uses have also been redesigned to reduce overall development square footage and to minimize potential land use conflicts with proposed residential, recreation, and open space components of the Project. The *NorthLake Specific Plan* provides for 50.1 acres of industrial use and 13.2 acres of commercial use. The Project proposes to develop 13.9 acres of the 50.1 industrial acres and 9.2 acres of the 13.2 commercial acres, remaining consistent with the Specific Plan. The permitted land uses within the industrial and commercial areas, as detailed in Section 4.0, Project Description, are also consistent with the uses anticipated by the *NorthLake Specific Plan*.

Additionally, the *NorthLake Specific Plan* features a golf course as the central organizing feature; however, changes in the popularity of golf and the current drought conditions in California have led to a reconsideration of the previous plan. Golf has given way to more inclusionary recreational and open space features that serve the needs of a higher percentage of the population and are more sensitive to environmental considerations; therefore, the proposed Project includes an enhanced park network, recreation facilities, and a greenbelt-trail loop system that is integrated with the adjacent open space trail system. The *NorthLake Specific Plan* provides for 643.3 acres of recreation and open space, as well as schools, parks, and other facilities. The proposed Project designates a total of 791.6 acres of land as recreation and/or open space, consistent with the *NorthLake Specific Plan*.

The *NorthLake Specific Plan* identified the potential need for one elementary school and one middle school within the proposed Project site boundaries. Two conceptual school sites were identified in the *NorthLake Specific Plan.* As detailed in Section 4.0, Project Description, there is an existing school mitigation agreement between the Project Applicant and the Castaic Union School District. The proposed project includes land for a 23-acre school site in Phase 2 of the project site. However, the CUSD may choose to locate the school site within the Phase 1 area of the project site as described in Section 4.0 and shown on Exhibit 4-4. Accordingly, the proposed Project includes one 23-acre school site, which may be located in either Phase 2 or Phase 1, and which is consistent with the *NorthLake Specific Plan*.

The Project proposes a modest adjustment from the total approved density and acreage to the total proposed density and acreage as shown in Table 4-2 of Section 4.0 Project Description,

Land Use Area Comparison). The adjustment is not significant as the total cumulative proposed density is approximately 9.2 dwelling units per acre in a more clustered development on 341.9 acres which uses 258.4 acres less than the existing Specific Plan approval, whereas the Specific Plan authorized development of 600.3 acres with 6 dwelling units per acre total cumulative project density. The modest adjustment between approved and proposed densities, the addition of 148.6 more acres of recreation/open space, and the consistency with the Specific Plan regarding the amount of approved and proposed residential units overall (3,150 proposed compared to 3,623 approved in the Specific Plan), identifies these uses as being consistent with and in conformity with the *NorthLake Specific Plan*.

Implementation of the proposed Project would be consistent with the applicable County plans for the subject property including, but not limited to, the General Plan, Area Plan, and Specific Plan, and no impact would occur.

NorthLake Specific Plan Consistency Summary

Section II.D of the NorthLake Specific Plan contains goals and policies, which are restated below in Table 5.9-4, that are in conformance with the Los Angeles County General Plan and the Santa Clarita Valley Area Plan.

TABLE 5.9-4
ADOPTED SPECIFIC PLAN GOALS AND POLICIES

I. LAND USE	
Goal i:	**To encourage high quality design in all development projects compatible with and sensitive to the natural and man-made environment.**
Policy ia:	Assure that new development is compatible with the natural and man-made environment by implementing appropriate locational controls and high quality design standards.
Policy ib:	Protect the character of residential neighborhoods by preventing the intrusion of incompatible uses that would cause environmental degradation such as excessive noise, noxious fumes, glare, shadowing and traffic.
Policy ic:	Promote planned industrial development in order to avoid land use conflicts with neighboring activities.
Policy id:	Establish and implement regulatory controls that ensure compatibility of development adjacent to major public open space and recreation areas including the Angeles National Forest and Castaic Lake.
Goal ii:	**To provide commercial and industrial lands to accommodate a portion of the projected labor force.**
Policy ii:	Provision of light industrial uses and both neighborhood and highway commercial uses within the Specific Plan area.
Goal iii:	**To foster compatible land use arrangements that contribute to reduced energy consumption and improved air quality.**
Policy iii:	To design land use arrangements that will maximize energy conservation, i.e., provide a balance of land use types within the Specific Plan area which would reduce dependence on the private automobile.
Goal iv:	**To encourage conservation, protection and enhancement of natural ecological, scenic, cultural and open space resources for the benefit and enjoyment of the current and future residential population in the region.**
Policy iva:	Prevent inappropriate development in areas that are environmentally sensitive or subject to severe natural hazards.
Policy ivb:	To achieve consistency with the SCVAP by maintaining steep ridges and hillsides as hillside management areas where feasible and provide building pads that are compatible with basic landforms.
Goal v:	**To coordinate land use with existing and proposed transportation networks.**
Policy v:	Well-designed, highway-oriented commercial facilities in appropriate and conveniently spaced locations.

TABLE 5.9-4
ADOPTED SPECIFIC PLAN GOALS AND POLICIES

II. CIRCULATION	
Goal i:	**To achieve a local transportation system that is consistent with the comprehensive objectives of the General Plan and the needs of the Castaic area residents.**
	Policy i: Provide transportation planning services and facilities that are coordinated with and which support the circulation element of the County of Los Angeles General Plan.
Goal ii:	**To achieve a transportation system that is responsive to economic, environmental, energy conservation and social needs at the local community and areawide level.**
	Policy iia: Coordinate land use with a circulation system that conforms to the County's standards and serves both through and local traffic.
	Policy iib: Provide a roadway network that provides for the needs of future residents and that avoids traffic conflicts in existing and future residential neighborhoods.
	Policy iic: Plan and develop a network of bicycle routes and facilities (including racks and lockers at parks) as well as pedestrian walkways within the Specific Plan area and, where possible, that interconnect with other bicycle routes and transportation modes.
	Policy iid: Provide transportation facilities that will improve the safety, security and dependability of all transportation modes and provide for seismic safety and effectiveness in emergency situations.
	Policy iie: Encourage alternative transportation systems and procedures which will effectively reduce vehicle miles traveled by automobiles.
	Policy iif: Provide road improvements in a timely manner as required to service development. All required roads and road improvements will be open and available for public use at the time of occupancy of each phase of development. Roads shall be provided in accordance with requirements and scheduling of the County Department of Public Works.
Goal iii:	**Preservation and enhancement of aesthetic resources within [the] Interstate Route 5 (I-5) scenic corridor.**
	Policy iii: The Specific Plan site will be situated so as to be behind a major ridgeline and will not be visible from the I-5 second priority scenic highway corridor to the west.
III. HOUSING	
Goal i:	**To develop housing that satisfies the needs of the present and future residents of the NorthLake community.**
	Policy ia: To provide a variety of housing types, prices, ownership possibilities and locations.
	Policy ib: To base development regulations on various dwelling types by planning areas.
Goal ii:	**New construction that reflects concern for durability, resource conservation and prevention of premature deterioration.**
	Policy ii: To maintain quality project standards for residential land development, thus insuring the establishment of neighborhoods with lasting value.
IV. OPEN SPACE/RECREATION	
Goal i:	**To improve opportunities for a variety of outdoor recreational experiences.**
	Policy ia: Develop local parks easily accessible to local residents and workers.
	Policy ib: Develop a system of bikeways and riding and hiking trails; link recreational facilities where possible.
Goal ii:	**To preserve and protect sites with scenic and/or recreational value.**
	Policy ii: Designate substantial open space within the Specific Plan area to meet the public's active and passive, scenic, recreational and conservation needs while achieving a balanced distribution of developable area to open space.

TABLE 5.9-4
ADOPTED SPECIFIC PLAN GOALS AND POLICIES

IV. OPEN SPACE/RECREATION (cont.)	
Goal iii:	**To reduce the risk to life and property from seismic occurrences, flooding, erosion, wildland fires and landslides.**
Policy iiia:	Restrict development in areas subject to seismic and geologic hazards.
Policy iiib:	Restrict urban-type development in floodprone areas, thus avoiding major new floodcontrol works.
Policy iiic:	Design to encourage the multiple use of floodprone areas for recreation and wildlife habitat.
Policy iiid:	Manage development in hillside area to protect their natural and scenic character and to reduce risks from fire, flood, mudslides, erosion and landslides.
Goal iv:	**To promote a fire management system to assist project developers and residents in constructing and maintaining a fire-safe environment.**
Policy iv:	Protection of property and services through a concerted fire management program.
V. COMMUNITY DESIGN AND SCENIC HIGHWAYS	
Goal i:	**To develop an environment that is visually attractive while being efficiently and effectively organized and maintained.**
Policy ia:	Provide and implement design guidelines for architecture, signage, [and] landscaping to enhance project identity and develop a sense of community.
Policy ib:	To apply design guidelines to major entry points, major street intersections and parkways.
Policy ic:	To provide design and maintenance standards for transition areas between urban development and open space.
Goal ii:	**To preserve and enhance the visual aspects of the County's circulation system for aesthetic purposes.**
Policy ii:	To apply special design considerations regarding the views along important corridors within the planning area, including key intersections and vista points.
VI. NOISE	
Goal i:	**To maintain consistency with the County's Noise Element by establishing compatible land use[s] adjacent to transportation facilities and other significant sources of noise and by properly mitigating noise-generating uses that cause exceedance of maximum suggested noise levels.**
Policy i:	To avoid locating noise sensitive facilities, including schools, parks and the library site within areas designated in excess of 65 dBA (dBA is an " A-weighted" system of measuring decibels that is adjusted to match frequencies audible to humans).
Policy ii:	The placement of commercial uses on major intersections and adjacent to the arterial highways.
Policy iii:	The separation of low-density residential uses from arterial highways.
Policy iv:	To provide adequate noise mitigation measures for those uses located within areas designated in excess of 65 dBA on the County's Noise Level Map.
VII. SAFETY	
Goal i:	**Protection of life and property.**
Policy ia:	To require all future development within the Specific Plan area to comply with standards and criteria to reduce or eliminate unacceptable levels of fire and geologic risk.
Policy ib:	To work closely with the County Forester and Fire Warden to ensure that state-of-the-art fire safety procedures and precautions are implemented in all developments within the planning area.
Policy ic:	To stress only low-fuel volume plants in landscaping within the NorthLake Specific Plan area.
Goal ii:	**Reduction of adverse economic, environmental and social conditions resulting from fires and geologic hazards.**
Policy iia:	Revegetate all artificial slopes at the earliest feasible opportunity subsequent to grading in order to reduce erosion potential.
Policy iib:	Provide adequate emergency access to all areas within the Specific Plan site.

The analysis below discusses the Project's consistency with the goals and policies set forth in the NorthLake Specific Plan.

Land Use goals and policies identify that all new development be of high-quality design that is compatible with surrounding land uses; provide for commercial and industrial uses; reduce energy consumption and contribute to improved air quality; encourage the conservation, protection and enhancement of resources; and coordinate with transportation networks. As discussed throughout this SEIR, the proposed Project would implement the NorthLake Specific Plan. As part of the project design, proposed land uses are located in areas that minimize compatibility issues by grouping similar land uses together and concentrating development along the internal circulation system to preserve undeveloped and open space areas. Design elements have been proposed to complement the area's existing aesthetics, including a landscape plan that includes native, drought-tolerant species common to the area. Additionally, the Project proposes development of an extensive greenbelt and trail system connecting schools, parks, amenities, and neighborhoods throughout the community and the Castaic Lake Recreation Area which would limit internal vehicle trips.

Circulation goals and policies state the need for the Project's circulation system to accommodate the needs of both the future on-site community as well as the local off-site, and also be responsive to the area's economic, environmental, energy conservation, and social needs. As stated in Section 4.0, Project Description, the Project would be accessed via three separate access points and would be served by an interconnecting internal roadway system. The Project site would be easily accessible from the local area; however, the northern access point would allow for vehicular access and limit the amount of Project-related traffic impacting the Castaic area.

The Housing goal and policies identify the need to develop housing to satisfy the needs of present and future residents. As discussed in Section 4.0, Project Description, a variety of housing types to accommodate a range of income levels and age groups are proposed as part of the Project, including multi-family residential uses, single-family residential uses, and opportunities for age-restricted residential communities.

Open Space and Recreation goals and policies identify the need to provide adequate recreation and open space opportunities to satisfy a variety of needs (i.e., active, passive, scenic, recreational, and conservation) while minimizing exposure to natural and man-made hazards. As discussed in Section 4.0, Project Description, over half of the proposed Project site would be set aside for recreational use or open space areas. The recreational uses would include a variety of active and passive parks as well as a greenbelt and trail system. These uses would be developed to minimize land use compatibilities as well as exposure to hazards, including geological and flooding hazards.

Community Design and Scenic Highways goals and policies promote the need to develop a visually attractive and aesthetically pleasing Project. The Project would comply with all established design guidelines set forth in the previously approved *NorthLake Specific Plan* and the Project has been designed to preserve the area's natural topography to the maximum extent possible by condensing development areas along the project's internal circulation system and maintaining a largely natural, undeveloped perimeter.

The Noise goal and related policies require the Project to be consistent with the County's Noise Element by avoiding locating noise sensitive uses near incompatible noise-generating uses. As discussed in Section 4.10, Noise, project-level and cumulative noise impacts related to project traffic noise would be significant and unavoidable due to the proximity of existing and proposed roadways to off-site sensitive receptors; however, the noise sensitive uses are existing. Therefore,

although a significant and unavoidable noise impact would occur with the proposed Project, the Project would not be inconsistent with Section II.D of the NorthLake Specific Plan.

Safety goals and policies identify the need to protect both life and property. As discussed in Section 5.5, Fire Hazards, Emergency Response, and Environmental Safety and Section 5.6, Geology and Soils, the Project would comply with all regulatory requirements to ensure the safety of future residents and employees and minimize potential hazards related to Project construction and daily operation. Additionally, the Project would implement all recommended measures included in the current and subsequent geotechnical reports.

Level of Significance without Mitigation: Less than significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None.

Level of Significance with SCVAP 2012 EIR Mitigation: Less than significant.

Recommended 1992 SP EIR Mitigation Measures: None.

Level of Significance with 1992 SP EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant.

Threshold 5.9-2 Would the project be inconsistent with the County zoning ordinance as applicable to the subject property?

Title 22 of the County of Los Angeles Municipal Code contains the County's Zoning Code. The Zoning Code regulates land use, population density, lot coverage, and building sizes and locations. The project site is currently zoned as "Specific Plan." The Specific Plan identifies single-family, multi-family, commercial, light industrial, open space, school/park, and recreation designations (presented as golf facilities) within the Specific Plan area. The proposed Project would implement the approved NorthLake Specific Plan, as identified in the County's Zoning Code. As discussed previously, despite minor modifications, the proposed Project would be consistent with the NorthLake Specific Plan and where the Specific Plan is silent, the Project would comply with the applicable zoning requirements; therefore, the Project would also be consistent with the County Zoning Code.

Level of Significance without Mitigation: No impact.

Recommended SCVAP 2012 EIR Mitigation Measures: None.

Level of Significance with SCVAP 2012 EIR Mitigation: No impact.

Recommended 1992 SP EIR Mitigation Measures: None.

Level of Significance with 1992 SP EIR Mitigation: No impact.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: No impact.

5.9.8 CUMULATIVE IMPACTS

In order for the proposed project and all other related projects to be approved, they are required to be consistent with the County General Plan and SCAG's Regional Comprehensive Plan. Consistency with these plans prevents this and other projects from creating cumulative impacts in terms of land use. The plans did anticipate these developments upon adoption, and therefore have been designed to prevent potential cumulative impacts.

5.9.9 IMPACT CONCLUSION

Land uses within the Project site would be consistent with those designated by the Specific Plan, and therefore will create no significant impact. Furthermore, land uses within the Project site would be compatible with one another because they would conform to the designations of the Specific Plan; hence it will not create a significant adverse impact.

5.9.10 REFERENCES

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5.10 NOISE

This section of the SEIR addresses potential short-term (construction-related) and long-term (operational) noise and vibration impacts that would result from implementing the Project. The noise analysis includes a discussion of the existing noise environment, including monitored data. Key issues in the impact analysis include construction noise, noise from project-generated traffic, and noise from stationary sources. This section also provides mitigation measures, as determined necessary. Noise monitoring data are included in Appendix I of this SEIR.

5.10.1 METHODOLOGY

"Sound" is a vibratory disturbance created by a moving or vibrating source and is capable of being detected. "Noise" is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. Although the terms "sound" and "noise" are often used synonymously, perceptions of sound and noise are highly subjective (Caltrans 2013a). The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance and, in the extreme, hearing impairment.

Decibels and Frequency

In its most basic form, a continuous sound can be described by its frequency or wavelength (pitch) and its amplitude (loudness). Frequency is expressed in cycles per second, or hertz. Frequencies are heard as the pitch or tone of sound. High-pitched sounds produce high frequencies; low-pitched sounds produce low frequencies. Sound pressure levels are described in units called the decibel (dB).

Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB.

Perception of Noise and A-Weighting

A typical noise environment consists of a base of steady "background" noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. The local sources can vary from an occasional aircraft or train passing by, to intermittent periods of sound (such as amplified music), to virtually continuous noise from, for example, traffic on a major highway.

The human ear is not equally sensitive to all frequencies within the sound spectrum. To accommodate this phenomenon, the A-scale was devised; the A-weighted decibel scale (dBA or dB[A]) approximates the frequency response of the average healthy ear when listening to most ordinary everyday sounds. When people make relative judgments of the loudness or annoyance of a sound, their judgments correlate well with the A-weighted sound levels of those sounds. Therefore, the "A-weighted" noise scale is used for measurements and standards involving the human perception of noise.

Human perception of noise has no simple correlation with acoustical energy. Due to subjective thresholds of tolerance, the annoyance of a given noise source is perceived very differently from person to person. The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at 3 feet is approximately 60 dBA, while loud jet engine noises at 1,000 feet equate to 100 dBA, which can cause serious discomfort. Table 5.10-1 shows the relationship of various noise levels in dBA to commonly experienced noise events.

TABLE 5.10-1
NOISE LEVELS FOR COMMON ACTIVITIES

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
–	110	Rock Band
Jet Fly-over at 300 m (1,000 ft)	100	–
Gas Lawn Mower at 1 m (3 ft)	90	–
Diesel Truck at 15 m (50 ft) at 80 km/hr (50 mph)	80	Food Blender at 1 m (3 ft); Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower at 30 m (100 ft)	70	Vacuum Cleaner at 3 m (10 ft)
Commercial Area, Heavy Traffic at 90 m (300 ft)	60	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	50	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	30	Library
Quiet Rural Nighttime	20	Bedroom at Night, Concert Hall (Background)
–	10	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

dBA: A-weighted decibels, m: meter, km/hr: kilometers per hour, ft: feet, mph: miles per hour.
Source: Caltrans 2013a.

Two noise sources do not “sound twice as loud” as one source. As stated above, a doubling of noise sources results in a noise level increase of 3 dBA. It is widely accepted that (1) the average healthy ear can barely perceive changes of a 3 dBA increase or decrease; (2) a change of 5 dBA is readily perceptible; and (3) an increase (decrease) of 10 dBA sounds twice as loud (Caltrans 2013a). In community situations, noise exposure and changes in noise levels occur over a number of years, unlike the immediate comparison made in a field study situation. The generally accepted level at which changes in community noise levels become “barely perceptible” typically occurs at values greater than 3 dBA.

Noise Propagation

From the source to the receiver, noise changes both in level and frequency spectrum. The most obvious change is the decrease in noise level as the distance from the source increases. The manner in which noise reduces with distance depends on the factors described below.

Geometric Spreading from Point and Line Sources: Sound from a small localized source (approximating a “point” source) radiates uniformly outward as it travels away from the source in a spherical pattern. For point sources (e.g., heating, ventilation, and air conditioning [HVAC] units or construction equipment), the sound level attenuates (or drops off) at a rate of 6 dBA for each doubling of the distance (i.e., if the noise level is 70 dBA at 25 feet, it is 64 dBA at 50 feet). Vehicle movement on a road makes the source of the sound appear to emanate from a line (line source) rather than a point when viewed over some time interval. The sound level attenuates or drops off at a rate of 3 dBA per doubling of distance for line sources.

Ground Absorption: To account for the ground-effect attenuation (absorption), two types of site conditions are commonly used in noise prediction: soft site and hard site conditions. Hard sites (i.e., sites with a reflective surface between the source and the receiver, such as parking lots or smooth bodies of water) receive no excess ground attenuation, and the changes in noise levels

with distance (drop-off rate) are simply the geometric spreading of the source. Soft sites are sites that have an absorptive ground surface (e.g., soft dirt, grass, or scattered bushes and trees) and receive an excess ground attenuation value of 1.5 dBA per doubling of distance.

Atmospheric Effects: Wind speed will bend the path of sound to "focus" (increase) it on the downwind side and make a "shadow" (reduction) on the upwind side of the source. At short distances, the wind has minor influence on the measured sound level. For longer distances, the wind effect becomes appreciably greater. Temperature gradients create effects similar to those of wind gradients, except that they are uniform in all directions from the source. On a sunny day with no wind, temperature decreases with altitude, giving a shadow effect for sound. On a clear night, temperature may increase with altitude, focusing sound on the ground surface.

Shielding by Natural and Man-Made Features, Noise Barriers, Diffraction, and Reflection: A large object in the path between a noise source and a receiver can significantly attenuate noise levels at that receiver location. The amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain or landform features as well as man-made features (e.g., buildings and walls) can significantly alter noise levels. For a noise barrier to work, it must be high enough and long enough to block the view from the receiver to a road or to the noise source. Effective noise barriers can reduce outdoor noise levels at the receptor by up to 15 dB.

Noise Descriptors

Several rating scales (or noise "metrics") exist to analyze effects of noise on a community. These scales include the equivalent noise level (L_{eq}), the community noise equivalent level (CNEL), and the day-night average sound level (DNL or L_{dn}). Average noise levels over a period of minutes or hours are usually expressed as dBA L_{eq}, which is the equivalent noise level for that period of time. The period of time averaging may be specified; for example, $L_{eq(3)}$ would be a 3-hour average. When no period is specified, a one-hour average is assumed. Noise of short duration (i.e., substantially less than the averaging period) is averaged into ambient noise during the period of interest. Thus, a loud noise lasting many seconds or a few minutes may have minimal effect on the measured sound level averaged over a one-hour period.

To evaluate community noise impacts, L_{dn} was developed to account for human sensitivity to nighttime noise. L_{dn} represents the 24-hour average sound level with a penalty for noise occurring at night. The L_{dn} computation divides the 24-hour day into two periods: daytime (7:00 AM to 10:00 PM) and nighttime (10:00 PM to 7:00 AM). The nighttime sound levels are assigned a 10 dBA penalty prior to averaging with daytime hourly sound levels. CNEL is similar to L_{dn} except that it separates a 24-hour day into 3 periods: daytime (7:00 AM to 7:00 PM), evening (7:00 PM to 10:00 PM), and nighttime (10:00 PM to 7:00 AM). The evening sound levels are assigned a 5 dBA penalty, and the nighttime sound levels are assigned a 10 dBA penalty prior to averaging with daytime hourly sound levels.

Several statistical descriptors are often used to describe noise, including L_{max}, L_{min}, and $L_{\%}$. L_{max} and L_{min} are respectively the highest and lowest A-weighted sound levels that occur during a noise event. The $L_{\%}$ signifies the noise level that is exceeded x percent of the time; for example, L_{10} denotes the level that was exceeded 10 percent of the time.

Adverse Effects of Noise

Noise is known to have several adverse effects on people. From these known effects of noise, criteria have been established to help protect the public health and safety and to prevent disruption of certain human activities. These criteria are based on such known impacts of noise

on people as hearing loss, speech interference, sleep interference, physiological responses, and annoyance. Each of these potential noise effects on people is briefly discussed in the following narratives.

Hearing loss is not a concern in community noise situations such as residential developments. The potential for noise-induced hearing loss is more commonly associated with occupational noise exposures in heavy industry or very noisy work environments. Typical neighborhood noise levels, including very noisy airport environs, are not sufficiently loud to cause hearing loss.

Speech interference is one of the primary concerns in environmental noise problems. Normal conversational speech is in the range of 60 to 65 dBA, and any noise in this range or louder may interfere with speech. There are specific methods of describing speech interference as a function of distance between speaker and listener and voice level.

Sleep interference is a major noise concern for traffic noise. Sleep disturbance studies have identified interior noise levels that have the potential to cause sleep disturbance. Sleep disturbance does not necessarily mean awakening from sleep, but can refer to altering the pattern and stages of sleep.

Physiological responses are those measurable effects of noise on people and can include changes in pulse rate, blood pressure, etc. While such effects can be induced and observed, the extent to which these physiological responses cause harm or are a sign of harm is not known.

Annoyance is the most difficult of all noise responses to describe. Annoyance is a very individual characteristic and can vary widely from person to person. What one person considers tolerable can be quite unbearable to another of equal hearing capability.

Groundborne Vibration

In contrast to airborne noise, groundborne vibration is not a common environmental problem. Some common sources of groundborne vibration are construction activities such as blasting, pile driving, and operating heavy earth-moving equipment. Trains and similar rail vehicles can also produce vibration. It is unusual for vibration from sources such as buses and trucks to be perceptible.

In quantifying vibration, the peak particle velocity (ppv) is most frequently used to describe vibration impacts and is typically measured in inches per second (in/sec). Vibration levels that may cause annoyance to humans are described using the vibration decibel (VdB). Typically, groundborne vibration generated by man-made activities attenuates rapidly with distance from the source.

Noise Calculations

This analysis assesses potential noise impacts from existing and Project-related traffic, stationary noise sources, and construction.

The study area for the traffic noise impact analysis was defined by the roadway segments identified in the Northlake Traffic Impact Analysis (Stantec 2016) (see Appendix J-1). Traffic noise levels were calculated using the Federal Highway Administration's (FHWA's) Highway Traffic Noise Prediction Model (RD 77-108). The FHWA model determines a predicted noise level through a series of adjustments to a reference sound level. These adjustments account for traffic flows, speed, truck mix, varying distances from the roadway, length of exposed roadway, and

noise shielding. The calculations do not take into account the effect of any noise barriers or topography that may affect ambient noise levels

For stationary and construction noise sources, the distance from the noise source to a receptor is a primary consideration in determining the actual noise level experienced at the receptor. Most reference noise levels are specified at a distance of 50 feet from the source. The calculation of noise from a point source, such as construction or HVAC equipment, at other distances uses the equation

$L_D = L_{50} – 20 \log (D/50)$, where

L_D is the noise level at a distance D from the noise source,

L_{50} is the noise level at a distance of 50 feet from the source, and

20 is a factor used for “hard”, or non-absorpive, surface between the source and receptor.

This equation is the mathematical expression for a noise level being reduced by 6 dBA for each doubling of distance from the source. For “soft”, or absorptive surfaces, such as grassland, the 20 factor is replaced by 25, and the noise level is reduced by approximately 7.5 dBA for each doubling of distance. For very long distances, atmospheric absorption reduces noise at an approximate rate of 1 dBA per 1,000 feet.

Construction equipment can be considered to operate in two modes: stationary and mobile. Noise impacts from stationary equipment are assessed from the center of the equipment, while noise impacts for mobile construction equipment are assessed as emanating from the center of the equipment activity or construction site. For construction equipment, the average noise level, L_{eq}, is related to the maximum noise level, L_{max}, by the following equation:

$L_{eq} = L_{max} + 10 \log (UF)$, where,

L_{eq} is the average noise level from a piece of construction equipment at 50 feet,

L_{max} is the maximum noise level from a piece of construction equipment at 50 feet, and

UF is the acoustic utilization factor.

5.10.2 BACKGROUND INFORMATION

1992 NorthLake Specific Plan Environmental Impact Report

The 1992 SP EIR did not include a noise analysis. Therefore, no specific noise impacts or mitigation measures relevant to noise were previously identified.

2012 Santa Clarita Valley Area Plan Environmental Impact Report

The following summary reflects the noise and vibration impacts from the 2012 Santa Clarita Valley Area Plan (SCVAP) EIR, which is included as background information to provide a context for the scope of this SEIR analysis. The summary presented here is from pages 3.18-28 through 3.18-52 of the 2012 SCVAP EIR). Adopted mitigation measures from the 2012 SCVAP relevant to noise issues are included below in Section 5.10.7.

The following relevant noise and vibration impacts were identified in the 2012 SCVAP EIR:

- Construction Noise. The proposed policies are designed to reduce construction source noise through development review and comment, implementation of adopted noise ordinance and code provisions, use of noise-absorbing barriers where appropriate, and regulating noise from construction activities near residential neighborhoods. Nonetheless, construction noise impacts under the proposed Area Plan could be in violation of the County Noise Ordinance and County of Los Angeles Construction Equipment Noise Restrictions, and a significant noise impact could occur.
- Construction Vibration. In the event that construction creates vibration at or beyond the property boundary that is in exceedance of the vibration perception threshold of 0.01 inch/second over the range of 1 to 199 Hertz, a significant vibration impact would occur.
- Traffic Noise. Buildout of the Area Plan and General Plan would result in Ridge Route Road north of Lake Hughes Road experiencing a noise level increase of 5 dB or greater when compared to buildout under the existing Area Plan and General Plan. A cumulative noise level increase of 5 dB or greater is a significant noise impact.
- Noise-Land Use Compatibility. Buildout of the OVOV Planning Area could cause exterior use areas to be exposed to continuous noise levels greater than those identified in the State Land Use Compatibility Guidelines for the affected land use, which are used by the County of Los Angeles to determine noise impacts, and result in a potentially significant noise impact. However, the proposed Area Plan policies would (1) ensure land use compatibility so that noise sensitive receptors are not adversely affected by noise, and that business centers, rather than noise sensitive uses, are placed along major transportation corridors and (2) ensure acceptable interior noise levels in residences, schools, childcare centers, senior housing, and other noise sensitive uses.

5.10.3 EXISTING CONDITIONS

Site Conditions

The NorthLake site is located just east of Interstate 5 (I-5), north of the community of Castaic and west of the Castaic Lake State Recreation Area (SRA). Existing noise levels in the vicinity of the Project site derive exclusively from transportation sources, especially vehicular noise on the I-5 freeway. Another transportation source is Ridge Route Road, which traverses the western edge of the Project site in a north-south direction; however, traffic on this roadway is typically light and slow-moving, so it does not currently produce noise levels that would be incompatible with the proposed residential uses of the Project.

Existing land uses surrounding the study area consist of single-family residences, apartments, and commercial and/or industrial properties.

Sensitive Receptors

Sensitive noise and vibration receptors are defined in the Los Angeles County General Plan Update Draft EIR as including “residential, schools, libraries, churches, nursing homes, hospitals, and open space/recreation areas where quiet environments are necessary for enjoyment, public health, and safety. Commercial and industrial uses are generally not considered noise- and vibration-sensitive uses, unless noise and vibration would interfere with their normal operations and business activities.”

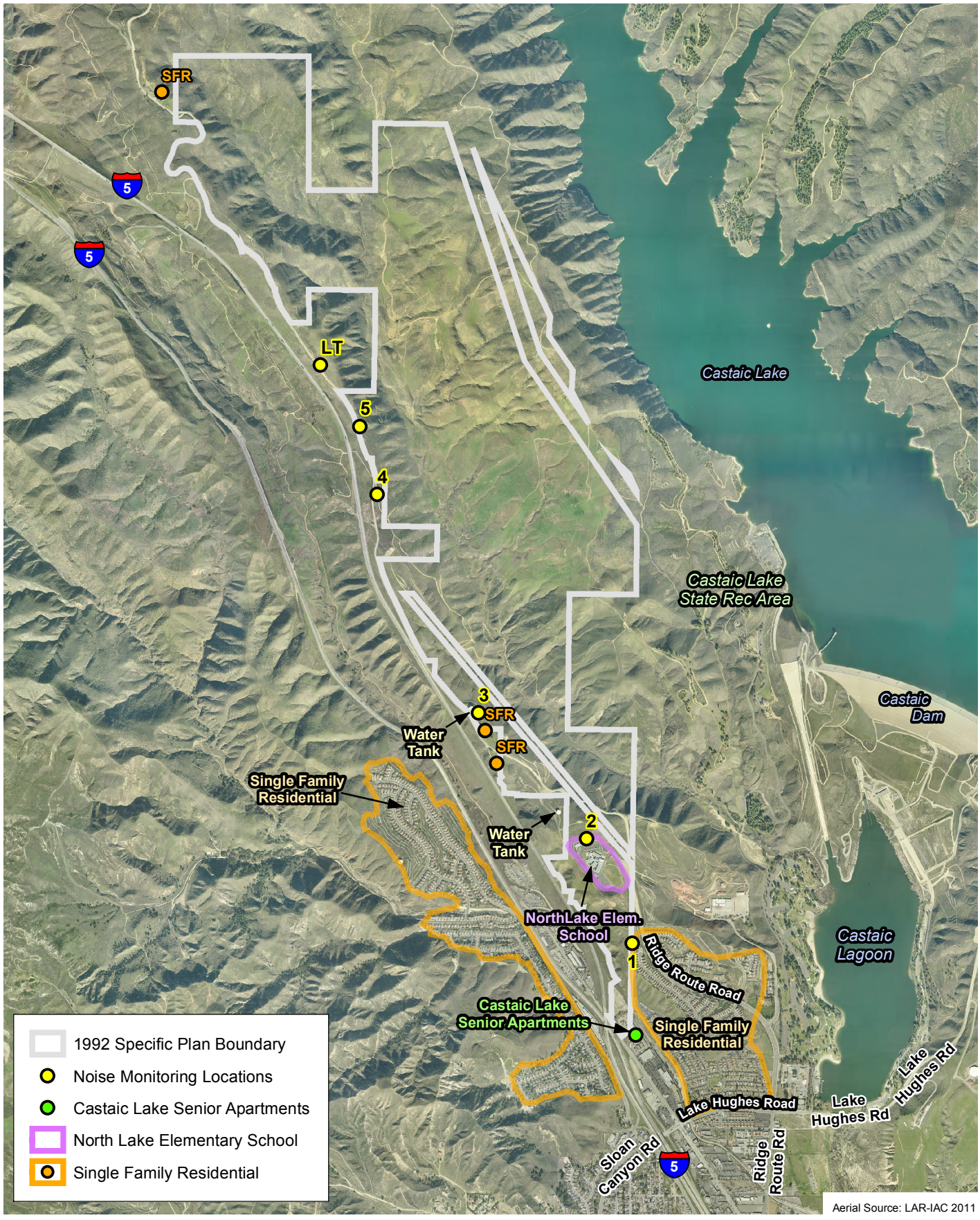
There is one sensitive receptor on the Project site, the Northlake Hills Elementary School. The closest off-site sensitive receptors include the following and are shown on Exhibit 5.10-1.

- Single family residences on Big Oak Lane west of Ridge Route Road, adjacent to the east boundary of the Project site and near the south end of the Project site.
- Single family residences on Pine Crest Place and Mariposa Lane, east of Ridge Route Road and east and northeast of the Big Oak Lane neighborhood
- The Castaic Lake Senior Apartments complex, located adjacent to the southern tip of the Project site and on the east side of Castaic Road
- Two single family residences on Ridge Route Road approximately 2 miles north of Lake Hughes Road and adjacent to the west boundary of the Project site
- One single family residence on Ridge Route Road and adjacent to the northwest corner of the Project site

The residences and school that would be built as part of the proposed Project would be sensitive noise and vibration receptors.

Noise Measurements

In order to characterize the existing noise environment, noise measurements were obtained at 6 locations in the vicinity of Project site. Noise level measurements were taken on April 15, 2015 (short-term) and May 27-29, 2015 (38-hour) using a Larson Davis Laboratories Model 831 (LD 831) integrating sound level meter. Noise monitoring locations are shown on Exhibit 5.10-1. The microphones were mounted approximately five feet above the ground and equipped with a windscreen during all measurements. The meter was calibrated before and after use with a Larson Davis Model CAL200 acoustical calibrator to ensure that the measurements would be accurate. The sound level meters were programmed to record noise levels in “slow” mode in A-weighted form. The duration of short-term measurements was determined by the variability of the noise source; noise was measured until the average noise level was relatively steady and representative of one hour of monitoring. The purpose of the long-term measurement is to obtain a CNEL value for the area. Summaries of the locations and noise measurements are provided in Table 5.10-2, Existing Measured Noise Levels.



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Noise Monitoring Locations and Sensitive Receptors

Exhibit 5.10-1

NorthLake Specific Plan SEIR

N W E S

0.5 0.25 0 0.5 Miles

BonTerra PSOMAS

(Rev: 12-15-2015 JAZ) R:\Projects\Woodri (WCP)\J001\Graphics\SEIR\ex5.10-1_noise_sampling.pdf

TABLE 5.10-2
EXISTING MEASURED NOISE LEVELS

Location ID	Location Description	Time Started/ Duration[a]	Major noise sources	Noise Level (dBA)			Comments
				L_{eq}	L_{max}	L_{min}	
1	Southeast portion of Project site, adjacent to residential uses to the south,100 feet from Ridge Route Road	9:38 AM/15 min	Strong wind	46	52	41	Intermittent sounds from vehicles on Ridge Route Road.
2	55 feet north of adjacent North Lake Hills Elementary School, in southern portion of Project site	10:18 AM/21 min	Strong wind; bell from Elementary School	47	63	38	L_{max} from Elementary School bell. Distant sounds of children playing.
3	Southwestern portion of Project site, 60 feet east of Ridge Route Road. Adjacent to Newhall County Water District Reservoir #1A	11:00 AM/20 min	Strong winds, 1 truck passing	53	68	42	No sounds from water tank. Very windy location.
4	Western edge of Project site, adjacent to Ridge Route Road. 80 feet from Ridge Route Road and 390 feet from I-5 Freeway	12:24 PM/20 min	Strong winds	48	62	40	I-5 Freeway sounds were barely audible.
5	Western edge of project site on northwestern portion of project site, adjacent to Ridge Route Road, 40 feet from road and 400 feet from I-5 Freeway	12:58 PM/ 24 min	Very strong, gusty wind	55	70	41	Two vehicles passed. Freeway sounds very distant.
LT	1,156 ft west of Project site boundary on NW portion of Project site. 45 feet east of Ridge Route Road and 289 feet from I-5 Freeway	38 hours	1-minute data		76	44	CNEL is 61 dBA
			Hourly averages		56	52	

dBA: A-weighted decibels; L_{eq}: Average noise level; L_{max}: Maximum noise level; L_{min}: Minimum noise level; ft: foot/feet; CNEL: Community Noise Equivalent Level

[a] Locations 1 through 5 monitored on April 15, 2015; location LT monitored on May 27-29, 2015

Noise measurement data in Appendix I.

As shown in Table 5.10-2 daytime average noise levels in the Project site do not exceed 56 dBA L_{eq}. At the western edge of the Project site, locations 4 and 5, traffic noise from the I-5 freeway is barely audible. The CNEL measured at location LT was 61 dBA.

Existing Traffic Noise Levels

Existing traffic noise levels were calculated from the traffic volumes provided in the Project's Traffic Impact Analysis using the FHWA Highway Traffic Noise Prediction Model as described in Section 5.10-1, and are shown in Table 5.10-3.

TABLE 5.10-3
EXISTING NOISE LEVELS

Road/Segment	Existing	
	Traffic Volumes	Noise Level at 50 ft from roadway
	ADT	dBA CNEL
Ridge Route Road		
North of Castaic Lake Road	4,000	65
North of Lake Hughes Road	4,000	68
South of Lake Hughes Road	6,000	66
East of I-5 NB Ramp	18,000	68
Between I-5 Ramps	17,000	68
Lake Hughes Road		
West of Castaic Road	25,000	73
East of Castaic Road	6,000	66
East of Ridge Route Road	2,000	59
Castaic Road		
North of Lake Hughes Road	4,000	6
South of Lake Hughes Road	11,000	69
South of Ridge Route Road	3,000	60
Sloan Canyon Road		
East of The Old Road	13,000	70
West of The Old Road	5,000	62
Parker Road		
West of I-5 SB Ramp	12,000	66
West of The Old Road	8,000	65
The Old Road		
North of Sloan Canyon Road	10,000	69
South of Sloan Canyon Road	4,000	62
South of Parker Road	7,000	64
North of I-5 Ramps	7,000	64
I-5		
North of Lake Hughes Road	70,000	83
North of Parker Road	71,000	83
South of Parker Road	89,000	84

ADT: average daily traffic volume; dBA: A-weighted decibels; I: Interstate; NB: northbound; SB: southbound

Noise levels rounded to the nearest whole decibel to avoid implying data and assumptions can produce more accurate predictions.

Source: Stantec 2016, Manalili 2015

5.10.4 RELEVANT PLANS, POLICIES, AND REGULATIONS

State

Residential Interior Noise Standard

Title 24 of the *California Code of Regulations*, also known as the California Building Standards Code or, more commonly, as the California Building Code, requires that residential structures other than detached single-family dwellings be designed to prevent exterior noise intrusion so that the interior L_{dn} or CNEL attributable to exterior sources does not exceed 45 dBA in any habitable room with closed windows (CBSC 2015).

California Land Use Compatibility Guidelines

Title 24 of the *California Code of Regulations*, also known as the California Building Standards Code, or more commonly as the California Building Code, requires that residential structures other than detached single-family dwellings be designed to prevent exterior noise intrusion so that the interior community noise exposure level (CNEL) attributable to exterior sources do not exceed 45 dBA in any habitable room with closed windows (CBSC 2015).

Noise compatibility guidelines from the State General Plan Guidelines are shown below in Table 5.10-4, California Land Use compatibility Guidelines (OPR 2003). The noise compatibility guidelines are intended to be incorporated into land use planning decisions to reduce future noise and land use incompatibilities. For example, as shown below in Table 5.10-4, a CNEL at multiple-family homes that does not exceed 60 dBA is considered normally acceptable, while levels exceeding 75 dBA would be considered clearly unacceptable. These guidelines are primarily used to assess transportation noise impacts to new developments.

TABLE 5.10-4
CALIFORNIA LAND USE COMPATIBILITY GUIDELINES

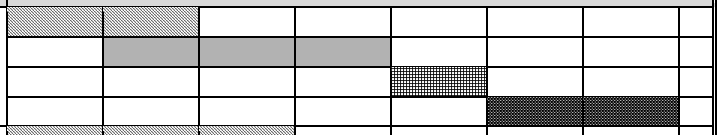
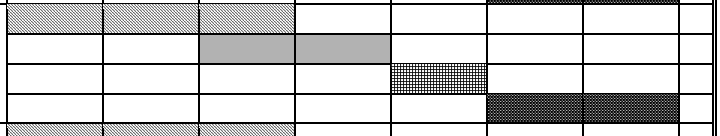
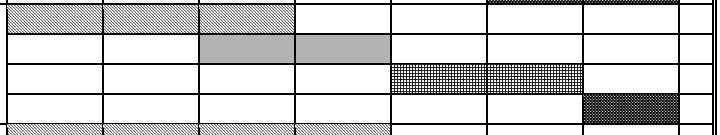
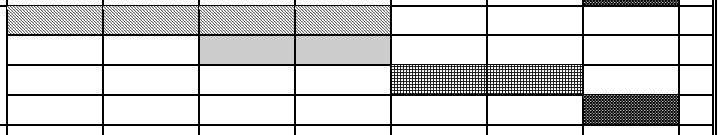
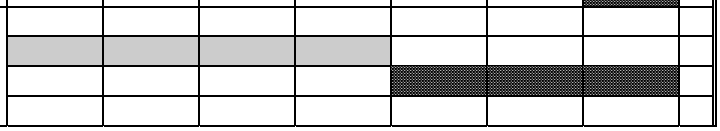
Land Use Category	Community Noise Exposure L_{dn} or CNEL, dB 55 60 65 70 75 80 85
Residential (Low-Density Single-Family, Duplex, Mobile Homes)	
Residential (Multiple-Family Homes)	
Transient Lodging (Motels, Hotels)	
Schools, Libraries, Churches, Hospitals, Nursing Homes	
Auditoriums, Concert Halls, Amphitheaters	

TABLE 5.10-4
CALIFORNIA LAND USE COMPATIBILITY GUIDELINES

Land Use Category	Community Noise Exposure L_{dn} or CNEL, dB 55 60 65 70 75 80 85
Sports Arena, Outdoor Spectator Sports	
Playgrounds, Neighborhood Parks	
Golf Courses, Riding Stables, Water Recreation, Cemeteries	
Office Buildings, Business, Commercial and Professional	
Industrial, Manufacturing, Utilities, Agriculture	

Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirement is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.	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. Outdoor areas must be shielded.	New construction or development should generally not be undertaken. Construction costs to make the indoor environment acceptable would be prohibitive and the outdoor environment would not be acceptable.

L_{dn}: Day-Night Average Sound Level; CNEL: Community Noise Equivalent Level; dB: decibel

Source: OPR 2003.

County

County of Los Angeles General Plan

The current General Plan requires the NorthLake development to address the following policies, as stated in Noise Element. The Project's consistency with the following policies is presented in Section 5.9, Land Use.

Noise Element

- **Policy N 1.1:** Utilize land uses to buffer noise-sensitive uses from sources of adverse noise impacts.
- **Policy N 1.2:** Reduce exposure to noise impacts by promoting land use compatibility.
- **Policy N 1.3:** Minimize impacts to noise-sensitive land uses by ensuring adequate site design, acoustical construction, and use of barriers, berms, or additional engineering controls through Best Available Technologies (BAT).
- **Policy N 1.5:** Ensure compliance with the jurisdictions of State Noise Insulation Standards (Title 24, California Code of Regulations and Chapter 35 of the Uniform Building Code), such as noise insulation of new multifamily dwellings constructed within the 60 dB (CNEL or L_{dn}) noise exposure contours.
- **Policy N 1.6:** Ensure cumulative impacts related to noise do not exceed health-based safety margins.
- **Policy N 1.9:** Require construction of suitable noise attenuation barriers on noise sensitive uses that would be exposed to exterior noise levels of 65 dBA CNEL and above, when unavoidable impacts are identified.
- **Policy N 1.10:** Orient residential units away from major noise sources (in conjunction with applicable building codes).
- **Policy N 1.11:** Maximize buffer distances and design and orient sensitive receptor structures (hospitals, residential, etc.) to prevent noise and vibration transfer from commercial/light industrial uses.
- **Policy N 1.12:** Decisions on land adjacent to transportation facilities, such as the airports, freeways and other major highways, must consider both existing and future noise levels of these transportation facilities to assure the compatibility of proposed uses.

County of Los Angeles Noise Ordinance

Section 12.08 of the County of Los Angeles Code (County Code) contains the County's Noise Ordinance (Noise Ordinance). The Noise Ordinance prohibits unnecessary, excessive, and annoying sounds from sources on private properties by setting limits that cannot be exceeded at adjacent properties.

Transportation Sources

The County's Noise Ordinance requirements are not applicable to mobile noise sources such as automobiles or heavy trucks when traveling in a legal manner on public roadways or on private property. Mobile noise source control is regulated by federal and State laws.

Construction

Section 12.08.440 of the County Code prohibits construction noise between the hours of 7:00 PM and 7:00 AM on weekdays (including Saturday), and at any time on Sunday or a federal holiday if it creates a disturbance across a residential or commercial real-property line. The County also sets maximum construction noise levels "at residential structures" as summarized in Table 5.10-5, County of Los Angeles Construction Equipment Noise Limits.

TABLE 5.10-5
COUNTY OF LOS ANGELES CONSTRUCTION EQUIPMENT NOISE LIMITS

Time Interval	Single-Family Residential (dBA)	Multi-Family Residential (dBA)	Semi-Residential or Commercial (dBA)
Mobile Equipment			
Daily, except Sundays and legal holidays, 7:00 AM to 8:00 PM	75	80	85
Daily, 8:00 PM to 7:00 AM, and all day Sunday and legal holidays	60	64	70
Stationary Equipment			
Daily, except Sundays and legal holidays, 7:00 AM to 8:00 PM	60	65	70
Daily, 8:00 PM to 7:00 AM, and all day Sunday and legal holidays	50	55	60
dBA: A-weighted decibels Source: County of Los Angeles Code §12.08.40			

Operation

The County of Los Angeles Noise Ordinance, Section 12.08.390, also specifies exterior noise levels that cannot be exceeded at the receiving properties for a specified time period. The general application of these standards is to noise made from one property to another. As stated in the ordinance,

> Unless otherwise herein provided, no person shall operate or cause to be operated, any source of sound at any location within the unincorporated county, or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person which causes the noise level, when measured on any other property either incorporated or unincorporated, to exceed any of the following exterior noise standards.

Exceptions to the exterior standards include, but are not limited to, construction and residential air conditioning or refrigeration equipment. These two cases are regulated separately, as described below. The County-specified noise standards are listed in Table 5.10-6, County of Los Angeles Exterior Noise Standards. It should be noted that these standards do not apply to the assessment of land use compatibility for transportation noise.

TABLE 5.10-6
COUNTY OF LOS ANGELES EXTERIOR NOISE STANDARDS

Noise Zone	Designated Noise Zone Land Use	Time Interval	Exterior Noise Level (dBA)
I	Noise-Sensitive Area	Anytime	45
II	Residential Area	10:00 PM to 7:00 AM 7:00 AM to 10:00 PM	45 50
III	Commercial Area	10:00 PM to 7:00 AM 7:00 AM to 10:00 PM	55 60
IV	Industrial Area	Anytime	70
dBA: A-weighted decibels Source: County of Los Angeles Code §12.08.390			

The applicable standards listed in Table 5.10-6 should not be exceeded at the property line of a noise-sensitive use for:

- a cumulative period of more than 30 minutes in any hour. If the ambient L_{50} exceeds the foregoing level, then the ambient L_{50} becomes this standard.
- the applicable standard plus 5 dBA for a cumulative period of more than 15 minutes in any hour. If the ambient L_{25} exceeds the foregoing level, then the ambient L_{25} becomes this standard.
- the applicable standard plus 10 dBA for a cumulative period of more than 5 minutes in any hour. If the ambient $L_{8.3}$ exceeds the foregoing level, then the ambient $L_{8.3}$ becomes this standard.
- the applicable standard plus 15 dBA for more than the standard for a cumulative period of more than 1 minute in any hour. If the ambient $L_{1.7}$ exceeds the foregoing level, then the ambient $L_{1.7}$ becomes this standard.
- the noise standard plus 20 dBA for any time period. If the ambient L_0 exceeds the foregoing level, then the ambient L_0 becomes this standard.

If the measurement location is on a boundary of a property between two different noise zones (see Table 5.10-6), the exterior noise level shall be the arithmetic mean of the exterior noise levels of the subject zones.

Residential Air Conditioning or Refrigeration Equipment

Section 12.08.530 of the County Code prohibits noise from the operation of any air conditioning or refrigeration equipment from exceeding the noise levels in Table 5.10-7, Residential Air Conditioning and Refrigeration Equipment Noise Limits.

TABLE 5.10-7
RESIDENTIAL AIR CONDITIONING AND REFRIGERATION EQUIPMENT NOISE LIMITS

Measurement Location	Units Installed Before 1-1-80 dBA	Units Installed On or After 1-1-80 dBA
Any point on neighboring property line, 5 feet above grade level, no closer than 3 feet from any wall.	60	55
Center of neighboring patio, 5 feet above grade level, no closer than 3 feet from any wall.	55	50
Outside the neighboring living area window nearest the equipment location, not more than 3 feet from the window opening, but at least 3 feet from any other surface.	55	50
dBA: A-weighted decibels Source: County of Los Angeles Code §12.08.530		

County of Los Angeles Vibration Standards

Section 12.08.560 of the County Code prohibits the operation of any device that creates vibration that is above the vibration perception threshold of any individual at or beyond the property boundary of the source if the source is on private property or at 150 feet (46 meters) from the source if on a public space or public right-of-way. According to the County Noise Ordinance, the perception threshold is a motion velocity of 0.01 inch per second (in/sec) over the range of 1 to 100 Hertz (Hz).

Santa Clarita Valley Area Plan

The SCVAP requires the *NorthLake Specific Plan* to address the following policies from its Noise Element. The Project's consistency with the following policies is presented in Section 5.9, Land Use.

Noise Element

- **Policy N-1.1.1:** Use the Noise and Land Use Compatibility Guidelines contained in Figure N-8, which are consistent with State guidelines, as a policy basis for decisions on land use and development proposals related to noise.
- **Policy N-1.1.2:** Continue to implement the adopted Noise Ordinance and other applicable code provisions, consistent with state and federal standards, which establish noise impact thresholds for noise abatement and attenuation, in order to reduce potential health hazards associated with high noise levels.
- **Policy N-1.1.3:** Include consideration of potential noise impacts in land use planning and development review decisions.
- **Policy N-1.1.4:** Control noise sources adjacent to residential, recreational, and community facilities, and those land uses classified as noise sensitive.

- **Policy N-2.1.1:** Encourage owners of existing noise-sensitive uses, and require owners of proposed noise sensitive land uses, to construct sound barriers to protect users from significant noise levels, where feasible and appropriate.
- **Policy N-2.1.5:** Encourage employers to develop van pool and other travel demand management programs to reduce vehicle trip-generated noise in the planning area.
- **Policy N-3.1.1:** Require that developers of new single-family and multi-family residential neighborhoods in areas where the ambient noise levels exceed 60 CNEL provide mitigation measures for the new residences to reduce interior noise levels to 45 CNEL, based on future traffic and railroad noise levels.
- **Policy N-3.1.2:** Require that developers of new single-family and multi-family residential neighborhoods in areas where the projected noise levels exceed 65 CNEL provide mitigation measures (which may include noise barriers, setbacks, and site design) for new residences to reduce outdoor noise levels to 65 CNEL, based on future traffic conditions. This requirement would apply to rear yard areas for single-family developments, and to private open space and common recreational and open space areas for multi-family developments.
- **Policy N-3.1.3:** Through enforcement of the applicable Noise Ordinance, protect residential neighborhoods from noise generated by machinery or activities that produce significant discernable noise exceeding recommended levels for residential uses.
- **Policy N-3.1.4:** Require that those responsible for construction activities develop techniques to mitigate or minimize the noise impacts on residences, and adopt standards that regulate noise from construction activities that occur in or near residential neighborhoods.
- **Policy N-3.1.5:** Require that developers of private schools, childcare centers, senior housing, and other noise sensitive uses in areas where the ambient noise level exceeds 65 dBA (day), provide mitigation measures for these uses to reduce interior noise to acceptable levels.
- **Policy N-3.1.7:** Ensure that design of parks, recreational facilities, and schools minimize noise impacts to residential neighborhoods.
- **Policy N-4.1.1:** Implement and enforce the applicable Noise Ordinance to control noise from commercial and industrial sources that may adversely impact adjacent residential neighborhoods and other sensitive uses.
- **Policy N-4.1.2:** Require appropriate noise buffering between commercial or industrial uses and residential neighbor- hoods and other sensitive uses.
- **Policy N-4.1.3:** Adopt and enforce standards for the control of noise from commercial and entertainment establishments when adjacent to residential neighborhoods and other sensitive uses.

5.10.5 THRESHOLD CRITERIA

Thresholds Addressed in the Initial Study

The Initial Study prepared for the proposed Project (included in Appendix A) and circulated with the NOP concludes that Project implementation would not result in significant impacts for the thresholds of significance listed below. Further analysis of these thresholds in this Draft EIR is not required (a summary of the analysis presented in the Initial Study is provided in Section 7.1, Effects Determined Not to be Significant, of this Draft EIR):

- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?
- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Thresholds Addressed in this Draft Supplemental Environmental Impact Report

The County of Los Angeles utilizes an Initial Study Questionnaire with Thresholds of Significance specific to the County. The Initial Study for the proposed Project concludes that additional analysis of the following thresholds of significance is required in this Draft EIR. The Project will be considered to have a significant effect related to noise if the Project would:

- Expose persons to, or generate, noise levels in excess of standards established in the County General Plan or noise ordinance (Los Angeles County Code, Title 12, Chapter 12.08), or applicable standards of other agencies.
- Expose persons to or generate excessive groundborne vibration or groundborne noise levels.
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from parking areas.
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from amplified sound systems.

5.10.6 RELEVANT PROJECT CHARACTERISTICS

Proposed residential lots will not be accessed directly from the NorthLake community's backbone streets, thus allowing units to be buffered by rear yards, community landscaping, and slope elevation changes. Local street access off the local collectors is limited.

The primary local collector streets are proposed to include traffic-calming features. Traffic-calming measures include parkway treatment (landscaping and street width) and pedestrian-accommodating design. The design of the roadway system would discourage high or excessive vehicular speeds, thereby minimizing traffic noise.

Regulatory Requirements

The following Regulatory Requirements (RRs) are incorporated as part of the proposed Project and are assumed in the analysis presented in this section.

RR 5.10-1 The Project will be constructed in accordance with Section 12.08.440 of the County Code, which prohibits construction activities that generate noise that could create a disturbance across a residential or commercial property line from occurring between 7:00 PM and 7:00 AM on weekdays, or at any time on Sunday or a federal holiday. For this project, this limit would apply to noise-generating construction activities within ¼ mile of a residential, school, or commercial receptor.

5.10.7 ENVIRONMENTAL IMPACTS

Impact Analysis

Threshold 5.10-1 Would the Project expose persons to, or generate, noise levels in excess of standards established in the County General Plan or noise ordinance (Los Angeles County Code, Title 12, Chapter 12.08), or applicable standards of other agencies?

Short-Term Construction Impacts

Hours of Construction

Construction of the Project is expected to begin in 2018, with completion in 2028, a duration of approximately 10 to 11 years. Mass grading, typically the noisiest part of a project of this type, would occur over the first two years of the Project. In areas of the Project site within ¼ mile of a residential, school, or commercial receptor, construction would be limited to the hours of 7:00 AM to 7:00 PM on weekdays and Saturdays, with no construction on Sundays or federal holidays (RR 5.10-1). Therefore, the construction noise hours limits standards of the County noise ordinance, would not be exceeded.

Mobile and Stationary Equipment

This section evaluates temporary noise impacts from construction of the Project to receptors adjacent to or near the Project site. Noise generated by on-site activities is evaluated based on County of Los Angeles noise standards.

Construction noise is related primarily to the use of heavy equipment. Construction equipment can be considered to operate in two modes: stationary and mobile. Stationary equipment operates in one location for one or more days at a time, with either a fixed-power operation (such as pumps, generators, and compressors) or a variable noise operation (such as pile drivers, rock drills, and pavement breakers). Mobile equipment moves around a construction site with power applied in cyclic fashion (such as bulldozers, graders, and loaders).

To determine the L_{eq} of the equipment's operation, the power variation is accounted for by describing the noise at a reference distance from the equipment operating at full power and adjusting it based on the duty cycle of the activity (fraction of time the equipment operates at maximum power). Typical duty cycles and noise levels generated by representative pieces of construction equipment are listed in Table 5.10-8, Typical Maximum Construction Noise Levels.

TABLE 5.10-8
TYPICAL MAXIMUM CONSTRUCTION NOISE LEVELS

Equipment	Noise Level (dBA) at 50 ft	Typical Duty Cycle*
Auger Drill Rig	85	20%
Backhoe	80	40%
Blasting	94	1%
Chain Saw	85	20%
Clam Shovel	93	20%
Compactor (ground)	80	20%
Compressor (air)	80	40%
Concrete Mixer Truck	85	40%
Concrete Pump	82	20%
Concrete Saw	90	20%
Crane (mobile or stationary)	85	20%
Dozer	85	40%
Dump Truck	84	40%
Excavator	85	40%
Front-End Loader	80	40%
Generator (25 KVA or less)	70	50%
Generator (more than 25 KVA)	82	50%
Grader	85	40%
Hydra Break Ram	90	10%
In situ Soil Sampling Rig	84	20%
Jackhammer	85	20%
Mounted Impact Hammer (hoe ram)	90	20%
Paver	85	50%
Pile Driver, Impact (diesel or pneumatic)	95	20%
Pile Driver, Vibratory	95	20%
Pneumatic Tools	85	50%
Pumps	77	50%
Rock Drill	85	20%
Scraper	85	40%
Tractor	84	40%
Vacuum Excavator (vac-truck)	85	40%
Vibratory Concrete Mixer	80	20%

dBA: A-weighted decibels; ft: foot/feet; KVA: kilovolt amps

* Typical duty cycle: the typical relationship between the operating and resting time of a motor.

Source: Thalheimer 2000.

Each construction stage has a different equipment mix depending on the work to be accomplished during that stage. Each stage also has its own noise characteristics; some will have higher continuous noise levels than others, and some have high-impact noise levels. The L_{eq} of each stage is determined by combining the L_{eq} contributions from each piece of equipment used in that stage. Typical heavy construction equipment would include bulldozers, excavators, dump trucks, front-end loaders, graders, and industrial/concrete saws. In typical construction projects (such as the proposed Project), grading activities generate the highest noise levels because grading

involves the largest equipment. Construction activities associated with the Project would not require pile driving.

Because of the effects of noise attenuation, the distance from the noise source to a receptor is a primary consideration in determining the noise level experienced at the receptor. The distances and locations of sensitive receptors near the Project site are discussed below. Because different construction stages involve different pieces of equipment and may involve only localized portions of a site, each construction stage can result in different noise levels being generated depending on the relative distance to sensitive receptors.

Mobile Equipment

Mass grading would include up to 25 scrapers and 14 dozers operating within the Project site. The closest sensitive receptors to areas of planned Project development are the (1) the Northlake Elementary School, (2) single family homes on Big Oak Lane adjacent to the east boundary of the project site, and (3) two residences on the east and west side of Ridge Route Road approximately two miles north of Lake Hughes Road. Site preparation, grading, and building could occur within approximately 75 feet of the school and within 50 feet of the residences. Maximum noise events from a single piece of equipment, such as a dozer, scraper, or excavator at full power may exceed 80 dBA. Maximum noise levels occur intermittently because equipment cycles from full power to lower power levels and moves around a construction area. Because of the variations in power level and distance from equipment to a receptor, average noise levels may be substantially less than maximum noise levels. If a dozer and a scraper operated for a period of time at an average distance of 75 feet from the nearest residences, the noise level would be approximately 80 dBA L_{eq}, which exceeds the 75 dBA noise ordinance threshold (Table 5.10-5). The noise level for this combination of equipment would be less than 75 dBA L_{eq} when operating at a distance greater than 140 feet from a sensitive receptor. There is In order to minimize noise impacts to nearby residences, mitigation measures (MM) MM 5.10-4, MM 5.10-5, and MM 5.10-6 are recommended for implementation to reduce the noise impact.

The County noise ordinance construction noise limits do not include schools as receptors. However, MMs 5.10-4, 5.10-5, and 5.10-6 include the NorthLake Elementary School in order to minimize noise impacts.

Stationary Equipment

Stationary noise sources associated with Project construction would include air compressors, generators, and cranes. As shown on Table 5.10-8, the maximum noise levels from operation of a generator at 50 feet are approximately 82 dBA with a load factor of 50 percent. The most restrictive County daytime stationary equipment noise standard is 60 dBA (Table 5.10-6). The noise level from a generator would not exceed 60 dBA L_{eq} at distances of 450 feet. As there is a potential for stationary equipment to be located within 450 feet of a sensitive receptor, the noise impact is potentially significant. MM 5.10-4 would be incorporated into the Project and would require stationary equipment to operate at a distance of greater than 450 feet or provide an enclosure or similar noise attenuation to limit the average hourly daytime noise level to 60 dBA or less. With the incorporation of MM 5.10-4, the temporary increase in ambient noise levels due to on-site construction stationary sources would be less than significant.

It should be noted that the Castaic Clay and Manufacturing facility is not a sensitive noise receptor and is located approximately 1,000 feet east of the Project site. Noise impacts to the Castaic Clay and Manufacturing facility would be less than significant.

Long-Term Operational Impacts

Noise Generated by On-Site Sources

Primary on-site operational noise sources subject to applicable codes would include HVAC systems; industrial activities; and trucks idling, loading, unloading, and completing other activities at industrial and commercial uses allowed by the *NorthLake Specific Plan*.

The sensitive receptors that may be impacted by on-site noise sources would be the Northlake Elementary School and the two single family residences adjacent to Ridge Route Road approximately two miles north of Lake Hughes Road, as shown on Exhibit 5.10-1. All other off-site sensitive noise receptors are not located near proposed industrial, commercial, recreational, or residential development. Proposed land uses are shown on Exhibit 4-1.

Industrial Sources

Table 5.10-6, County of Los Angeles Exterior Noise Standards, does not include a zone classification for schools. For purposes of this analysis, it is assumed that the applicable standard for schools is the same as for a residential area. Therefore, based on Table 5.10-6, noise from the proposed industrial areas adjacent to the Northlake Elementary School and the single family residences adjacent to Ridge Route Road should not exceed 60 dBA L_{eq} from 7:00 AM to 10:00 PM and 57.5 dBA L_{eq} between 10:00 PM and 7:00 AM.[1] These noise levels may be exceeded for short periods as described in the text accompanying Table 5.10-6. The industrial uses in the areas in these areas have not been determined. Because the noise sources are not known, the noise impact to the sensitive receptors is potentially significant. To avoid a significant impact, mitigation measure MM 5.10-7 is recommended, which would require noise analysis of proposed industrial development to ensure compliance with Section 12.08.390 of the County Code.

Commercial Sources

Based on Table 5.10-6, noise from the proposed commercial areas adjacent to the single family residences should not exceed 55 dBA L_{eq} from 7:00 AM to 10:00 PM and 50 dBA L_{eq} between 10:00 PM and 7:00 AM. These noise levels may be exceeded for short periods as described in the text accompanying Table 5.10-6. The commercial uses in the areas adjacent to residences have not been determined. Because the noise sources are not known, the noise impact to the school is potentially significant. To avoid a significant impact, mitigation measure MM 5.10-7 is recommended, which would require noise analysis of proposed commercial development to ensure compliance with Section 12.08.390 of the County Code.

Residential Sources

Typical noise sources associated with residential development include HVAC units, children playing, home and yard maintenance activities, barking dogs, and trash collection. Sensitive receptors near proposed residential development are other proposed residences and the proposed middle school. HVAC unit noise is limited by Section 12.08.530 of the County Code, as shown in Table 5.10-7. Because the noise sources and receptor locations are not known, the noise impact to the sensitive receptors is potentially significant. To avoid a significant impact, mitigation measure MM 5.10-8 is recommended, which would require noise analysis of proposed

1 The noise standard between two different zones is the arithmetic mean of the standards for each zone.

multi-family residential development to ensure compliance with Section 12.08.530 of the County Code.

Noise-Land Use Compatibility

As described in Section 5.10.4, Los Angeles County uses the California Land Use Compatibility Guidelines shown in Table 5.10-4. These guidelines and applicable sections of the State building code are used to evaluate the proposed Project's compatibility with future ambient noise levels.

The primary and highest noise levels within the Project site would be from automobile and truck traffic on Ridge Route Road and NorthLake Boulevard, which would be the primary access road. The highest traffic volumes and noise levels on interior roads would be on A Street, B Street, and E Street, which would be the primary connector roads from Ridge Route Road and NorthLake Boulevard to the residential areas of the Project site. Future noise levels adjacent to these roads were calculated from the projected on-site traffic volumes included on the NorthLake traffic impact analysis (Stantec 2016) and are shown in Table 5.10-9.

TABLE 5.10-9
ESTIMATED ON-SITE TRAFFIC NOISE LEVELS

Road/Segment[a]	Buildout ADT	CNEL at 50 feet	Distance to 65 dBA CNEL feet	Distance to 60 dBA CNEL feet
Ridge Route Road				
South of B Street	28,000	72	144	311
South of Northlake Boulevard	24,000	72	130	280
NorthLake Boulevard				
North of Ridge Route	22,000	71	123	265
North of A Street	15,000	70	95	205
South of E Street	9,000	67	68	146
North of E Street	5,000	65	-	100
B Street				
North of Ridge Route	5,000	62	-	63
A Street				
East of NorthLake Boulevard	8,000	64	-	86
E Street				
East of NorthLake Boulevard	5,000	62	-	63

ADT-Average daily traffic volume; CNEL – Community Noise Equivalent Level

[a] Speed on Ridge Route Road and Northlake = 45 miles per hour (mph); Speed on interior roads = 35 mph.

Source: Stantec 2016; Manalili 2015.

The maximum "Normally Acceptable" exterior noise level for single family and duplex residential land uses is 60 dBA CNEL; see Table 5.10-4. The maximum Normally Acceptable exterior noise level for multi-family residential land uses is 65 dBA CNEL. As shown in Table 5.10-9, multi-family homes built near Ridge Route Road or Northlake Boulevard could have exterior noise levels exceeding 65 dBA CNEL. Single family and duplex residences built near any of the road segments shown in Table 5.10-9 could have exterior noise levels exceeding 60 dBA CNEL. The exceedance of the Normally Compatible noise levels for residential uses is potentially significant and MM 5.10-9 is recommended.

Commercial development is proposed for an area adjacent to Ridge Route Road south of Northlake Boulevard. As shown in Table 5.10-9, exterior noise levels near Ridge Route Road could exceed 70 dBA CNEL, the maximum Normally Acceptable exterior noise level for commercial development. The exceedance of the Normally Acceptable noise levels for commercial uses is potentially significant; implementation of MM 5.10-10 would reduce the potential impacts to a less than significant level.

The maximum Normally Acceptable exterior noise level for industrial land uses is 75 dBA CNEL. As shown in Table 5.10-9, there are no on-site traffic noise levels projected to exceed 75 dBA CNEL. Proposed industrial uses on the Project site would be compatible with the future noise environment; the impact would be less than significant.

Level of Significance without Mitigation: Potentially significant.

Recommended SCVAP EIR Mitigation Measures:

MM 5.10-1 Maintain adequate buffer distances from nearby residences to freeways, high traffic volume roads, railroads, airports, manufacturing facilities, industrial facilities, mining centers and other existing processing plants where the public may be affected by noise. **(SCVAP MM 3.18-2)**

MM 5.10-2 Sound barriers should be required of the owners of the proposed sensitive land uses adjacent to high noise sources, to protect the public from significant noise impacts. **(SCVAP MM 3.18-4)**

MM 5.10-3 The placement of telecommunication towers and antennas power boxes should comply with noise ordinances. All related equipment should be rated not to exceed 45 dB(A) at any residential property line. **(SCVAP MM 3.18-6)**

Level of Significance with SCVAP EIR Mitigation Measures: Potentially significant.

Recommended 1992 EIR Mitigation Measures: The 1992 SP EIR did not include a noise analysis; therefore, no mitigation measures or impacts relevant to noise are carried forward.

Level of Significance with 1992 EIR Mitigation Measures: N/A: Potentially significant.

Recommended Project-Specific Mitigation Measures:

MM 5.10-4 Prior to the issuance of each permit for clearing, grading, or building within 500 feet of existing residences or the Northlake Elementary School, the Developer shall demonstrate that the construction plans or specifications include the following noise-abatement and control measures. This measure applies to all phases of construction.

- All construction equipment, including internal combustion engines and stationary equipment (used for construction purposes) shall be equipped with noise-reducing features such as, but not limited to, improved mufflers, intake silencers, ducts, engine enclosures, and acoustical shields or shrouds.
- Stationary sources located within 450 feet of the Northlake elementary School or off-site residences shall have noise abatement, such as engine enclosures or placed behind barriers, to limit the noise level at the sensitive receptor to 60 dBA L_{eq} or less.

- Stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.
- On-site and off-site construction haul routes shall be designed to avoid noise-sensitive uses, as feasible.
- Equipment and material staging areas and equipment maintenance areas shall be located at least 500 feet from sensitive noise receivers, if feasible.

MM 5.10-5 To the extent feasible, intensive noise activity (e.g., operation of earth moving equipment) within 750 feet of the Northlake Elementary School shall be scheduled to occur when classroom instruction is not scheduled. If grading or similar construction activity within 150 feet of the school is to occur for longer than one day while school is in session, the Developer shall install a temporary noise barrier between the construction area and the school. The barrier shall be 12 feet high and solid from the ground to the top. The barrier shall be constructed with plywood that is at least ½ inch thick or with another material that creates a noise transmission loss of at least 20 dBA. The barrier shall be located to break the line of sight between the school and the construction area. Where feasible, the barrier shall remain in place until the completion of construction near the school. This measure applies to all phases of construction.

MM 5.10-6 If grading or similar construction activity within 150 feet of off-site residences is to occur for longer than one day, the Developer shall install a temporary noise barrier between the construction area and the residences. The barrier shall be 12 feet high and solid from the ground to the top. The barrier shall be constructed with plywood that is at least ½ inch thick or with another material that creates a noise transmission loss of at least 20 dBA. The barrier shall be located to break the line of sight between the residences and the construction area. Where feasible, the barrier shall remain in place until the completion of construction near the residences. This measure applies to all phases of construction.

MM 5.10-7 Prior to issuing of a building permit for each industrial and commercial land use, the Developer shall submit a noise analysis to the County demonstrating that projected noise levels from stationary sources, vehicle activity, loading docks, and similar sources will not exceed the exterior noise standards of Section 12.08.390 of the County Code. For purposes of this MM, school use shall be considered as a residential use (Zone II) in the County Code. The noise analysis shall, to the extent feasible, be cumulative, considering not only the noise generated by the proposed development but also noise generated by adjacent and nearby stationary sources. Where the adjacent properties have not been developed, the analysis should show that the noise level from the proposed development would be far enough below the standard to allow a reasonable increment for future noise sources without exceeding the standard.

MM 5.10-8 Prior to issuing of a building permit for each multi-family residential use, the Developer shall submit a noise analysis to the County demonstrating that projected air conditioning and refrigeration equipment noise levels would not exceed the standards of Section 12.08.530 of the County Code.

MM 5.10-9 Prior to issuing of building permits for single-family and duplex residences adjacent to Ridge Route Road, Northlake Boulevard, A Street, B Street, or E Street, and for multi-family residences adjacent to Ridge Route Road and Northlake Boulevard, the Developer shall submit a noise analysis to the County demonstrating that

projected exterior noise levels at areas where residents would reasonably be expected to spend more than one hour, such as back yards, would not exceed 60 dBA CNEL for single family and duplex residences and 65 dBA CNEL for multi-family residences. This standard is based on the California Land Use Compatibility Guidelines. Noise abatement may be achieved by setbacks, berms, and walls.

The noise analysis shall also demonstrate that interior noise levels in all habitable rooms would of duplexes and multi-family residences would not exceed 45 dBA CNEL, as required by the California Building Code.

MM 5.10-10 Prior to issuing of building permits for commercial land uses adjacent to Ridge Route Road, the Developer shall submit a noise analysis to the County demonstrating that projected exterior noise levels at areas where patrons would reasonably be expected to spend more than one hour, such as outdoor restaurant seating, would not exceed 70 dBA CNEL.

Net Level of Significance:

Construction: Less than significant.

Operation: Less than significant.

Threshold 5.10-2 Would the project expose persons to or generate excessive groundborne vibration or groundborne noise levels?

As described in Section 5.10.1, groundborne vibration is not a common environmental problem. Some common sources of groundborne vibration are construction activities such as blasting, pile driving, and operating heavy earth-moving equipment. There would not be pile driving on the proposed Project. Blasting is discussed in detail under Threshold 5.10-4 and is summarized below. The following analysis addresses potential vibration impacts from construction equipment.

Vibration impacts can result in structural damage and annoyance to persons. The County Code prohibits vibration activities that exceed the vibration perception threshold (annoyance) of 0.01 particle velocity (ppv) inch per second (in/sec). Compliance with this standard would eliminate the potential for structural damage as shown in Table 5.10-10.

TABLE 5.10-10
VIBRATION DAMAGE THRESHOLD CRITERIA

Structure and Condition	Maximum ppv (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

ppv: peak particle velocity; in/sec: inch(es) per second

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Source: Caltrans 2013b.

The closest sensitive receptors to areas of Project development, are the (1) the Northlake Elementary School, (2) single family homes on Big Oak Lane adjacent to the east boundary of the project site, and (3) two residences on the east and west side of Ridge Route Road approximately two miles north of Lake Hughes Road. Site preparation, grading, and building could occur within approximately 75 feet of the school and within 50 feet of the residences.

Conventional heavy construction equipment would be used for mass grading. Table 5.10-11 summarizes typical vibration levels measured during construction activities for various vibration-inducing pieces of equipment at a distance of 25 feet (Caltrans 2013b). At a distance of 50 feet, vibration levels from vibratory rollers are estimated at approximately 0.1 ppv in/sec and vibration levels from large bulldozers are estimated at approximately 0.4 ppv in/sec. These vibration levels would exceed the County standard. Table 5.10-11 also shows the calculated distance required to reduce vibration levels to the 0.01 ppv in/sec County Code limit. Because vibratory rollers could be operated within 265 feet of sensitive receptors and large bulldozers and scrapers could be operated within 135 feet of sensitive receptors, the impact is potentially significant and mitigation is required. Implementation of MM 5.10-11 requires that plans and specifications be submitted to the County to demonstrate that grading and construction activities would not generate vibration effects exceeding 0.01 peak particle velocity (ppv) inch per second (in/sec).

TABLE 5.10-11
VIBRATION LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	ppv at 25 ft (in/sec)	Distance to reduce to 0.01 ppv in/sec
Vibratory roller	0.210	265
Large bulldozer	0.089	135
Caisson drilling	0.089	135
Loaded trucks	0.076	125
Jackhammer	0.035	80
Small bulldozer	0.003	9
ppv: peak particle velocity; ft: feet; in/sec: inches per second.		
Source: Caltrans 2013b; FTA 2006.		

Blasting

Results of limited seismic refraction surveys indicated that some mass grading may require heavy ripping or possibly blasting owing to the existence of hard cemented beds within the bedrock section. Potential vibration impact from blasting vibration is analyzed in Threshold 5.10.4.

Level of Significance without Mitigation: Potentially significant.

Recommended SCVAP EIR Mitigation Measures: None

Level of Significance with SCVAP EIR Mitigation Measures: Potentially significant.

Recommended 1992 EIR Mitigation Measures: The 1992 SP EIR did not include a noise analysis; therefore, no mitigation measures or impacts relevant to noise are carried forward.

Level of Significance with 1992 EIR Mitigation Measures: Potentially significant.

Recommended Project-Specific Mitigation Measures:

MM 5.10-11 Prior to the issuance of each grading permit, the Developer shall submit plans and/or specifications to the County demonstrating that site preparation and grading within 265 feet of a residence or the NorthLake Elementary School shall be performed with equipment that will not cause a vibration exceeding 0.01 peak particle velocity (ppv) inch per second (in/sec).

Net Level of Significance: Less Than Significant.

Threshold 5.10-3 Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from parking areas?

Permanent increases to ambient noise would result from Project-generated traffic and from noise generated by on-site sources to sensitive receptors.

Noise Generated by Project Traffic

The County Code has no standards for a substantial permanent increase in ambient noise levels. The following criteria were used in the County General Plan EIR and are therefore used in this EIR noise analysis (DRP 2014).

A substantial permanent noise increase would occur if:

- Project-related traffic noise would increase the ambient noise level at noise-sensitive locations by 3 dBA CNEL or more and the ambient noise levels under with-project conditions fall within the “Normally Unacceptable” or “Clearly Unacceptable” categories; OR

- Project-related traffic noise increases the ambient noise level at noise-sensitive locations by 5 dBA CNEL or more.

The proposed Project at buildout would generate an estimated 35,953 weekday trips (Stantec 2016); these vehicles would use roadways in the Project vicinity as identified in Section 5.11, Traffic, Access and Circulation, of this SEIR. The addition of Project traffic to existing traffic would increase the traffic volumes on these roadways and therefore, the traffic noise at adjacent receptors. As previously described, a doubling of traffic volume would increase traffic noise levels by 3 dBA.

To estimate noise level increases and impacts due to the development of the proposed Project, noise levels and noise level increases were calculated from the traffic volumes provided in the Project’s Traffic Impact Analysis using the FHWA Highway Traffic Noise Prediction Model as described in Section 5.10-1. The traffic report provided volumes for Existing, Existing plus Project, 2028 Cumulative Conditions No Project, and 2028 Cumulative Conditions with Project scenarios.

Table 5.10-12 shows the traffic noise levels without and with Project volumes and the calculated noise increases for the Existing and 2028 direct Project impact cases.

TABLE 5.10-12
OFF-SITE TRAFFIC NOISE IMPACTS

Road/Segment	Existing			2028 Cumulative		
	Noise Level at 50 feet dBA CNEL		Noise Level Increase	Noise Level at 50 feet dBA CNEL		Noise Level Increase
	w/o Project	w/Project	dBA	w/o Project	w/Project	dBA
Ridge Route Road						
North of Castaic Lake Road	64.6	73.7	**9.1**	64.6	73.8	**9.2**
North of Lake Hughes Road	67.9	76.9	**9.0**	70.3	77.4	**7.0**
South of Lake Hughes Road	66.3	70.9	**4.5**	70.0	73.2	**3.2**
East of I-5 NB Ramp	68.1	70.2	2.1	70.0	71.3	1.3
Between I-5 Ramps	67.8	69.3	1.4	69.1	70.0	0.8
Lake Hughes Road						
West of Castaic Road	72.5	74.4	1.8	73.5	74.5	1.1
East of Castaic Road	66.3	72.0	**5.7**	68.6	72.1	**3.6**
East of Ridge Route Road	58.5	58.5	0.0	63.3	63.6	0.3
Castaic Road						
North of Lake Hughes Road	64.6	65.3	0.7	64.6	64.8	0.2
South of Lake Hughes Road	69.0	69.9	0.9	68.1	68.6	0.5
South of Ridge Route Road	60.3	61.6	1.4	62.5	62.8	0.3
Sloan Canyon Road						
East of The Old Road	69.7	71.7	2.0	71.6	72.5	1.0
West of The Old Road	62.5	63.8	1.3	62.5	62.8	0.3
Parker Road						
West of I-5 SB Ramp	66.3	66.7	0.4	67.0	67.1	0.1
West of The Old Road	64.5	64.9	0.4	64.5	64.6	0.1
The Old Road						
North of Sloan Canyon Road	68.6	70.4	1.8	70.9	71.9	1.0
South of Sloan Canyon Road	61.5	62.2	0.7	69.8	69.9	0.0
South of Parker Road	64.0	64.4	0.4	64.0	64.1	0.2
North of I-5 Ramps	64.0	64.4	0.4	65.9	66.0	0.1
I-5						
North of Lake Hughes Road	83.4	83.5	0.1	84.7	84.7	0.0
North of Parker Road	83.4	83.9	0.5	85.0	85.3	0.2
South of Parker Road	84.4	85.2	0.8	85.5	86.0	0.5

ADT: average daily traffic volume, dBA: A-weighted decibels, I: Interstate, NB: northbound, SB: southbound

Noise levels shown to the tenth of one decibel do not indicate noise levels forecasted to that accuracy but are shown to indicate small increases.

Bold indicates a noise increase of 3 dBA or more.

Source: Stantec 2016, Manalili 2015

As shown in Table 5.10-12 for both the Existing with Project and 2028 with Project scenarios, the Project generated traffic would cause traffic noise increases greater than 3 dBA on four road segments:

- Ridge Route Road north of Castaic Lake Road

- Ridge Route Road north of Lake Hughes Road
- Ridge Route Road south of Lake Hughes Road
- Lake Hughes Road east of Castaic Road

All of these road segments have adjacent residences and the with-Project noise levels would be in the Normally Unacceptable range; the impact would be significant. Mitigation of the noise impact with barriers adjacent to the affected road segments is not feasible because many of the residences have existing barriers and because the barriers would not reduce noise to the second story of 2-story homes and noise impacts would be significant and unavoidable.

The Project-generated traffic on Ridge Route Road north of Castaic Road would also increase traffic noise levels at the NorthLake Elementary School. Although the school is approximately 500 feet from Ridge Route Road and existing daytime noise levels are less than 50 dBA L_{eq} (Table 5.10-2), the Project buildout traffic would increase traffic noise levels by more than 9 dBA, which is considered a substantial and significant increase.

Noise Generated by On-Site Sources

Noise generated by on-site sources was analyzed under Threshold 5.10.1. Because the County has established standards for noise levels generated by on-site sources, an exceedance of those limits would be a substantial noise increase. The analysis of Threshold 5.10.1 showed that, without mitigation, noise from commercial, industrial, and residential sources would be potentially significant. Implementation of MMs 5.10-4 and 5.10-8 would reduce these impacts to less than significant levels.

Level of Significance without Mitigation: Potentially significant for off-site traffic noise from Project generated traffic and noise generated by on-site industrial, commercial, and residential sources.

Recommended SCVAP EIR Mitigation Measures: None

Level of Significance with SCVAP EIR Mitigation Measures: Potentially significant.

Recommended 1992 EIR Mitigation Measures: The 1992 SP EIR did not include a noise analysis; therefore, no mitigation measures or impacts relevant to noise are carried forward.

Level of Significance with 1992 EIR Mitigation Measures: Potentially significant.

Recommended Project-Specific Mitigation Measures:

MM 5.10-4, in Threshold 5.10.1 would be applicable to generation of noise from on-site industrial and commercial sources. MM 5.10-8, in Threshold 5.10.1 would be applicable to generation of noise from on-site residential sources.

Net Level of Significance: Significant and unavoidable.

Threshold 5.10-4 Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from amplified sound systems?

There would be a temporary increase in ambient noise levels in the vicinity of the Project site due to Project-related construction. Noise generated by on-site construction equipment was analyzed under Threshold 5.10.1 and showed that, without mitigation, construction noise would be potentially significant.

Construction Traffic (Off-Site)

During construction, noise would be generated on local roadways by heavy trucks delivering construction materials and workers commuting to and from the job site. It is anticipated that earthwork would balance cut and fill on-site and off-site hauling of excavated materials would be minimal. However, during the peak building periods, it is estimated that there could be 250 to 300 worker trips on Ridge Route Road north of Lake Hughes Road at the start and at the end of the construction day. There may also be periods when there would be an estimated maximum of 10 one-way truck trips per hour during the day. These traffic volumes would temporarily increase hourly average traffic noise on Ridge Route Road north of Lake Hughes Road by 2 to 4 dBA L_{eq}. The increase in traffic noise would be audible during the periods of peak construction activity. An hourly average traffic noise increase of 4 dBA L_{eq} during the daytime work hours would increase the CNEL by approximately 2 dBA, which would be less than the 3 dBA CNEL threshold. The impact would be less than significant.

Construction traffic would also use Lake Hughes Road between Ridge Route Road and I-5, and Ridge Route Road between Lake Hughes Road and I-5. As shown in the traffic impact study and Table 5.10-3, the existing traffic volumes on these road segments are greater than the traffic volume on Ridge Route Road north of Lake Hughes Road. Therefore, the construction traffic noise increase on Lake Hughes Road between Ridge Route Road and I-5, and Ridge Route Road between Lake Hughes Road and I-5 would be less than the increase on Ridge Route Road north of Lake Hughes Road analyzed above. The impact would be less than significant.

Blasting

Results of limited seismic refraction surveys indicated that some mass grading may require heavy ripping or possibly blasting owing to the existence of hard cemented beds within the bedrock section.

Noise and airborne vibration perceived during blasting is the result of an air blast. An air blast is a pressure disturbance that travels through the air like any other sound, and it is quantified in the same manner as any noise event. Because of the impulsive nature of the blast, it is commonly referred to as an "over-pressure" (a temporary increase in air pressure over the standard atmospheric pressure). Generally, air blasts are of short duration, usually 2 to 10 seconds. Because the air blast contains mostly low frequencies (typically less than 250 Hz), it is often felt rather than heard. The over-pressure (and resultant noise) is a function of the source strength (charge weight), weather conditions, and distance to the receiver. The peak sound level (L_{peak}) is the maximum instantaneous sound level during a stated time and is often used for measurement of blast noise or impulse noise.

Factors that affect ground vibration transmission include explosive composition, charge weight and delays, distance, depth of burial of the charge, and geologic formations. Air overpressure transmission is also affected by intensity, terrain features (trees, foliage, and other screening)

orientation of the blast face, atmospheric conditions, temperature gradients and wind direction and velocity.

Blasting Noise and Vibration Guidelines

Office of Surface Mining Reclamation and Enforcement

The U. S. Department of Interior, Office Of Surface Mining Reclamation and Enforcement (OSM) has established OSM Blasting Performance Standards, which are codified in Part 30 of the Code of Federal Regulations. The performance standards include limits for airblast and maximum peak particle velocity as follows:

> Airblast. (1) Limits. (i) Airblast shall not exceed the maximum limits listed below at the location of any dwelling, public building, school, church, or community or institutional building outside the permit area, except as provided in Paragraph (e) of this Section (below).
>
> (e) The maximum airblast and ground-vibration standards of paragraphs (b) and (d) of this section shall not apply at the following locations:
>
> (1) At structures owned by the permittee and not leased to another person,
> (2) At structures owned by the permittee and leased to another person, if a written waiver by the lessee is submitted to the regulatory authority before blasting.

Lower frequency limit of measuring system, in Hz (+/- 3 dB)	Maximum level, in dB
0.1 Hz or lower--flat response[1]	134 peak
2 Hz or lower--flat response	133 peak
6 Hz or lower--flat response	129 peak
C-weighted--slow response[1]	105 peak dBC

[1] Only when approved by the regulatory authority.
Source: OSM 2013.

> (ii) If necessary to prevent damage, the regulatory authority shall specify lower maximum allowable airblast levels than those of Paragraph (b)(1)(i) of this Section (the table above) for use in the vicinity of a specific blasting operation.
>
> Maximum peak particle velocity. (i) The maximum ground vibration shall not exceed the following limits at the location of any dwelling, public building, school, church, or community or institutional building outside the permit area:

Distance(D)from the blasting site, in feet	Maximum allowable peak particle velocity(V max) for ground vibration, in inches/ second[1]	Scaled-distance factor to be applied without seismic monitoring[2] (Ds)
0 to 300	1.25	50
301 to 5,000	1.00	55
5,001 and beyond	0.75	65

[1] Ground vibration shall be measured as the particle velocity. Particle velocity shall be recorded in three mutually perpendicular directions. The maximum allowable peak particle velocity shall apply to each of the three measurements.
[2] Applicable to the scaled-distance equation of Paragraph (d)(3)(i) of this Section.
Source: OSM 2013.

It should be noted that the vibration level that causes a potential for structural damage from blasting is not the same as the structural damage potential data shown in Table 5.10-10. Data from blasting research shows that no residential damage is likely to occur at blast vibration levels less than 2.0 ppv in/sec (Caltrans 2013b).

U.S. Bureau of Mines

The U. S Bureau of Mines (USBM) 1980 publication, "Structure Response and Damage Produced by Ground Vibration From Surface Mine Blasting" includes the following conclusions (Caltrans 2013b):

- The potential for damage to residential structures is greater with low-frequency blast vibration (below 40 Hz) than with high frequency blast vibration (40 Hz and above).
- The type of residential construction is a factor in the vibration amplitude required to cause damage
- For low-frequency blast vibration, a limit of 0.75 in/sec ppv for modern drywall construction and 0.50 in/sec ppv for older plaster-on-lath construction was proposed. For frequencies above 40 Hz, a limit of 2.0 in/sec ppv for all types of construction was proposed

Caltrans Guidance

Human response to blast vibration and air overpressures from blasting is difficult to quantify. Ground vibration and air overpressures can be felt at levels that are well below those required to produce any damage to structures. The duration of the event has an effect on human response, as does the frequency. Events are of short duration, 1–2 seconds, for millisecond-delayed blasts. Typically, the longer the event and the higher the frequency, the more adverse the effect on human response. Factors such as frequency of occurrence, fright or "startle factor," level of personal activity at the time of the event, health of the individual, time of day, orientation of the individual (standing up or lying down), the perceived importance of the blasting operation, and other political and economic considerations also affect human response (Caltrans 2013b).

Although the duration of an event affects human response, some researchers have found that fewer blasts of a longer duration are preferable to many blasts with shorter durations. There would be fewer times of perceived disturbance. Fixed locations such as quarries may be able to take advantage of this. Construction projects, however, usually have constraints such as smaller volumes of material to be blasted and sequence of the work that would preclude this. Table 5.10-13, Human Response to Blasting Ground Vibration and Air Overpressure, indicates the average human response to vibration and air overpressures that may be anticipated when the person is at rest, situated in a quiet surrounding.

TABLE 5.10-13
HUMAN RESPONSE TO BLASTING GROUND VIBRATION AND AIR OVERPRESSURE

Average Human Response	PPV (in/sec)	Airblast (dB)
Barely to distinctly perceptible	0.02–0.10	50–70
Distinctly to strongly perceptible	0.10–0.50	70–90
Strongly perceptible to mildly unpleasant	0.50–1.00	90–120
Mildly to distinctly unpleasant	1.00–2.00	120–140
Distinctly unpleasant to intolerable	2.00–10.00	140–170
Source: Caltrans 2013b.		

The listing of vibration levels and air overpressure levels in Table 5.10-13 above does not indicate that there is any connection between the two, except as the particular levels apply to human response. In blasting, an increase in vibration can often be accompanied by a decrease in air overpressures, and vice versa.

In reviewing the above responses, one must distinguish between the average individual and those who may reside at either end of the human response spectrum. At one end are persons who might perceive some financial benefit or common good from the Project. Although they may not appreciate the inconvenience of the blasting, unless they are physically damaged in some manner, they may not complain. At the other end of the spectrum, individuals who do not want the Project to take place may be disturbed by the slightest inconvenience and will generally make their feelings known (Caltrans 2013b).

Blasting Impacts

As described above, there are many factors affecting blast impacts including but not limited to: distance between the blast location and the receptors, charge weight, depth of burial of the charge, geologic formations, and atmospheric conditions. However, the quantity of blasting required and the various parameters, such as frequency, charge weight, are not known and cannot be quantified until site conditions, including geological and atmospheric data, and Project requirements are reviewed by a blasting expert when blasting is required. Therefore, there would be a potentially significant noise and vibration impact and mitigation is required (refer to MM 5.10-12).

Level of Significance without Mitigation: Construction: Potentially significant.

Recommended SCVAP EIR Mitigation Measures: None

Level of Significance with SCVAP EIR Mitigation Measures: Potentially significant.

Recommended 1992 EIR Mitigation Measures: The 1992 SP EIR did not include a noise analysis; therefore, no mitigation measures or impacts relevant to noise are carried forward.

Level of Significance with 1992 EIR Mitigation Measures: Potentially significant.

Recommended Project-Specific Mitigation Measures:

MM 5.10-12 If blasting is required, the Applicant or its contractor shall hire a certified blasting expert to develop a blasting program to be approved by the County Department of Public Works. The program shall include but not be limited to the following elements:

- Design the blast to limit noise and vibration at any residence or the NorthLake Elementary School to the limits recommended by the Office of Surface Mining Reclamation and Enforcement or similarly recognized authority.
- Based on the blasting locations, define an impact area where noise and vibration impacts are anticipated to be distinctly perceptible.
- Inform all homeowners and tenants in the impact area of the Project, the planned blasting program, and the anticipated noise and vibration impacts. In addition to printed literature, have a public meeting. Provide a contact for homeowners for pre- and post-blast questions.

- Use blast signals to notify residents prior to each blast.
- Monitor blasts to verify noise and vibration levels at the nearest receptor(s).

Net Level of Significance: Significant and unavoidable.

5.10.8 CUMULATIVE IMPACT

Noise Generated by Project Traffic

Neither the Los Angeles County Code nor the Los Angeles County General Plan EIR has standards for a cumulative increase in ambient noise levels. The following criteria are used in this EIR noise analysis.

A significant cumulative noise increase would occur if:

- Cumulative traffic noise would increase the ambient noise level at noise-sensitive locations by 3 dBA CNEL or more and the ambient noise levels under with-project conditions fall within the “Normally Unacceptable” or “Clearly Unacceptable” categories and the Project contribution to the noise increase is 1 dBA or more; OR
- Cumulative traffic noise would increase the ambient noise level at noise-sensitive locations by 5 dBA CNEL or more and the ambient noise levels under with-project conditions fall within the “Normally Acceptable” or “Clearly Acceptable” categories and the Project contribution to the noise increase is 3 dBA or more; OR
- The Project causes the cumulative with-Project noise level to change the land use compatibility classification from “normally acceptable” or conditionally acceptable” to “conditionally unacceptable” or “clearly unacceptable.”

The long-term scenario is the Cumulative Year (2028) With Project condition, as described in the Project’s Traffic Analysis (refer to Section 5.11 of this SEIR). Cumulative traffic noise increases are shown in Table 5.10-14, Cumulative Traffic Noise Impacts.

TABLE 5.10-14
CUMULATIVE TRAFFIC NOISE IMPACTS

Road/Segment	Existing	2028 Cumulative	Noise Level Increase	Project Contribution
	Noise Level at 50 feet dBA CNEL			
	w/o Project	w/ Project	dBA	dBA
Ridge Route Road				
North of Castaic Lake Road	64.6	73.8	**9.2**	**9.2**
North of Lake Hughes Road	67.9	77.4	**9.4**	**7.0**
South of Lake Hughes Road	66.3	73.2	**6.9**	**3.2**
East of I-5 NB Ramp	68.1	71.3	**3.2**	1.3
Between I-5 Ramps	67.8	70.0	2.2	0.8
Lake Hughes Road				
West of Castaic Road	72.5	74.5	2.0	1.1
East of Castaic Road	66.3	72.1	**5.8**	**3.6**
East of Ridge Route Road	58.5	63.6	**5.1**	0.3
Castaic Road				
North of Lake Hughes Road	64.6	64.8	0.2	0.2
South of Lake Hughes Road	69.0	68.6	-0.4	0.5
South of Ridge Route Road	60.3	62.8	2.6	0.3
Sloan Canyon Road				
East of The Old Road	69.7	72.5	2.8	1.0
West of The Old Road	62.5	62.8	0.3	0.3
Parker Road				
West of I-5 SB Ramp	66.3	67.1	0.8	0.1
West of The Old Road	64.5	64.6	0.1	0.1
The Old Road				
North of Sloan Canyon Road	68.6	71.9	**3.3**	1.0
South of Sloan Canyon Road	61.5	69.9	**8.3**	0.0
South of Parker Road	64.0	64.1	0.2	0.2
North of I-5 Ramps	64.0	66.0	2.1	0.1
I-5				
North of Lake Hughes Road	83.4	84.7	1.4	0.0
North of Parker Road	83.4	85.3	1.9	0.2
South of Parker Road	84.4	86.0	1.6	0.5

ADT: average daily traffic volume; dBA: A-weighted decibels; I: Interstate, NB: northbound; SB: southbound

Noise levels shown to the tenth of one decibel do not indicate noise levels forecasted to that accuracy but are shown to indicate small increases.

Bold indicates a noise increase of 3 dBA or more.

Source: Stantec 2016, Manalili 2015

Table 5.10-14 shows that a significant cumulative noise increase would occur on five road segments:

- Ridge Route Road north of Castaic Lake Road
- Ridge Route Road north of Lake Hughes Road
- Ridge Route Road south of Lake Hughes Road
- Lake Hughes Road east of Castaic Road
- The Old Road north of Sloan Canyon Road

There are no sensitive receptors adjacent to the segment of Ridge Route Road east of the I-5 northbound ramp.

Mitigation of the noise impact with barriers adjacent to the affected road segments is not feasible because many of the residences have existing barriers and because the barriers would not reduce noise to the second story of 2-story homes and impacts would be significant and unavoidable.

Traffic Noise to On-Site Receptors

The analysis of Threshold 5.10.1 is based on Cumulative Year 2028 traffic volumes and is therefore a cumulative analysis. As discussed in Threshold 5.10.1, with the implementation of MM 5.10-8 and 5.10-9, the impact would be less than significant.

Vibration

Construction vibration is a local impact. There are no identified projects anticipating construction concurrently with the proposed Project and near the sensitive receptors that could be affected by the proposed Project. As such, there would be no cumulative sources of construction vibration and no cumulative impact.

Construction Noise

There would be a potential for significant cumulative construction noise impacts if off-site construction would occur near a sensitive receptor concurrently with on-site construction near that same receptor. There are no identified projects that are near off-site sensitive receptors that would concurrently with the proposed Project. The cumulative impact would be less than significant.

Level of Significance without Mitigation: Potentially cumulatively significant for off-site traffic noise from Project generated.

Recommended SCVAP EIR Mitigation Measures: None

Level of Significance with SCVAP EIR Mitigation Measures: Potentially cumulatively significant.

Recommended 1992 EIR Mitigation Measures: The 1992 SP EIR did not include a noise analysis; therefore, no mitigation measures or impacts relevant to noise are carried forward.

Level of Significance with 1992 EIR Mitigation Measures: Potentially significant.

Recommended Project-Specific Mitigation Measures: None.

Net Level of Significance:

Significant and unavoidable.

Less than significant for traffic noise to on-site receptors, vibration, and construction noise.

5.10.9 IMPACT CONCLUSION

There would be significant and unavoidable direct and cumulative traffic noise impacts to sensitive receptors adjacent to Ridge Route Road north of Castaic Lake Road and Ridge Route Road north of Lake Hughes Road.

There would be significant and unavoidable vibration and noise impacts from blasting.

With the incorporation of the recommended mitigation measures identified in this section, all other Project-direct and cumulative noise impacts would be less than significant.

5.10.10 REFERENCES

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5.11 TRAFFIC, ACCESS, AND CIRCULATION

5.11.1 METHODOLOGY

This section of the Supplemental Environmental Impact Report (SEIR) describes potential traffic impacts relative to the proposed Project and is based on information contained within the following sources:

- Los Angeles County, Department of Regional Planning. 1992 (June). *NorthLake Specific Plan Draft Environmental Impact Report* (On file with the County of Los Angeles Department of Regional Planning).
- Stantec Consulting Services Inc. 2016a (September). *Northlake Traffic Impact Analysis* (Included in Appendix J-1).
- Stantec Consulting Services Inc. 2016b (April). *Project Description – Northlake Specific Plan SEIR and Northlake TIA Differences* (Included in Appendix J-2).

Traffic Performance Criteria

Impact criteria are based on two primary measures. The first is "capacity", which establishes the vehicle carrying ability of a road segment, and the second is "volume". The volume measure is either a traffic count (in the case of existing volumes) or a traffic forecast for a future point in time. The ratio between the volume and the capacity gives a volume/capacity (V/C) ratio and, based on that V/C ratio, a corresponding level of service (LOS) is defined. Traffic LOS is designated "A" through "F" with LOS "A" representing free flow conditions and LOS "F" representing severe traffic congestion. Traffic flow quality descriptions for each LOS are from the 2010 Highway Capacity Manual (HCM) produced by the Transportation Research Board of the National Research Council and is described in Table 5.11-1 for arterial roadways and intersections and Table 5.11-2 for freeways.

Table 5.11-3 summarizes the V/C ranges listed for arterial roads, intersections, and freeway segments and are those used by the County of Los Angeles. The V/C ranges listed for freeway segments are based on the V/C and LOS relationships specified in the HCM for basic freeway sections with free-flow speeds of 65 miles per hour (mph), and the V/C method is specified by the County's Congestion Management Program (CMP) for the evaluation of CMP freeway monitoring stations.

The V/C is the method used in this analysis for the California Environmental Quality Act (CEQA) determination of impacts since it is the method specified by the CMP.

Both the V/C ratio and the LOS are used to identify significant impacts. Certain LOS values are deemed unacceptable, and an increase in the V/C ratio that causes or contributes to the LOS being unacceptable is defined as a significant impact. Note that, while the California Department of Transportation (Caltrans) guidelines for the preparation of traffic studies recommend the HCM 2010 method for the evaluation of State highway facilities, those guidelines do not include a threshold of significance for the determination of a significant project impact. While the Caltrans guidelines do not identify specific impact criteria due to differences between rural and urban areas of the State, as well as differences between the northern, central, and southern regions, the local Caltrans Districts will determine the impact criteria based on the appropriate requirements of that District. As such, the thresholds of significance criteria specified by the local agencies (i.e., Caltrans District 7, County of Los Angeles, and the Los Angeles County CMP) are utilized for this analysis.

In establishing V/C-based performance criteria, there are certain items that need to be addressed to obtain suitable V/C estimates and relate them to LOS. For instance, while average daily traffic (ADT) is a useful measure to show general levels of traffic on a facility and to provide data for other related aspects (e.g., noise and air quality), highway congestion is largely a peak hour or peak period occurrence and ADT does not reflect peak period conditions very effectively. Because of this, ADT is not used here as the basis for capacity evaluation but instead this evaluation focuses on those parts of the day when such congestion can occur, specifically the AM and PM peak hours.

For the arterial system and freeway system, the peak hour is the accepted time period used for impact evaluation. The analysis of the arterial road system is based on intersection capacity since this is the defining capacity limitation on an arterial highway system. The analysis of the freeway system is based on peak hour volumes by direction.

Levels of service for arterial roadway intersections and for freeway mainline segments are determined based on operating conditions during the AM and PM peak hours. For intersections, the intersection capacity utilization (ICU) method is applied, providing a planning level basis for determining V/C and LOS. This method adds the V/C ratios for the critical movements of an intersection and is the preferred procedure for intersection analysis by the County of Los Angeles. The ICU method is generally compatible with the intersection capacity analysis method outlined in the HCM 2010. For freeway segments, the V/C method is applied, which also provides a planning level basis for determining capacity utilization and LOS and which is the method specified by the County CMP. The HCM 2010 equates V/C ratios to other performance measures such as speed and density, as shown in Table 5.11-4.

TABLE 5.11-1
ARTERIAL ROADWAY AND INTERSECTIONS LEVEL OF SERVICE DESCRIPTIONS

LOS	Traffic Flow Description	V/C or ICU
A	Minimal or no vehicle delay.	0.00 – 0.60
B	Slight delay to vehicles.	0.61 – 0.70
C	Moderate vehicle delays, traffic flow remains stable.	0.71 – 0.80
D	More extensive delays at intersections.	0.81 – 0.90
E	Long queues create lengthy delays.	0.91 – 1.00
F	Severe delays and congestion.	> 1.00
LOS: level of service; V/C: Volume to Capacity ratio; ICU: Intersection Capacity Utilization Source: Stantec 2016a		

TABLE 5.11-2
FREEWAY LEVEL OF SERVICE DESCRIPTIONS

LOS	Traffic Flow Description	Density (pc/mi/ln)
A	Free-flow conditions. Free-flow speed prevails and vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream. The effects of incidents or point breakdowns are easily absorbed.	≤11
B	Reasonably free-flow operations, and free-flow speed on the freeway is maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high. The effects of minor incidents and point breakdowns are still easily absorbed.	>11–18
C	Traffic flow and speeds are near the free-flow speed of the freeway. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver. Minor incidents may still be absorbed, but the local deterioration in service quality will be significant. Queues may be expected to form behind any significant blockages.	>18–26
D	Speeds begin to decline with increasing flows, with density increasing more quickly. Freedom to maneuver within the traffic stream is seriously limited and drivers experience reduced physical and psychological comfort levels. Even minor incidents can be expected to create queuing, because the traffic stream has little space to absorb disruptions.	>26–35
E	Operation at capacity. Operations on the freeway at this level are highly volatile because there are virtually no usable gaps within the traffic stream, leaving little room to maneuver within the traffic stream. Any disruption to the traffic stream can establish a disruption wave that propagates throughout the upstream traffic flow. The physical and psychological comfort afforded to drivers is poor.	>35–45
F	Breakdown, or unstable flow. Breakdown occurs when the ratio of demand to capacity exceeds 1.00. Whenever queues due to a breakdown exist, they have the potential to extend upstream for considerable distances.	>45

LOS: level of service; pc/mi/ln: passenger cars per mile per lane

Source: Stantec 2016a

TABLE 5.11-3
VOLUME/CAPACITY RATIO LEVEL OF SERVICE RANGES

LOS	Roadway V/C and Intersection ICU Ranges	Freeway Segment V/C Ranges*
A	0.00–0.60	0.00 – 0.30
B	0.61–0.70	0.31 – 0.50
C	0.71–0.80	0.51 – 0.71
D	0.81–0.90	0.72 – 0.89
E	0.91–1.00	0.90 – 1.00
F	Above 1.00	Above 1.00

LOS: level of service; V/C: volume to capacity ratio; ICU: intersection capacity utilization; mph: miles per hour

* Values based on a free flow speed of 65 mph.

Source: Stantec 2016a

TABLE 5.11-4
LEVEL OF SERVICE CRITERIA FOR BASIC FREEWAY SEGMENTS

Criteria	LOS				
	A	B	C	D	E
Maximum density (pc/mi/ln)	11	18	26	35	45
Minimum speed (mph)	65.0	65.0	64.6	59.7	52.2
Maximum V/C	0.30	0.50	0.71	0.89	1.00
Maximum service flow rate (pc/h/ln)	710	1,170	1,680	2,090	2,350

LOS: level of service; pc/mi/ln: passenger cars per mile per lane; mph: miles per hour; V/C: volume to capacity ratio; pc/h/ln: passenger cars per hour per lane.

Notes: The exact mathematical relationship between density and V/C has not always been maintained at LOS boundaries because of the use of rounded values. Density is the primary determinant of LOS. The speed criterion is the speed at maximum density for a given LOS.

Values based on a free flow speed of 65 mph.

Source: Stantec 2016a

The ICU calculation method and associated impact criteria for the study area arterial system are summarized in Table 5.11-5. The County utilizes a variable scale of ICU impact amounts that are based on the pre-project LOS.

The County CMP specifies that LOS E is the acceptable threshold for arterial intersections. Therefore, the CMP analysis presented in this analysis utilizes LOS E as the acceptable threshold for CMP purposes.

The freeway V/C calculation method and associated impact criteria for the study area freeway system are summarized in Table 5.11-6. The County CMP specifies that LOS E or existing LOS, whichever is worse, represents the performance standard for freeway segments, and Caltrans' goal is to maintain no worse than LOS E in urban areas.

TABLE 5.11-5
INTERSECTION CAPACITY UTILIZATION ARTERIAL INTERSECTION PERFORMANCE CRITERIA

V/C Calculation Method

Level of service to be based on peak hour ICU values calculated using the following assumptions:

Saturation Flow Rates:

County Method:	1,600 vehicles/hour/lane for through lanes, right-turn lanes, and single left-turn lanes
	2,880 vehicles/hour/lane for dual left-turn lanes (total of both lanes)
Clearance Interval:	0.10

Significant Impact Thresholds[a]

An intersection is considered to be significantly impacted if the project increases the ICU by an amount equal to or greater than the amounts set forth below:

County Thresholds:	Pre-Project ICU	Project Increment
	0.71–0.80 (LOS C)[b]	greater than or equal to 0.04
	0.81–0.90 (LOS D)	greater than or equal to 0.02
	0.91 or more (LOS E and F)	greater than or equal to 0.01

V/C: Volume/Capacity Ratio; ICU: Intersection Capacity Utilization; LOS: level of service

[a] Note: For intersections under joint jurisdiction of the County and Caltrans or Caltrans, the analysis utilizes the corresponding threshold of the lead agency (County) or local agency.

[b] Note: The County guidelines do not address situations where pre-project conditions are less than 0.71. In that situation, County staff has interpreted the guidelines to mean that an increase resulting in a with-project condition of 0.75 or more is considered significant. The interpretation is based on the following scenario, which is addressed by the guidelines: 0.71 (pre-project) + 0.04 (project increment) = 0.75 and is a significant impact.

Source: Stantec 2016a

TABLE 5.11-6
INTERSECTION CAPACITY UTILIZATION FREEWAY
MAINLINE PERFORMANCE CRITERIA

V/C Calculation Method
Level of service to be based on peak hour V/C values calculated using the following assumptions for a planning level analysis:
Saturation/Service Flow Rates:
Mainline Mixed-flow/General Purpose Lane: 2,000 vehicles/hour/lane HOV or HOT Lane: 1,600* vehicles/hour/lane
Saturation flow rates derived from Caltrans PeMS data and through discussions with Caltrans staff.
Impact Threshold
A freeway mainline segment is considered to be significantly impacted if each of the following conditions are met: • The segment is forecasted to operate deficiently (i.e., worse than LOS E in urban areas or the existing LOS, whichever is worse). • Compared to the V/C in the no-project alternative, the V/C in the with-project alternative increases by greater than or equal to .02 (the impact threshold specified in the CMP).
V/C: Volume/Capacity Ratio; HOV: high occupancy vehicle; HOT: high occupancy toll; Caltrans: California Department of Transportation; PeMS: Performance Monitoring System; LOS: Level of Service; CMP: Congestion Management Program; vph: vehicles per hour. * For buffered or contiguous HOV facilities, LOS C occurs at approximately 1,650 vph or less if there is significant bus volume or if there are physical constraints. However, for the purpose of planning studies, Caltrans District 7 has specified a capacity of 1,600 vph based on the desire to maintain an operating condition for the HOV lanes that is better than for general purpose lanes. As such, a V/C ratio of 1.00 in the HOV lane represents a better operating condition than a V/C ratio of 1.00 in the general purpose lanes. Source: Stantec 2016a

5.11.2 BACKGROUND INFORMATION

1992 NorthLake Specific Plan Environmental Impact Report

The following summary reflects conditions existing at the time of preparation and certification of the 1992 NorthLake Specific Plan Environmental Impact Report (1992 SP EIR), which is incorporated by reference and is included as background information to provide a context for the scope of this SEIR analysis. Mitigation measures adopted as part of the 1992 SP EIR relevant to traffic issues are included below in Section 5.11.7.

The following traffic impacts were identified in the 1992 SP EIR:

- The Project-generated traffic would impact six of the nine intersections analyzed to operate at LOS D or worse during one of the four phases of Project completion.
- Future traffic (background, related projects, proposed Project) in the area will result in adverse impacts on the nine intersections and on the road network in the study area.

The SEIR focuses on the impacts of implementing the *NorthLake Specific Plan* based on existing conditions at the time the Notice of Preparation (NOP) for this document was distributed in 2015. The SEIR updates the existing conditions baseline information from the 1992 SP EIR where conditions in 2015 are new or different from the previous EIR.

2012 Santa Clarita Valley Area Plan Environmental Impact Report

Section 3.2, Transportation and Circulation, of the 2012 Santa Clarita Valley Area Plan Environmental Impact Report (SCVAP 2012 EIR) summarizes existing and projected traffic conditions in the County's Planning Area. The County's Planning Area consists of unincorporated land outside the City of Santa Clarita's (City) Planning Area and its adopted Sphere of Influence (SOI) but within the One Valley One Vision (OVOV) Planning Area boundaries. The City Planning Area consists of its incorporated boundaries and adopted SOI. Both the County and City Planning Areas comprise the OVOV Planning Area.

Buildout of the County's proposed Santa Clarita Valley Area Plan Update would reduce traffic on the County's roadways, including those monitored by the Los Angeles County CMP, and at principal intersections. However, without implementation of mitigation measures, impacts would be potentially significant. Implementation of the SCVAP 2012 would not result in a change in air traffic patterns; would not substantially increase hazards due to a design feature or incompatible uses; would not result in inadequate emergency access; and would not generate a parking demand that exceeds municipal code-required parking capacity. Furthermore, implementation of the proposed Area Plan would promote policies, plans, and programs supporting alternative transportation and would remove hazards and barriers to pedestrians and bicyclists. Therefore, with the implementation of mitigation measures potential traffic and circulation impacts would be less than significant.

5.11.3 EXISTING CONDITIONS

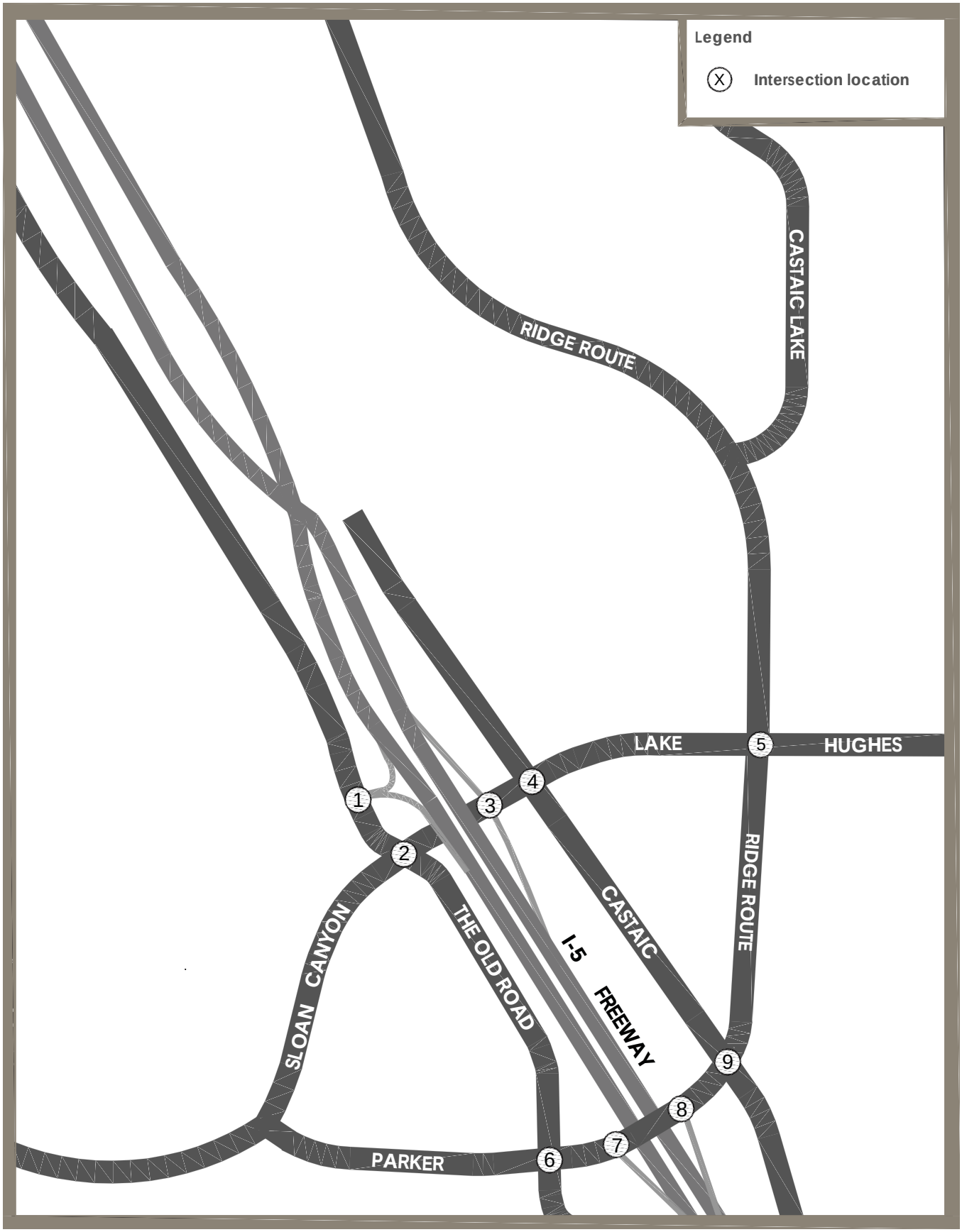
Study Area

The Traffic Study prepared for the Project addresses the local study area in the nearby Castaic community (where Project-generated traffic could potentially cause a significant impact) and the Interstate 5 (I-5) segments near the Project site. The local study area and the freeway segments are presented in Exhibit 5.11-1. As shown, the local study area extends south to the Ridge Route Road/Parker Road interchange and westerly to Sloan Canyon Road. The study area was derived by utilizing a traffic model to distribute Project trips to the area's roadways, and each major intersection with a discernible volume of Project traffic (i.e., daily traffic volumes > 500 ADT) was included in the study area.

The existing local roadway system in the nearby Castaic community is shown on Exhibit 5.11-2 in the form of mid-block lanes, intersection lane configurations and intersection control types for the intersections being studied.

Immediately south of the Project site, Ridge Route Road has been constructed with a 64-foot roadway width in 80 feet of right-of-way to just north of Castaic Lake Drive. From just north of Castaic Lake Drive to just south of the Castaic State Recreational Area park entrance, Ridge Route Road has been constructed with a 94-foot roadway width within 110 feet of right-of-way. From just south of the park entrance to Lake Hughes Road, Ridge Route Road has been constructed with an 84-foot roadway within 100 feet of right-of-way, with a raised median ranging from 4 feet to 14 feet in width. South of Lake Hughes Road, Ridge Route Road consists of two lanes with parking in each direction within a 64-foot roadway width.

Lake Hughes Road is a major highway currently configured with two lanes in each direction between Ridge Route Road and I-5. West of Ridge Route Road, Lake Hughes Road has been constructed with a 90-foot roadway width.



Source: Stantec 2013

Project Local Study Area – Intersection Location Map

Exhibit 5.11-1

NorthLake Specific Plan SEIR

N
W E
S

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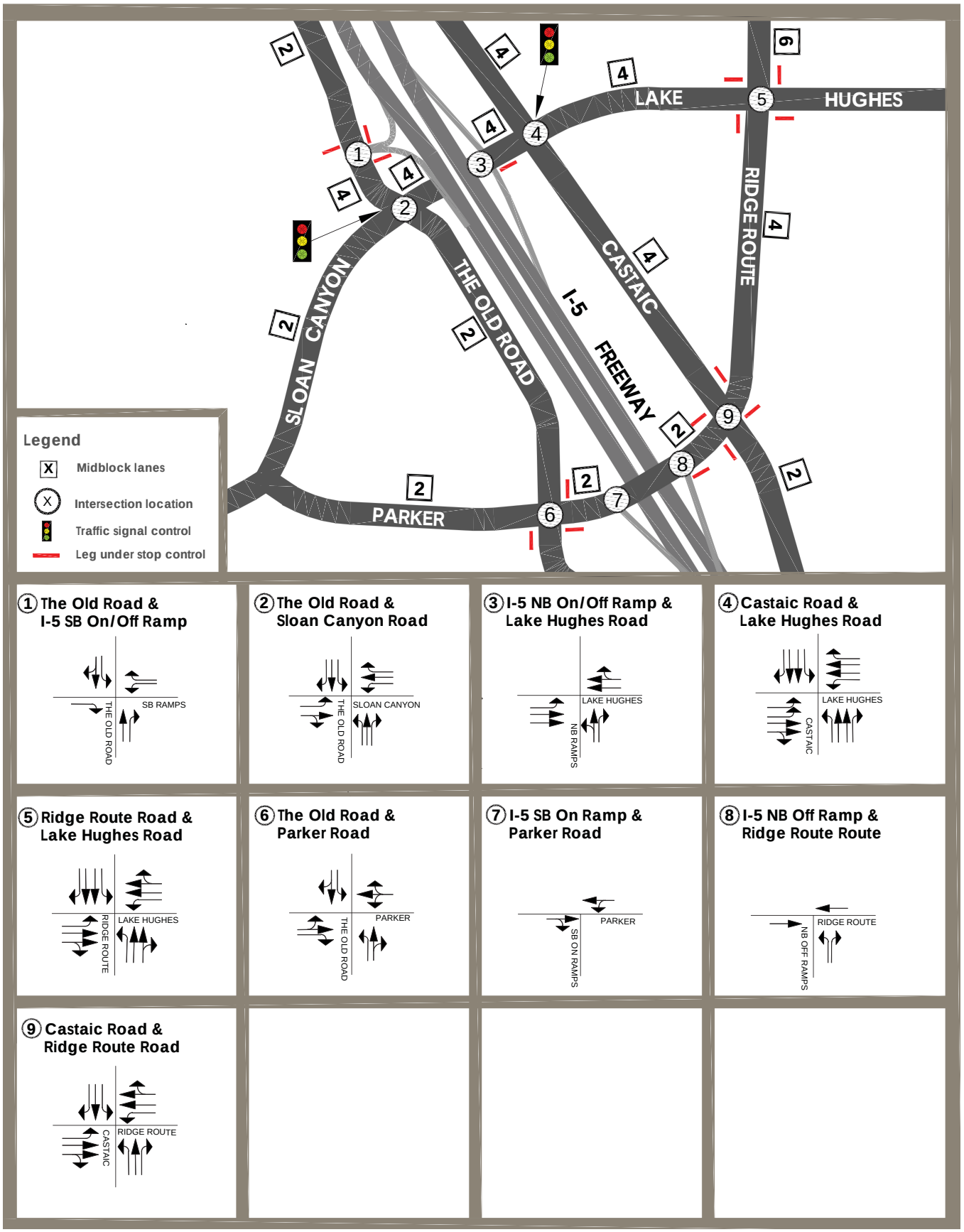

Source: Stantec 2013

Existing Roadway Network

Exhibit 5.11-2

NorthLake Specific Plan SEIR

N W E S

BonTerra PSOMAS

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I-5 provides regional access to the Los Angeles area to the south and to Kern County to the north. It currently consists of four lanes in each direction. In the Castaic area, interchanges exist at Lake Hughes Road and at the Parker Road/Ridge Route Road interchange. At the Lake Hughes Road interchange, direct ramps exist for the northbound direction, and hook ramps to and from The Old Road for the southbound direction. At the Parker Road/Ridge Route Road interchange, ramps exist for movement to and from the south only.

Existing Roadway and Intersection Traffic Volumes and Level of Service

An illustration of existing average daily traffic (ADT) volumes is provided in Exhibit 5.11-3. Peak hour turning movement volumes for each intersection are shown in Exhibits 5.11-4a and 5.11-4b for the AM peak hour and PM peak hour, respectively. The traffic counts were collected in January 2015 (count data is provided in Appendix C of the Traffic Study found in Appendix J-1).

As discussed previously, LOS is a concept developed to quantify the degree of comfort afforded to drivers as they travel on a given roadway. The degree of comfort includes such elements as travel time, number of stops, total amount of stopped delay, and other factors. As defined in the HCM 2010, six grades are used to denote the various LOS, which are denoted "A" through "F".

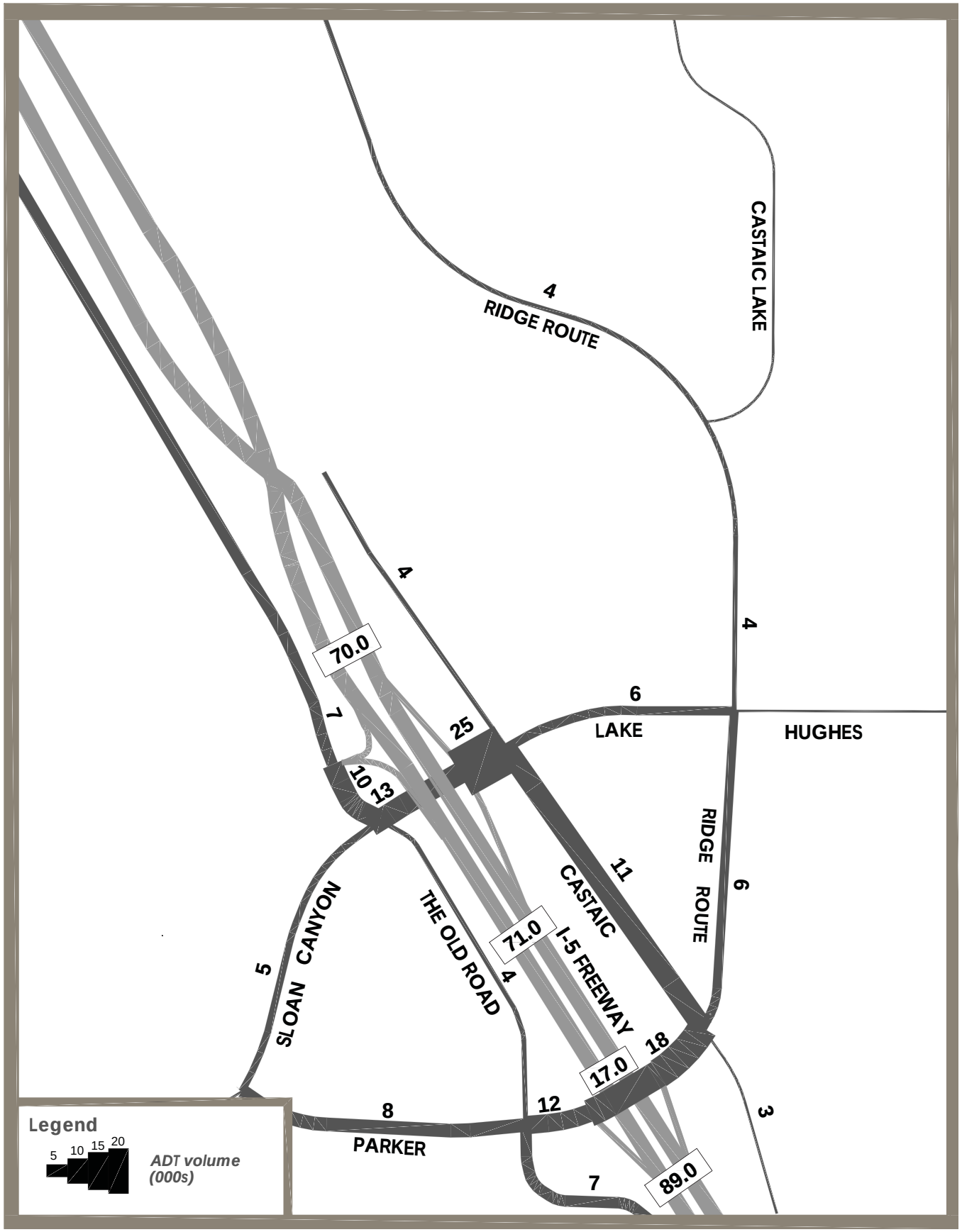
The results of the ICU and LOS analysis for the intersections near the Project site are shown in Table 5.11-7 (detailed LOS calculation worksheets are provided in Appendix A of the Traffic Study found in Appendix J-1). As noted in Table 5.11-7, most intersections in the study area are not currently controlled by a traffic signal. For those locations, the ICU provides an indication of the LOS based on traffic signal control and provides a benchmark for comparison of future condition with the Project.

TABLE 5.11-7
EXISTING (2015) CONDITIONS INTERSECTION
CAPACITY UTILIZATION AND LEVEL OF SERVICE SUMMARY

Intersection	Jurisdiction	Signal Control	AM Peak Hour		PM Peak Hour		Count Date
			ICU	LOS	ICU	LOS	
1. The Old Rd and I-5 SB Ramps	County/ Caltrans	Stop	0.41	A	0.39	A	1/27/2015
2. The Old Rd and Sloan Canyon Rd/Lake Hughes Rd	County	Signal	0.34	A	0.36	A	1/22/2015
3. 1-5 NB Ramps and Lake Hughes Rd	County/ Caltrans	Stop (South Leg)	0.31	A	0.41	A	1/27/2015
4. Castaic and Lake Hughes Rd	County	Signal	0.31	A	0.37	A	1/27/2015
5. Ridge Route Rd and Lake Hughes Rd	County	Stop	0.31	A	0.19	A	1/27/2015
6. The Old Rd and Parker Rd	County	Stop	0.45	A	0.42	A	1/28/2015
7. I-5 SB On-Ramp and Parker Rd	County/ Caltrans	None	0.60	A	0.52	A	1/22/2015
8. I-5 NB Off-Ramp and Ridge Route Rd	County/ Caltrans	Stop (South Leg)	0.46	A	0.55	A	1/22/2015
9. Castaic and Ridge Route Rd	County	Stop	0.33	A	0.41	A	1/22/2015

ICU: intersection capacity utilization; LOS: level of service; I: Interstate; SB: southbound; NB: northbound
Source: Stantec 2016a.

As shown in Table 5.11-7, all intersections currently operate at acceptable LOS (LOS D or better).



Source: Stantec 2013

Average Daily Traffic Volumes – Existing Conditions

Exhibit 5.11-3

NorthLake Specific Plan SEIR

BonTerra PSOMAS

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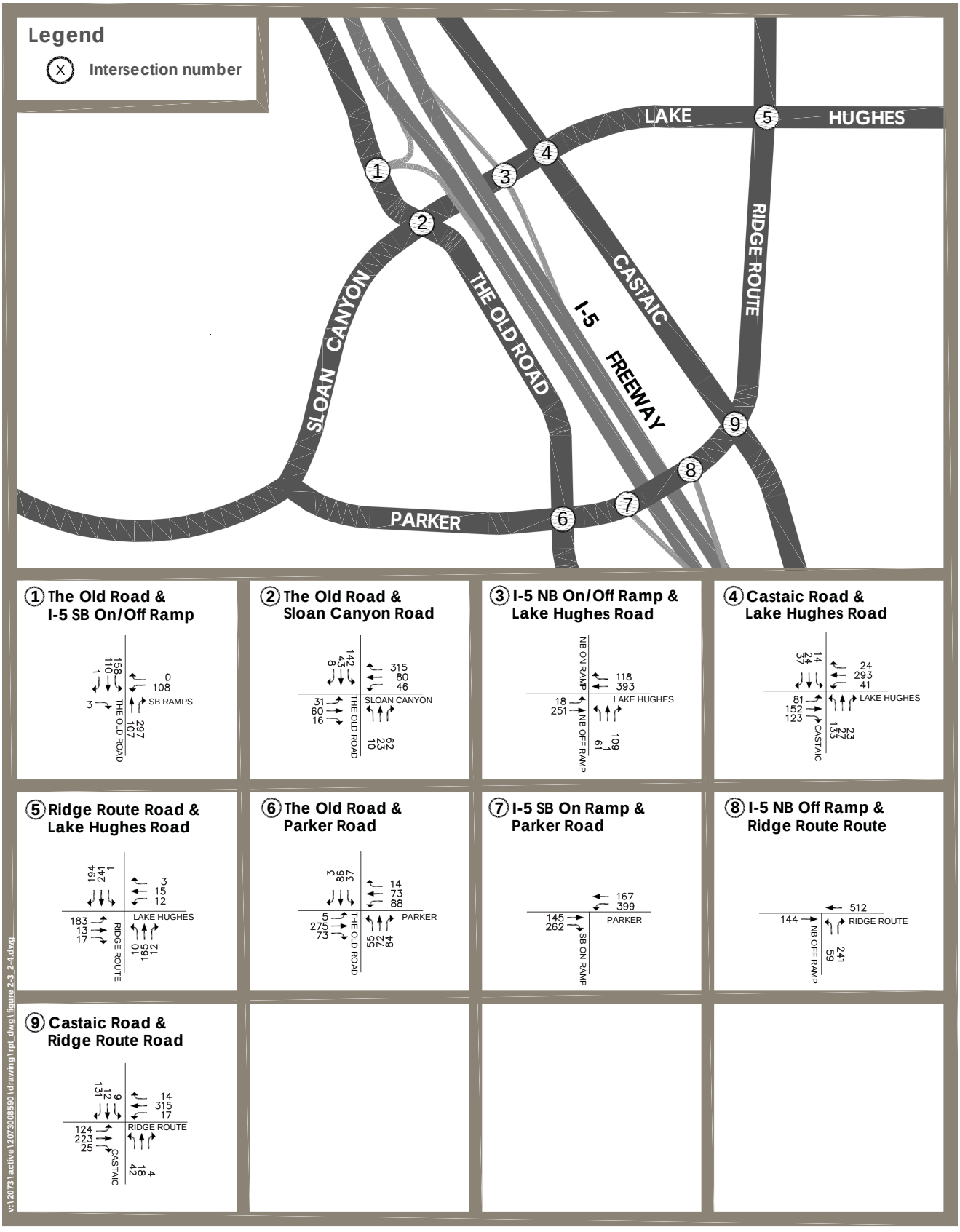

Source: Stantec 2013

Peak Hour Turning Movement Volumes Existing Conditions

Exhibit 5.11-4a

NorthLake Specific Plan SEIR

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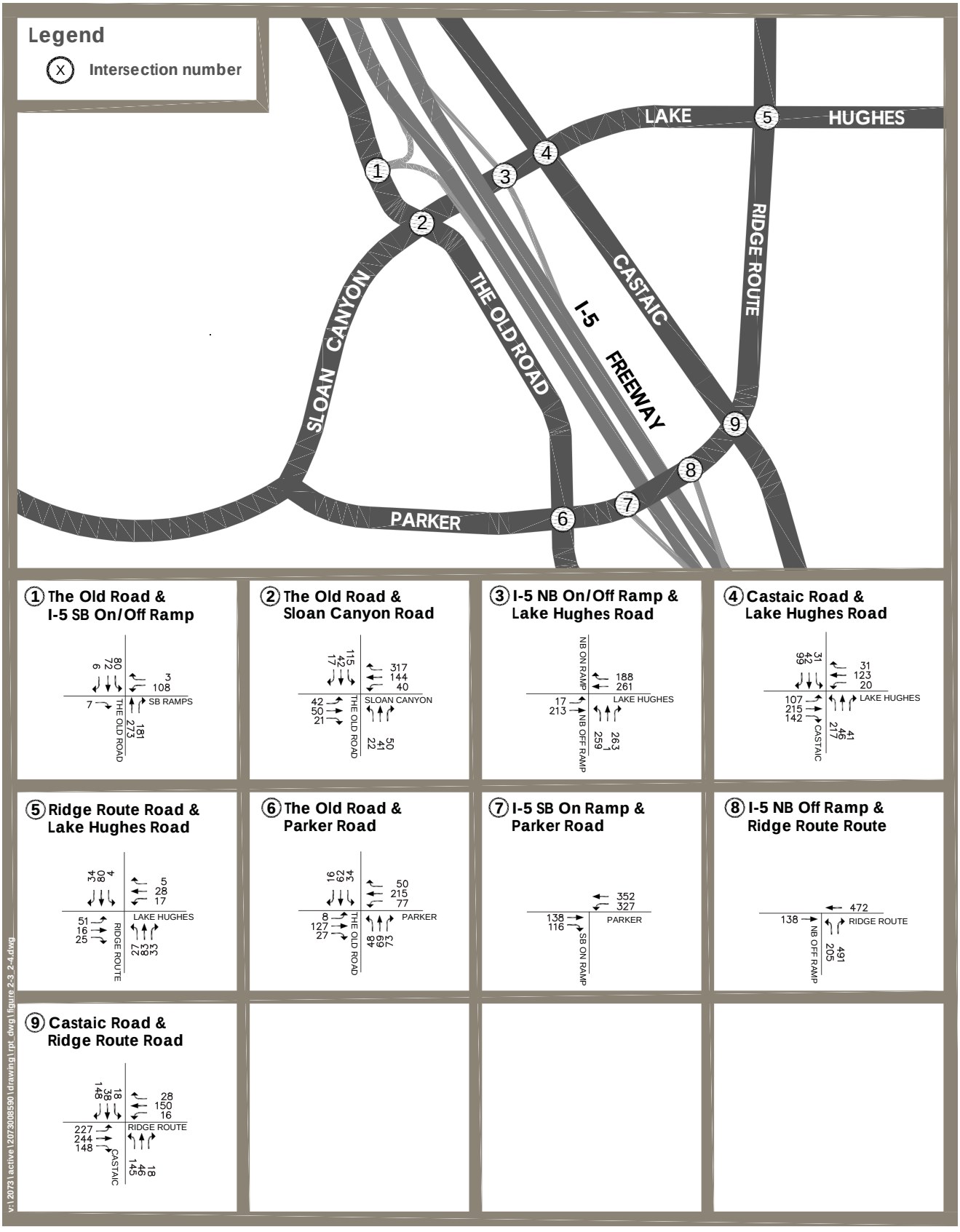

Source: Stantec 2013

Peak Hour Turning Movement Volumes Existing Conditions

Exhibit 5.11-4b

NorthLake Specific Plan SEIR

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Existing Freeway Traffic Volumes and Levels of Service

I-5 provides regional travel in the Project area. Freeway traffic volumes for existing (2013) conditions, as reported by Caltrans, are provided in Table 5.11-8 for average annual daily traffic (AADT).[1]

TABLE 5.11-8
EXISTING CONDITIONS FREEWAY AVERAGE ANNUAL DAILY TRAFFIC VOLUMES

No.	Segment	2013 AADT
1	I-5 between Templin Hwy and Lake Hughes Rd	70,000
2	I-5 between Lake Hughes Rd and Parker Rd	71,000
3	I-5 between Parker Rd and Hasley Canyon Rd	89,000
4	I-5 between Hasley Canyon Rd and SR-126	109,000
5	I-5 between Calgrove and SR-14	193,000
AADT: Annual Average Daily Traffic; I: Interstate; SR: State Route Source: Stantec 2016a		

Peak hour volumes were obtained from the Caltrans Performance Measurement System (PeMS) at select representative locations over the period of one month for 2013 weekday conditions. These peak hour volumes represent the mean (average) weekday volume plus one standard deviation for the weekdays for the month of October 2013. Peak hour data for several key segments on the I-5 was used to calculate representative K (peak hour volume factor) and D (directional factor) values in the AM and PM peak periods for each segment in order to calculate peak hour volumes by direction. The calculated K and D factors were then applied to 2013 AADT volumes to determine the peak hour volumes. Table 5.11-9 shows the peak hour K and D factors for two sample locations.

TABLE 5.11-9
FREEWAY PEAK HOUR K AND D FACTORS (SAMPLE LOCATIONS)

Location	AM Period			PM Period		
	K	D	KD	K	D	KD
I-5 at Templin Hwy	3.80%	50.87% (NB)	1.93%	6.57%	51.34% (NB)	3.37%
I-5 at Magic Mountain Pkwy	4.61%	55.25% (SB)	2.54%	6.12%	56.34% (SB)	3.45%
K: peak hour volume factor; D: directional factor; KD: peak hour volume and directional factor; I: Interstate; NB: northbound; SB: southbound Source: Stantec 2016a						

Table 5.11-10 presents the freeway peak hour volumes and corresponding V/C ratios for the study area. As shown, no freeway segments are operating over capacity under existing conditions.

1 Year 2013 is the most current published traffic data for Caltrans facilities.

TABLE 5.11-10
EXISTING CONDITIONS FREEWAY PEAK HOUR VOLUMES
AND VOLUME TO CAPACITY SUMMARY

No.	Segment	Lanes	Cap (vehicles /hour)	2013 AM Peak Hour		2013 PM Peak Hour	
				Vol	V/C	Vol	V/C
Northbound							
1	I-5 between Templin Hwy and Lake Hughes Rd	4M	8,000	1,351	0.169	2,359	0.295
2	I-5 between Lake Hughes Rd and Parker Rd	4M	8,000	1,463	0.183	1,896	0.237
3	I-5 between Parker Rd and Hasley Canyon Rd	4M	8,000	1,833	0.229	2,376	0.297
4	I-5 between Hasley Canyon Rd and SR-126	4M +1A	9,000	2,245	0.249	2,910	0.323
5	I-5 between Calgrove and SR-14	4M + 1T[C]	9,200	3,976	0.432	5,153	0.560
Southbound							
1	I-5 between Templin Hwy and Lake Hughes Rd	4M	8,000	1,309	0.164	2,240	0.280
2	I-5 between Lake Hughes Rd and Parker Rd	4M	8,000	1,803	0.225	2,450	0.306
3	I-5 between Parker Rd and Hasley Canyon Rd	4M	8,000	2,261	0.283	3,071	0.384
4	I-5 between Hasley Canyon Rd and SR-126	4M	8,000	2,769	0.346	3,761	0.470
5	I-5 between Calgrove and SR-14	4M + 2T[C]	10,400	4,902	0.471	6,659	0.640

Cap = Capacity; Vol = Volumes; V/C: volume to capacity ratio; I: Interstate; M: Mixed Flow Lane; A: Auxiliary Lane; T[C]: Truck Climbing Lane; SR: State Route

Source: Stantec 2016a

5.11.4 RELEVANT PLANS, POLICIES, AND REGULATIONS

Local

Los Angeles County General Plan

The Los Angeles County General Plan establishes policies in both the Land Use Element and the Mobility Element related to the implementation of circulation/transportation systems for new developments. Project consistency with these policies is more fully analyzed in Section 5.9 Land Use and Planning.

Mobility Element

- **Policy M 1.1:** Provide for the accommodation of all users, including pedestrians, motorists, bicyclists, equestrians, users of public transit, seniors, children, and persons with disabilities when requiring or planning for new, or retrofitting existing, transportation corridors/networks whenever appropriate and feasible.
- **Policy M 2.1:** Provide transportation corridors/networks that accommodate pedestrians, equestrians and bicyclists, and reduce motor vehicle accidents through a context-sensitive process that addresses the unique characteristics of urban, suburban, and rural communities whenever appropriate and feasible.

- **Policy M 2.4:** Ensure a comfortable walking environment for pedestrians by implementing the following, whenever appropriate and feasible:
    - Designs that limit dead-end streets and dead-end sidewalks.
    - Adequate lighting on pedestrian paths, particularly around building entrances and exits, and transit stops.
    - Designs for curb ramps, which are pedestrian friendly and compliant with the American Disability Act (ADA).
    - Perpendicular curb ramps at locations where it is feasible.
    - Pedestrian walking speed based on the latest standard for signal timing. Slower speeds should be used when appropriate (i.e., near senior housing, rehabilitation centers, etc.).
    - Approved devices to extend the pedestrian clearance times at signalized intersections.
    - Accessible Pedestrian Signals (APS) at signalized intersections.
    - Pedestrian crossings at signalized intersections without double or triple left or right turn lanes.
    - Pedestrian signal heads, countdown pedestrian heads, pedestrian phasing and leading pedestrian intervals at signalized intersections.
    - Exclusive pedestrian phases (pedestrian scrambles) where turning volume conflicts with very high pedestrian volumes.
    - Advance stop lines at signalized intersections.
    - Pedestrian Hybrid Beacons.
    - Medians or crossing islands to divide long crossings.
    - High visibility crosswalks.
    - Pedestrian signage.
    - Advanced yield lines for uncontrolled crosswalks.
    - Rectangular Rapid Flashing Beacon or other similar approved technology at locations of high pedestrian traffic.
    - Safe and convenient crossing locations at transit stations and transit stops located at safe intersections.
- **Policy M 2.5:** Ensure a comfortable bicycling environment by implementing the following, whenever appropriate and feasible:
    - Bicycle signal heads at intersections.
    - Bicycle signal detection at all signalized intersections.
    - Wayfinding signage.
    - Road diet techniques, such as lane narrowing, lane removal, and parking removal/restriction.
    - Appropriate lighting on all bikeways, including those in rural areas.
    - Designs, or other similar features, such as: shoulder bikeways, cycle tracks, contra flow bike lanes, shared use paths, buffered bike lanes, raised bike lanes, and bicycle boulevards.

- **Policy M 2.8:** Connect trails and pedestrian and bicycle paths to schools, public transportation, major employment centers, shopping centers, government buildings, residential neighborhoods, and other destinations.
- **Policy M 4.1:** Expand transportation options that reduce automobile dependence.
- **Policy M 4.7:** Maintain a minimum LOS D, where feasible; however, allow LOS below D on a case by case basis in order to further other General Plan goals and policies, such as those related to environmental protection, infill development, and active transportation.

Los Angeles County Congestion Management Program

The *Los Angeles County Congestion Management Program* (CMP) requires that a proposed development address the Project's impacts on the CMP highway system and the local and regional transit systems (LACMTA 2010).

Los Angeles County Healthy Design Ordinance

The *Los Angeles County Healthy Design Ordinance* (LACHDO) (No. 2013-0001) was adopted by the Board of Supervisors on February 5, 2013 and went into effect on March 7, 2013. The LACHDO amended Title 21, Subdivisions, and Title 22, Planning and Zoning, of the Los Angeles County Code to promote increased physical activity, such as walking and bicycling, through design of the built environment (LACDRP 2016).

Santa Clarita Valley Area Plan

Land Use Element

- **Policy LU-5.1.1:** Require safe, secure, clearly-delineated, adequately-illuminated walkways and bicycle facilities in all commercial and business centers.
- **Policy LU-5.1.2:** Require connectivity between walkways and bikeways serving neighborhoods and nearby commercial areas, schools, parks, and other supporting services and facilities.

Circulation Element

- **Policy C-1.1.1:** Reduce dependence on the automobile, particularly single-occupancy vehicle use, by providing safe and convenient access to transit, bikeways, and walkways.
- **Policy C-1.1.2:** Promote expansion of alternative transportation options to increase accessibility to all demographic and economic groups throughout the community, including mobility-impaired persons, senior citizens, low-income persons, and youth.
- **Policy C-1.1.4:** Promote public health through provision of safe, pleasant, and accessible walkways, bikeways, and multi-purpose trail systems for residents.
- **Policy C-1.1.6:** Provide adequate facilities for multi-modal travel, including but not limited to bicycle parking and storage, expanded park-and-ride lots, and adequate station and transfer facilities in appropriate locations.
- **Policy C-1.1.7:** Consider the safety and convenience of the traveling public, including pedestrians and cyclists, in design and development of all transportation systems.
- **Policy C-1.2.2:** Create walkable communities, with paseos and walkways connecting residential neighborhoods to multi-modal transportation services such as bus stops and rail stations.

- **Policy C-1.2.3:** Require that new commercial and industrial development provide walkway connections to public sidewalks and transit stops.
- **Policy C-1.2.8:** Provide safe pedestrian connections across barriers, which may include but are not limited to major traffic corridors, drainage and flood control facilities, utility easements, grade separations, and walls.
- **Policy C-1.3.5:** Continue coordinating with Caltrans on circulation and land use decisions that may affect Interstate 5, State Route 14, and State Route 126, and support programs to increase capacity and improve operations on these highways.
- **Policy C-2.1.2:** Enhance connectivity of the roadway network to the extent feasible given the constraints of topography, existing development patterns, and environmental resources, by constructing grade separations and bridges; connecting discontinuous streets; extending secondary access into areas where needed; prohibiting gates on public streets; and other improvements as deemed appropriate based on traffic analysis.
- **Policy C-2.1.3:** Protect and enhance the capacity of the roadway system by upgrading intersections to meet level of service standards, widening and/or restriping for additional lanes, synchronizing traffic signals, and other means.
- **Policy C-2.2.3:** Coordinate circulation plans of new development projects with each other and the surrounding street network, within both City and County areas.
- **Policy C-2.2.4:** Strive to maintain a Level of Service (LOS) D or better on most roadway segments and intersections to the extent practical; in some locations, a LOS E may be acceptable, or a LOS F may be necessary, for limited durations during peak traffic periods.
- **Policy C-6.1.1:** For recreational riders, continue to develop Class 1 bike paths, separated from the right-of-way, linking neighborhoods to open space and activity areas.
- **Policy C-6.1.2:** For long-distance riders and those who bicycle to work or services, provide striped Class 2 bike lanes within the right-of-way, with adequate delineation and signage, where feasible and appropriate.
- **Policy C-7.1.9:** Promote pedestrian-oriented street design through traffic-calming measures where appropriate, which may include but are not limited to bulb-outs or chokers at intersections, raised crosswalks, refuge islands, striping, and landscaping.

Castaic Bridge and Major Thoroughfare Construction Fee District

The current highway system in the Santa Clarita Valley is considered adequate for existing development. However, at this time, public funding is not available to adequately provide highway improvements for the future anticipated development in the Santa Clarita Valley. Therefore, the Santa Clarita Valley Bridge and Major Thoroughfare District (the District) is designed to accommodate the needs of future development anticipated by the Los Angeles County Santa Clarita Valley Area Wide Circulation Plan. The adoption of a specific area of benefit permits the County to levy a fee against future development located in the area of benefit. This funding method appropriately assesses developments, which create the need for additional improvements, for the additional public facility costs. Improvements include, but are not limited to, new and improved roadways, bridges, intersections, and interchanges. The charge is levied in proportion to the estimated number of trips generated by the development, which is translated into Factored Development Units (FDUs). The adoption of this type of funding district does not charge existing development. The District fee is collected at the time of recordation of a final map or just prior to the issuance of a building permit. It should be noted that, if a developer decides to construct District-identified improvements, that developer becomes eligible for District credit which can be used to offset current and future District fee obligations. In the event that the District fees

that are collected from developers exceed the cost of improvements, the surplus funds, minus administrative costs, will be refunded at District closure by the County to the developer in proportion to District fee paid.

5.11.5 THRESHOLD CRITERIA

Thresholds Addressed in the Initial Study

The Initial Study prepared for the proposed Project (included in Appendix A) and circulated with the NOP, concludes that Project implementation would not result in significant impacts for the thresholds of significance listed below. Further analysis of these thresholds in this Draft SEIR is not required (a summary of the analysis presented in the Initial Study is provided in Section 7.1, Effects Determined Not to be Significant, of this Draft SEIR):

- Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?
- Would the project substantially increase hazards due to a design feature (i.e., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Thresholds Addressed in this Draft Supplemental Environmental Impact Report

The County of Los Angeles utilizes an Initial Study Questionnaire with Thresholds of Significance specific to the County. The Initial Study for the proposed Project concludes that additional analysis of the following thresholds of significance is required in this Draft SEIR. The Project will be considered to have a significant effect related to traffic and circulation if the Project would:

- Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
- Conflict with an applicable congestion management program (CMP), including, but not limited to, level of service standards and travel demand measures, or other standards established by the CMP for designated roads or highways.
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

The following threshold is addressed in Section 5.5, Fire Hazards, Emergency Response, and Environmental Safety:

Would the project result in inadequate emergency access?

Additionally, Section 5.11.1, Methodology, details the County's quantitative thresholds for both intersection capacity utilization and mainline freeway segments in Tables 5.11-5 and 5.11-6, respectively. Additionally, Section 5.11.1 also address the County's CMP intersection thresholds of significance.

5.11.6 RELEVANT PROJECT CHARACTERISTICS

Development of the proposed Project includes the partial realignment and full reconstruction of the existing Ridge Route Road to current standards and to the established Interagency Engineering Committee (IEC) alignment within the Project site (Exhibit 4-5, Mobility Plan, from Section 4.0, Project Description). A complete network of roadways will be constructed within the site to serve Project-generated traffic. The circulation system will establish a design hierarchy where local roads serving the individual neighborhoods feed into the collector roads and secondary highways that serve the entire Project area. These, in turn, feed into major and urban arterial highways serving the community. The proposed Project includes three separate access points, including two access points from Ridge Route Road within the Phase 1 development area and one access point along Ridge Route Road from the north in the Phase 2 development area. Access to individual neighborhoods would be provided by a system of local collector roads and local streets. Additional unloaded collector streets have been designed to improve circulation; to coordinate access to the proposed middle school; and to meet County Fire Department regulations.

5.11.7 ENVIRONMENTAL IMPACTS

Impact Analysis

Project Trip Generation

As described previously, the Project consists of a variety of land uses. For the purpose of the Traffic Study, these land uses have been categorized based on the land use categories used by the Santa Clarita Valley Consolidated Traffic Model (SCVCTM), the County of Los Angeles Department of Public Works Traffic Impact Analysis Guidelines, and industry standards such as the Institute of Transportation Engineers (ITE) Trip Generation Manual. The specific trip rates used for this analysis are listed in Table 5.11-11. Note that for the Sports Park land use category, a comparison was made between the Brea Sports Park Traffic Study and the City of San Diego Trip Generation Manual, Developed Park land use category. It was determined that using the trip rate from the Brea Sports Park Traffic Study would be more conservative than using the trip rate from City of San Diego Trip Generation Manual. It should also be noted that the Traffic Study analyzed a more conservative project description than what is described in Section 4.0, Project Description, of this SEIR, as described in the April 6, 2016 memorandum prepared by Stantec and included in Appendix J-2 (Stantec 2016b). Therefore, the analysis presented represents a conservative, worst-case impact scenario.

Detailed trip generation estimates based on the trip generation rates referenced above are provided in Table 5.11-12. As shown, at buildout the Project is estimated to generate approximately 35,500 average daily trips, with approximately 2,900 trips during the AM peak hour, and approximately 3,500 trips during the PM peak hour.

The residential units of the project are forecasted to generate approximately 25,400 ADT with approximately 1,850 trips in the AM peak hour (1,480 outbound) and approximately 2,480 trips in the PM peak hour (1,570 inbound). The non-residential uses (i.e., neighborhood commercial and industrial) are forecasted to generate approximately 8,200 ADT with approximately 370 trips in the AM peak hour (280 inbound) and 830 trips in the PM peak hour (500 outbound).

The middle school site will serve students from the NorthLake development and from outside the Specific Plan area. The middle school (approximately 1,200 students) is projected to generate approximately 1,940 ADT with approximately 650 trips in the AM peak hour and approximately 190 trips in the PM peak hour.

The location of the Project and the on-site commercial and institutional uses (i.e., retail, existing NorthLake Elementary School and the proposed middle school) encourages a degree of local trip making. Table 5.11-13 shows the estimated ADT and peak hour trips separated by land use and both internal and external trip components.

Overall, approximately 19 percent of the daily trips generated by the Project (as measured by tripends) are estimated to be internal and 81 percent are external trips. The net volume of trips generated by the Project is derived by combining the amount of internal trips (two on-site Project tripends) with the amount of external trips (one on-site Project tripend). As shown in Table 5.11-14, the Project generates a net total of 33,241 trips when taking into account the Project's 19 percent internal capture rate.

The internal capture rate was derived by first determining the amount of school traffic that would be captured by the residential uses on-site. A nominal amount of internal capture was assumed during the AM peak hour for the commercial and industrial uses. After deducting these on-site trips from residential uses, the remainder represents the net volume of external (off-site) trips. The same was done for the PM peak hour, but with opposite directionality. This approach produced a conservative estimate of external trips for the model to distribute to the off-site study area.

TABLE 5.11-11
TRIP GENERATION RATES

Category	ITE Code	Units	AM Peak Hour			PM Peak Hour			Average Daily Tripends	Source
			In	Out	Total	In	Out	Total		
1. Single-Family Detached Housing	210	du	0.19	0.56	**0.75**	0.63	0.37	**1.00**	**9.52**	ITE 9th Edition
2. Condominium/Townhouse	N/A	du	0.06	0.48	**0.54**	0.47	0.26	**0.73**	**8.00**	LAC TIA Guidelines 1997
3. Senior Adult Housing (Attached)	252	du	0.07	0.13	**0.20**	0.14	0.11	**0.25**	**3.44**	ITE 9th Edition
4. Jr High School	522	Stu	0.30	0.24	**0.54**	0.08	0.08	**0.16**	**1.62**	ITE 9th Edition
5. Industrial Park	130	tsf	0.67	0.15	**0.82**	0.18	0.67	**0.85**	**6.83**	ITE 9th Edition
6. Shopping Center	820	tsf	1.11	0.72	**1.83**	3.27	3.53	**6.80**	**78.09**	ITE 9th Edition Shopping Center Fitted Curve Equation for 67 tsf.
7. Sports Park	N/A	Acre	0.01	0.00	**0.01**	3.40	4.10	**7.50**	**53.80**	Sports Park Case Study*
8. Developed Park	N/A	Acre	0.00	0.00	**0.00**	0.03	0.04	**0.07**	**2.60**	SCVCTM

ITE: Institute of Transportation Engineers; du: dwelling unit; N/A: not applicable; LAC: Los Angeles County; TIA: Traffic Impact Analysis; Stu: Student; tsf: thousand square feet; SCVCTM: Santa Clarita Valley Consolidated Traffic Model

* Brea Sports Park Traffic Study, Austin-Foust Associates, Inc. August 29, 2002.

Source: Stantec 2016a

TABLE 5.11-12
NORTHLAKE FREEWAY LAND USE AND TRIP GENERATION SUMMARY[a]

Category	Amount	Units	AM Peak Hour			PM Peak Hour			Average Daily Tripends
			In	Out	Total	In	Out	Total	
1. Single-Family Detached Housing	1,414	du	269	791	**1,060**	890	524	**1,414**	**13,462**
2. Condominium/Townhouse	1,341	du	81	643	**724**	631	348	**979**	**10,728**
3. Senior Adult Housing (Attached)	345	du	24	45	**69**	45	42	**87**	**1,187**
4. Jr High School	1,200	Stu	360	288	**648**	96	96	**192**	**1,944**
5. Industrial Park	304.9	tsf	204	46	**250**	55	204	**259**	**2,083**
6. Shopping Center	67.1	tsf	75	46	**121**	219	237	**456**	**5,240**
7. Sports Park	15	Acre	0	0	**0**	51	62	**113**	**807**
8. Developed Park	10	Acre	0	0	**0**	0	0	**0**	**26**
Total			**1,013**	**1,859**	**2,872**	**1,987**	**1,513**	**3,500**	**35,477**

du: dwelling units; Stu: Student; tsf: thousand square feet

[a] As noted previously, these land uses differ from what is presented in Section 4.0, Project Description, in order to represent a worst case scenario (refer to Stantec April 6, 2016 memorandum, included in Appendix J-2).

Source: Stantec 2016a; Stantec 2016b

TABLE 5.11-13
INTERNAL AND EXTERNAL TRIP VOLUMES AND PERCENTAGES

Description	AM Peak Hour		PM Peak Hour		ADT
	IB	OB	IB	OB	
1. Project Residential	374	1,479	1,566	914	25,403
ext.%	86%	79%	82%	79%	80%
int. %	14%	21%	18%	21%	20%
ext. vol	322	1,168	1,284	722	20,322
int. vol	52	311	282	192	5,081
2. Project Non-Residential	279	92	325	503	8,130
ext.%	90%	98%	66%	75%	80%
int. %	10%	2%	34%	25%	20%
ext. vol	251	90	214	377	6,504
int. vol	28	2	111	126	1,626
3. Project Jr High School	360	288	96	96	1,944
ext.%	70%	95%	95%	70%	80%
int. %	30%	5%	5%	30%	20%
ext. vol	252	274	91	67	1,555
int. vol	108	14	5	29	389
Project Subtotal	**1,013**	**1,859**	**1,987**	**1,513**	**35,477**
4. Existing Elementary School[a]	188	150	53	60	968
ext.%	5%	75%	93%	5%	40%
int. %	95%	25%	7%	95%	60%
ext. vol	9	112	49	3	387
int. vol	179	38	4	57	581
External	834	1,644	1,638	1,169	28,768
Internal[b]	367	366	402	404	7,677
External %	82%	88%	82%	77%	81%
Internal %	18%	12%	18%	23%	19%

IB: Inbound; OB: Outbound; ADT: Average Daily Traffic; ext: external; int: internal

[a] The elementary school peak hour and ADT trips shown in this table are in addition to the trips currently being made by existing residents.

[b] Includes trips to/from the elementary school.

Source: Stantec 2016a

TABLE 5.11-14
PROJECT TRIP SUMMARY

Total Tripends	External Trips[a]	Internal Trips[b]	Total Trips
35,477	28,768	3,839	32,607

[a] One tripend on site
[b] Two tripends on site

Source: Stantec 2016a; Stantec 2016b

The Project is anticipated to build out over a period of approximately 10 to 11 years. Traffic patterns for the Project in relation to the surrounding region were estimated for the 2028 timeframe to understand the relationship between the Project and the surrounding region in this long-range buildout context. The distribution of Project-generated trips was derived by the SCVCTM.

The SCVCTM is a computerized travel demand model that utilizes a sophisticated trip distribution function to derive the distribution of vehicle trips, and which has previously been calibrated to the existing conditions of the Santa Clarita Valley. Production and attraction trip data is generated by the model based on five separate trip purposes, and trip distribution patterns are then derived by the model. As a final step, the model assigns these trips to the roadway network based on the derived distribution patterns.

The Project's trip distribution patterns are shown in Exhibit 5.11-5. Approximately 19 percent of the Project's trip generation remains internal to the Project site and the remaining 81 percent are distributed along Ridge Route Road south of the Project site. Of those, 3 percent are generated by the adjacent neighborhood (north of the Lake Hughes intersection) and the remaining 78 percent are distributed to the Castaic area roadway system. Of the 78 percent that are distributed to the Castaic area roadway system, 47 percent are distributed to Lake Hughes Road west of Ridge Route Road, and 31 percent remain on Ridge Route Road south of Lake Hughes Road.

Future Conditions

The following section describes the long-range buildout conditions. It includes a description of the planned roadway system in the vicinity of the Project site and a summary of the anticipated increases in land use under buildout conditions.

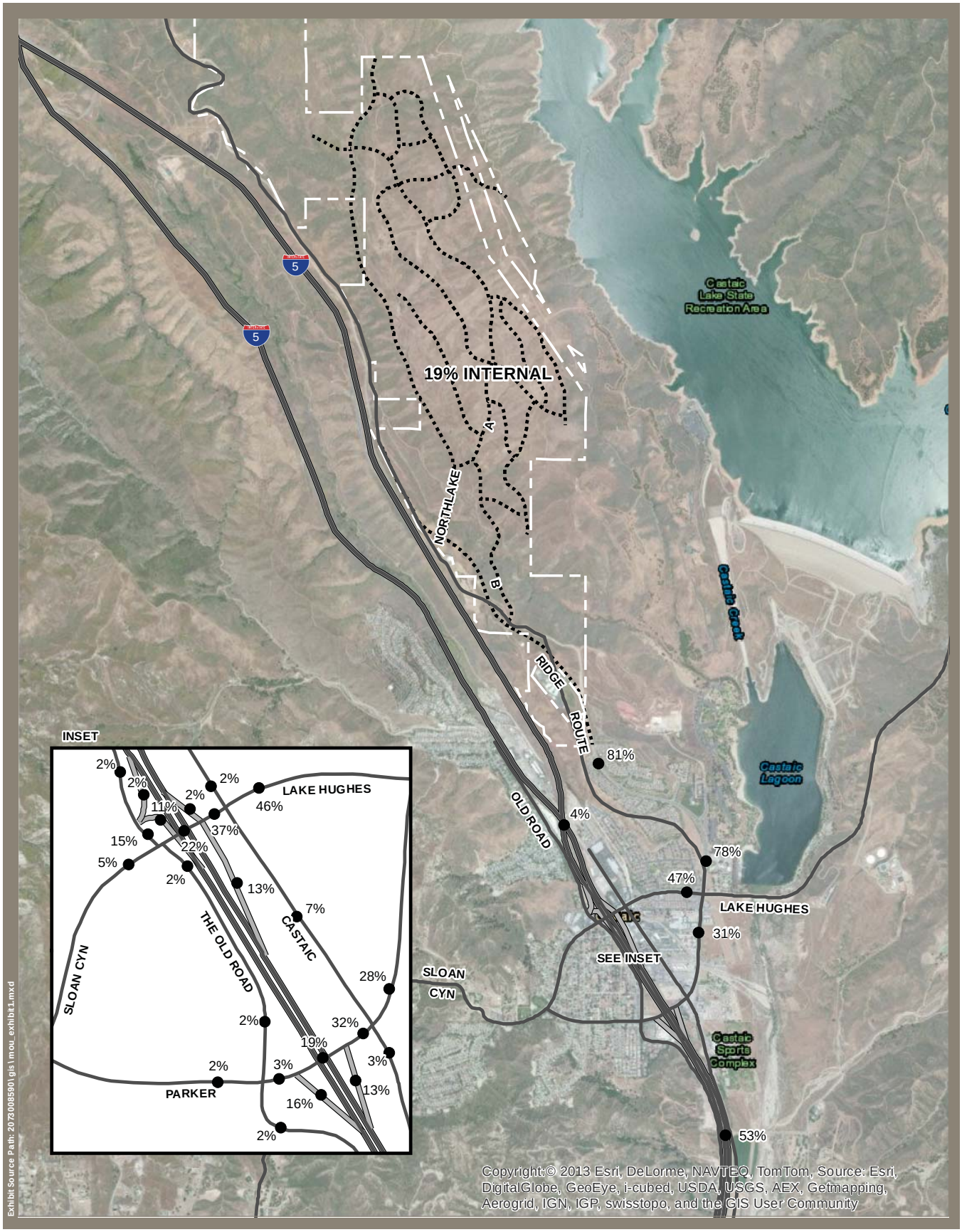
Future Local Roadway System

Exhibit 5.11-6 shows the Los Angeles County Highway Master Plan for the Castaic community.

As shown on the Highway Master Plan, Ridge Route Road is classified as a secondary highway from Castaic Road to approximately 1.40 miles north of the Lake Hughes Road intersection where Ridge Route Road transitions to a limited secondary highway. Development of the Project includes reconstruction of Ridge Route Road from north of Pine Crest Place to Northlake Boulevard to current standards and to the established IEC alignment within the Project site. Ridge Route Road north of Northlake Boulevard would remain as a two-lane roadway. Ridge Route Road is classified as a major highway from Castaic Road to The Old Road where it becomes Parker Road, which is classified as a limited secondary highway.

Lake Hughes Road is classified as a major highway from The Old Road to east of Ridge Route Road. Castaic Road, from Lake Hughes Road to Ridge Route Road, is classified as a major highway. The Old Road is classified as a secondary highway. Most of the roadways are built out.

Also, a complete network of roadways will be constructed within the Project site to serve the needs of the Project generated traffic.



Source: Stantec 2013

Project Trip Distribution Percentages

Exhibit 5.11-5

NorthLake Specific Plan SEIR

N W E S

BonTerra PSOMAS

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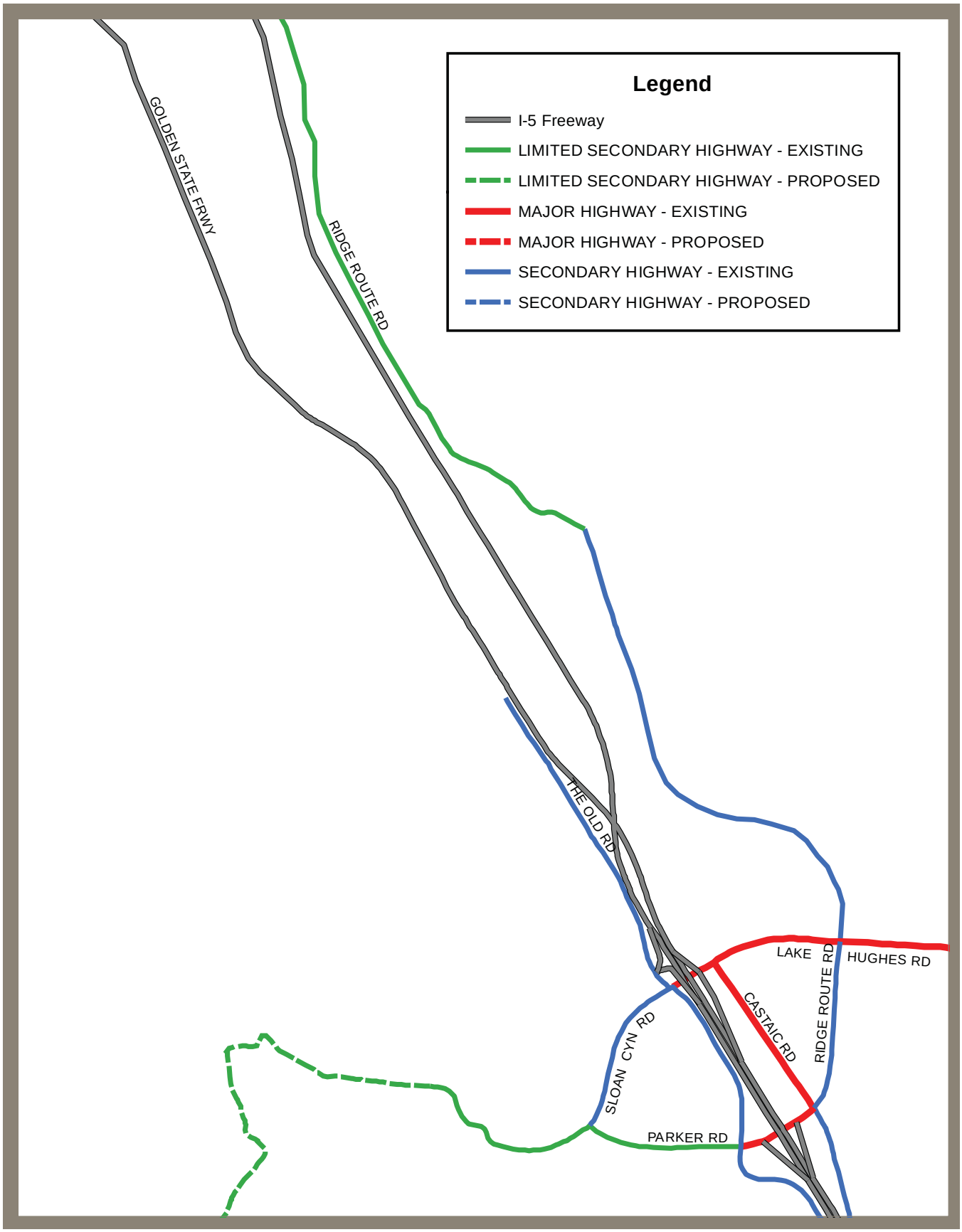

Source: Stantec 2013

Master Plan of Arterial Highways

Exhibit 5.11-6

NorthLake Specific Plan SEIR

N W E S

BonTerra PSOMAS

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As part of the Project, the extension of Ridge Route Road to Northlake Boulevard would be built to full County standards, which would include the construction of sidewalks on both sides of the roadway, as well as a Class I bike lane/multi-use trail along Ridge Route Road that would continue onto Northlake Boulevard and terminate at E Street. Within the Project site, a complete network of streets with sidewalks, multi-use (10 feet) trails and neighborhood pedestrian (6 feet) trails would be constructed and would facilitate movement among the various areas of the site.

Future Land Use and Transportation Modeling

Future forecasts were derived using three primary sources. The first is the SCVCTM, a model has the capability of forecasting the complex interaction of vehicle trips between existing and future land uses. The SCVCTM has the ability to provide traffic volume forecasts for a long-range setting, which represents buildout conditions, as well as interim year forecasts that are based on a defined list of planned, approved, and pending projects (i.e., "related projects"). An interim year version of SCVCTM was used to derive 2028 Cumulative Conditions forecasts. The SCVCTM was developed jointly by the County of Los Angeles Department of Public Works and the City of Santa Clarita.

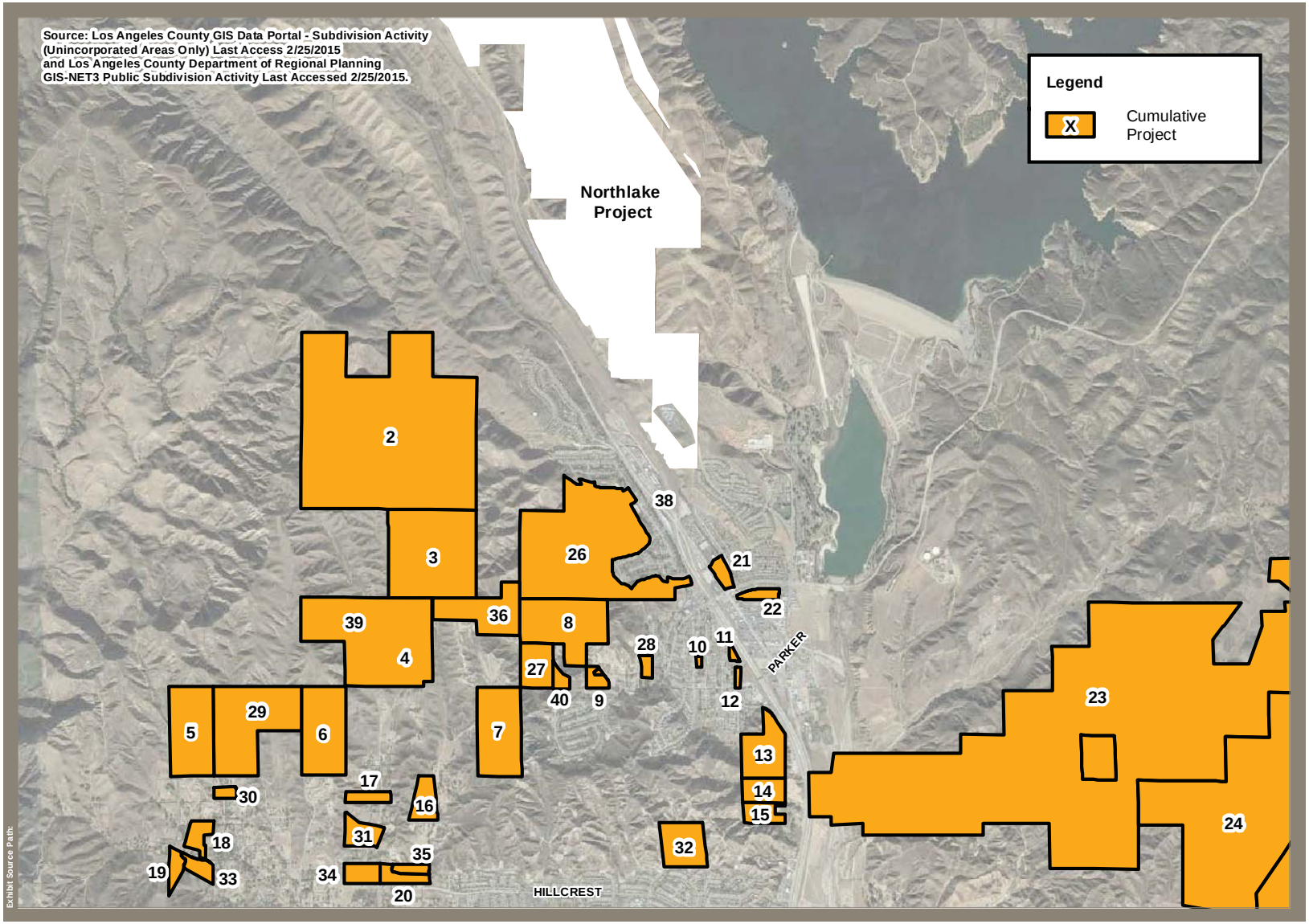
The second source of forecast data is the Northlake Traffic Model (NTM), which was prepared as part of the Traffic Study. The NTM is based on traffic modeling techniques used for fine-grained site-specific traffic forecasting. The arterial and freeway access network in the NTM defines the on-site circulation system used in the on-site impact analysis. The traffic forecast results give traffic volumes for individual roadway linkages and intersections.

The third set of data is from the Los Angeles County Department of Regional Planning's GIS-NET3 database. This online database tool was used to access information regarding subdivision activity around the Project site. A list was compiled, which is referred to as the "related project list". Table 5.11-15 defines a list of planned, approved, pending, and inactive projects in and around the Castaic community (Exhibit 5.11-7 shows the general location of these projects). The list was incorporated into the SCVCTM interim year (discussed above).

Future Traffic Volumes

As part of the Traffic Study, the SCVCTM was updated to reflect the specific characteristics of the proposed Project. An interim year version of the SCVCTM was used to derive 2028 Cumulative Conditions. Related projects discussed in the previous section were included in the model's land use database, along with additional growth derived by interpolating between existing and General Plan buildout conditions. The 2028 model runs were prepared for conditions both With and Without the Project. These traffic forecasts are presented later in this section.

The SCVCTM forecasts the complex interaction of vehicle trips between existing and future land uses. As such, the future condition forecasts reflect the changes in existing travel patterns that occur due to changes in land use (e.g., the introduction of new development). The SCVCTM employs a process in which modeled future volumes are compared to modeled existing condition volumes, and the net change from existing to future is then applied to the actual observed traffic count in a post-processing procedure. Post-processing is applied to each intersection's 12 possible turning movements while controlling the net change at each of the intersection's 4 legs (both entering and departure volumes). In that regard, the traffic forecasts presented utilize existing traffic conditions as the foundation and ten build upon that foundation with the forecasted change in volume (both increases and decreases) as derived by the model. As a result of changing traffic patterns, there are instances where specific turning movement volumes may decrease in the future relative to existing volumes.



Source: Stantec 2013

Related Project Location Map

Exhibit 5.11-7

NorthLake Specific Plan SEIR

N
W
E
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Similar to the modeled changes between existing and future conditions, the SCVCTM is also used to derive the traffic volume differences between No Project and With Project conditions. A change in traffic patterns occurs with the introduction of the Project's land uses, and the larger the project the more pronounced the changes will be. The effect of new land uses results in modified travel patterns that, in some instances, cause a reduction in specific turning movement volumes under With Project conditions.

Future Freeway Volumes

Freeway volumes for future year Cumulative Conditions were derived from two sources: the Supplemental Environmental Impact Report/Environmental Reevaluation (EIR/ER) for the High Occupancy Toll (HOT) Lanes prepared by Caltrans and the Southern California Association of Government's (SCAG) Regional Transportation Model (RTM).

The Supplemental EIR/ER for the HOT Lanes is for an improvement project that replaces the planned high occupancy vehicle (HOV) lanes with HOT lanes. I-5 traffic volumes from this study were considered, and average annual growth rates were derived from those volumes. The Supplemental EIR/ER addressed segments on the I-5 in the Santa Clarita Valley and it presents traffic forecasts for Year 2035.

The second source for deriving future freeway volumes is the Southern California Association of Governments' (SCAG's) Regional Transportation Plan. SCAG is the primary agency responsible for developing and maintaining the regional travel demand forecasting models for the SCAG region, which includes six counties: Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial. Traffic model data, such as an average annual growth rate for the freeway section on the I-5 north of Lake Hughes Road (this segment was not addressed in the Caltrans HOT lanes study) was as obtained from SCAG. The growth rate was then applied to 2013 existing conditions traffic volumes.

TABLE 5.11-15
RELATED PROJECTS INCLUDED IN THE CUMULATIVE DATABASE

Name	Description	Units	Commercial/ Industrial	Acres	Status
TR 42537	West of I-5 in Castaic. Site access via Romero Canyon Rd.	95	0	553	Approved
Tract 46443	West of I-5 in Castaic. Site access via Mandolin Canyon Rd and Romero Canyon Rd.	95	0	160	Recorded
TR 47807	West of I-5 in Castaic. Site is located west of Sloan Canyon Rd	77	0	197	Approved
PM069961	West of I-5 in Castaic. Site access via Gilmour St.	4	0	81	Pending
PM067785	West of I-5 in Castaic. No residences proposed – land division only.	0	0	80	Denied
Laro Properties L.P. (TR 52729)	West of I-5 in Castaic. Sloan Canyon Rd, north of Hillcrest Pkwy, west of Meadowgrass Dr.	33	0	80	Pending
TR067278	West of I-5 in Castaic. Site access via Sloan Canyon Rd.	23	0	90	Pending
PM071059	West of I-5 in Castaic. Site access via Sloan Canyon Rd.	3	0	8	Pending
PM25852	West of I-5 in Castaic. Site located at Cherry Dr and Church St north of Park Rd. Access via Park Rd and Cherry Dr.	4	0	1	Approved
Mobe Development Corp. TR060611	West of I-5 in Castaic. Site located west of The Old Rd near the intersection of The Old Rd and Ferguson Dr. Multi-family residences.	18	0	2	Recorded
TR060674	West of I-5 in Castaic. Site located west of The Old Road at the intersection of Church St and The Old Rd.	21	0	2	Recorded
Lake View Estates TR53933	West of I-5 in Castaic, approximately $^1/_5$ mile south of Parker Rd. Access to the site via The Old Rd. Includes residential lots (10.62 acres), 3 commercial industrial lots (8.16 acres), 4 open space lots (28.47 acres), and a park (0.54 acre).	70	90 tsf	47	Pending
TR46798	West of I-5 in Castaic, south of Parker Rd with access via The Old Rd.	55	0	22	Approved
TR46798	West of I-5 in Castaic, south of Parker Rd with access via The Old Rd.	0	0	16	Recorded
PM191949-2	West of I-5 in Castaic, access to the site via Hillcrest Pkwy and Sloan Canyon Rd.	4	0	20	Approved
PM062852	West of I-5 in Castaic. Access to the site via Hillcrest Pkwy and Romero Canyon Rd.	2	0	10	Pending
PM060646	West of I-5 in Castaic, access to the site via Hasley Canyon Rd.	4	0	13	Approved

TABLE 5.11-15
RELATED PROJECTS INCLUDED IN THE CUMULATIVE DATABASE

Name	Description	Units	Commercial/ Industrial	Acres	Status
PM069664	West of I-5 in Castaic. Access to the site via Hasley Canyon Rd.	2	0	10	Pending
PM070839	West of I-5 in Castaic, located at the westerly terminus of Hillcrest Pkwy at Sloan Canyon Rd.	4	0	12	Pending
PM064825	East of I-5 in Castaic, north of Lake Hughes Rd and east of Castaic Rd. Site access via Castaic Rd.	0	95.6 tsf	9	Recorded
TR060024	East of I-5 in Castaic, just south of Lake Hughes Rd. Site access via Lake Hughes Rd.	84	0	8	Recorded
Tapia Canyon (TR 53822)	East of I-5 in Castaic, Tapia Canyon Rd, west of Tesoro Residential Development. Access to the site currently via the Parker Ro exit from I-5.	405	0	1,430	Pending
Tesoro del Valle (TR 51644)	West side of San Francisquito Creek, north of Copperhill Dr. Project includes residential, commercial (6.2 acres), Parks (61.8-acres), an elementary school, a recreation center (13.96-acres), and open space. Designed to be built in 4 phases. Phase A is currently built out. Areas B and C to be built, north of Avenida Rancho Tesoro.	714	40 tsf	1,262	Recorded
Golden Valley Ranch (TR 52535)	West of the I-5 in Castaic at the intersection of Royal Rd and Green Hill Dr.	199	0	260	Inactive
TR48637	West of I-5 in Castaic. Site access via Sloan Canyon Rd.	18	0	30	Inactive
TR50070	West of I-5 in Castaic. Site access via Sloan Canyon Rd and Vaca St.	18	0	5	Inactive
TR50220	West of I-5 in Castaic. Site access via Hasley Canyon Rd and Gilmour Street.	21	0	120	Inactive
PM24179	West of I-5 in Castaic. Site access via Hasley Canyon Rd and Gilmour St.	2	0	5	Inactive
PM26549	West of I-5 in Castaic. Site is located at 30711 Romero Canyon Rd.	3	0	18	Inactive
TR067617	West of I-5 in Castaic. Site is located at the northerly terminus of Park Vista Dr, 200 feet north of the intersection with Hillcrest Pkwy. Detached condominiums with 2 public facilities on 38 acres.	13	0	0	Inactive
TR48465	West of I-5 in Castaic. Site located at the intersection Hasley Canyon Rd and Burlwood Dr.	5	0	10	Inactive

TABLE 5.11-15
RELATED PROJECTS INCLUDED IN THE CUMULATIVE DATABASE

Name	Description	Units	Commercial/ Industrial	Acres	Status
PM19776	West of the I-5 in Castaic. Site access via Romero Canyon Rd.	15	0	22	Inactive
TR072680	West of I-5 in Castaic. Site location at Sloan Canyon Rd at Canyon Hill Rd. Site access via Sloan Canyon Rd. Residential units and 1 public facility lot.	40	0	90	Pending
PM20202 (not shown on map)	East of I-5 in Castaic. North of NorthLake Project site.	3	0	28	Inactive
Auto Impound Yard	32170 N. Castaic Rd.	0	28.2 gsf	N/A	Proposed
Castaic High School (currently under construction)	West of I-5 in Castaic. Site located north of Romero Canyon Rd/Hasley Canyon Rd. Approximately 2,600 students.	0	0	198	Approved
Elementary School	West of I-5 in Castaic near Sloan Canyon Rd. Approximately 900 students.	0	0	N/A	Pending

sf: square feet; I: Interstate; tsf: thousand square feet; gsf: gross square feet

Source: Stantec 2016a

Table 5.11-16 summarizes the average annual growth rates assumed in this analysis for 2028 Cumulative Conditions.

TABLE 5.11-16
I-5 AVERAGE ANNUAL GROWTH RATES

Segment	Description	Average Annual Growth Rate 2028 (%)	Source
I-5			
1	between Templin Hwy and Lake Hughes Rd	3.06	SCAG
2	between Lake Hughes Rd and Parker Rd	4.44	HOT Lane SEIR
3	between Parker Rd and Hasley Canyon Rd	3.54	HOT Lane SEIR
4	I-5 between Hasley Canyon Rd and SR-126	2.45	HOT Lane SEIR
5	I-5 between Calgrove and SR-14	1.22	HOT Lane SEIR

I: Interstate; SCAG: Southern California Association of Governments; HOT: high occupancy toll; SEIR: Supplemental EIR; SR: State Route

Source: Stantec 2016a

Threshold 5.11-1 Would the Project conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

The Traffic Study evaluated the Project utilizing the established guidelines of the Los Angeles County Department of Public Works and current methods, as directed by County staff. A special plan–to-ground analysis (i.e., Existing Plus Project analysis) is provided as well as Cumulative Conditions (i.e., related projects) analysis. The Project is expected to build out over a 10- to 11-year period; therefore, a horizon year of 2028 is utilized for the cumulative setting. The scenarios analyzed are as follows:

Existing Conditions (refer to Section 5.11.3, Existing Conditions)
Existing Conditions Plus Project (Buildout Conditions)
2028 Cumulative Conditions/Related Projects With Project (Buildout Conditions)

Project Traffic Forecasts

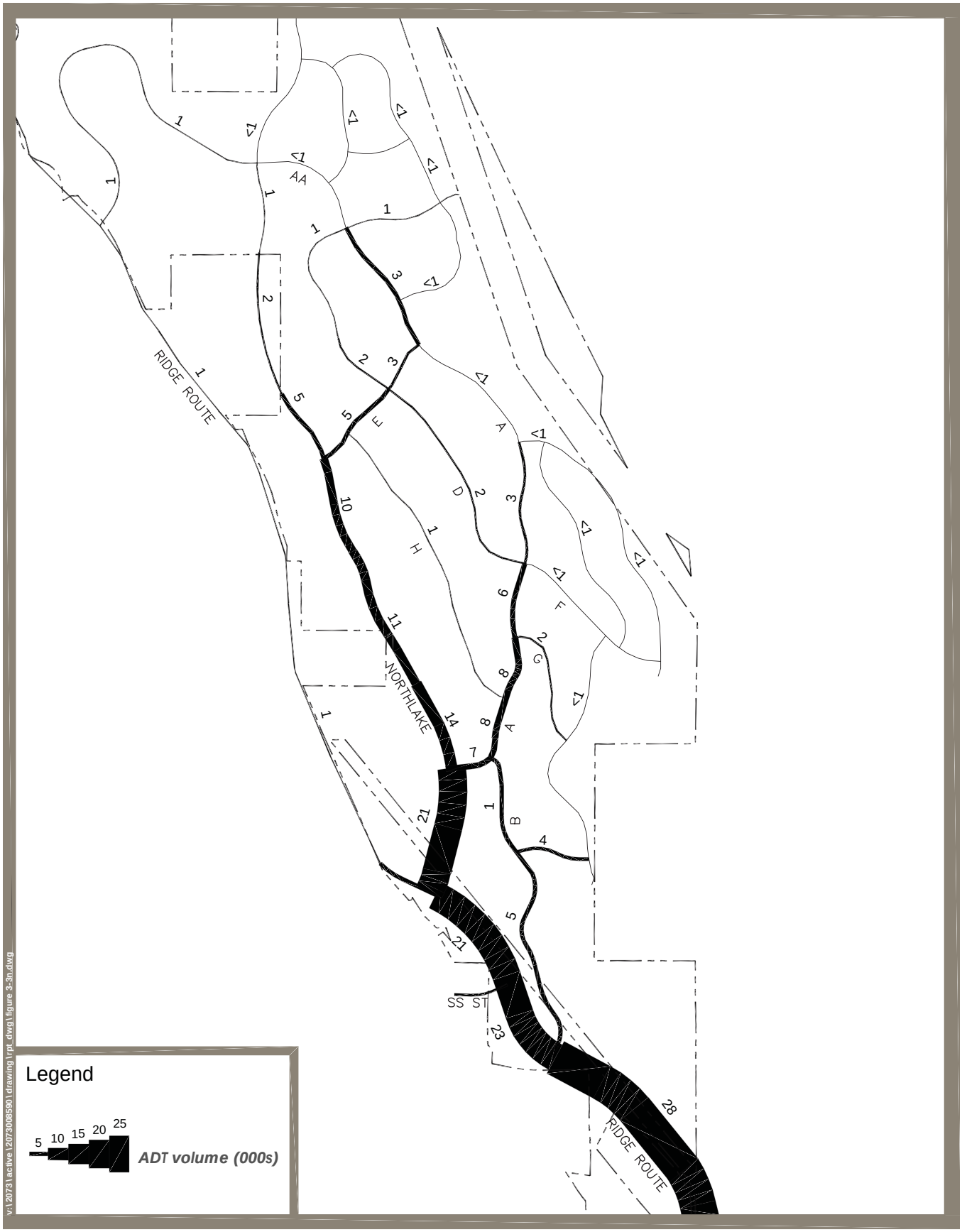
The following section presents Project only traffic data, first for the on-site roadway system, followed by the local roadway system and then the freeway system. As noted in the previous section, the SCVCTM was used to calculate the distribution of trips to and from the Project site. For on-site intersections, the site-specific NorthLake Traffic Model was used to forecast future traffic volumes on the Project site.

On-Site Roadway System

Exhibit 5.11-8 shows forecasted ADT volumes for Project buildout. Forecasted peak hour turning movement volumes for buildout conditions are shown in Exhibit 5.11-9 and Exhibit 5.11-10 for the AM peak hour and PM peak hour, respectively.

The peak hour traffic volumes referenced above were utilized to derive the intersection lane configurations for the on-site intersections referenced in Exhibit 5.11-11. The intersection capacity analysis is based on these lanes, and the forecasted peak hour volumes are summarized in Table 5.11-17. As shown, each of the on-site Project intersections is anticipated to operate at LOS D or better for buildout conditions, with the majority of the intersections operating at no worse than LOS B. Detailed LOS calculation worksheets for each intersection are provided in Appendix B of the Traffic Study found in Appendix J-1.

The Northlake Specific Plan, approved in 1991, showed a need to either widen Ridge Route Road to a 6-lane Major Arterial, or build a secondary access. Due to the decreased dwelling unit total, in comparison to the Specific Plan, the findings of this analysis show that neither the widening of Ridge Route Road to a 6-lane Major Arterial, nor building of a secondary access is needed.



Source: Stantec 2016

On-Site ADT Volumes

Exhibit 5.11-8

NorthLake Specific Plan SEIR

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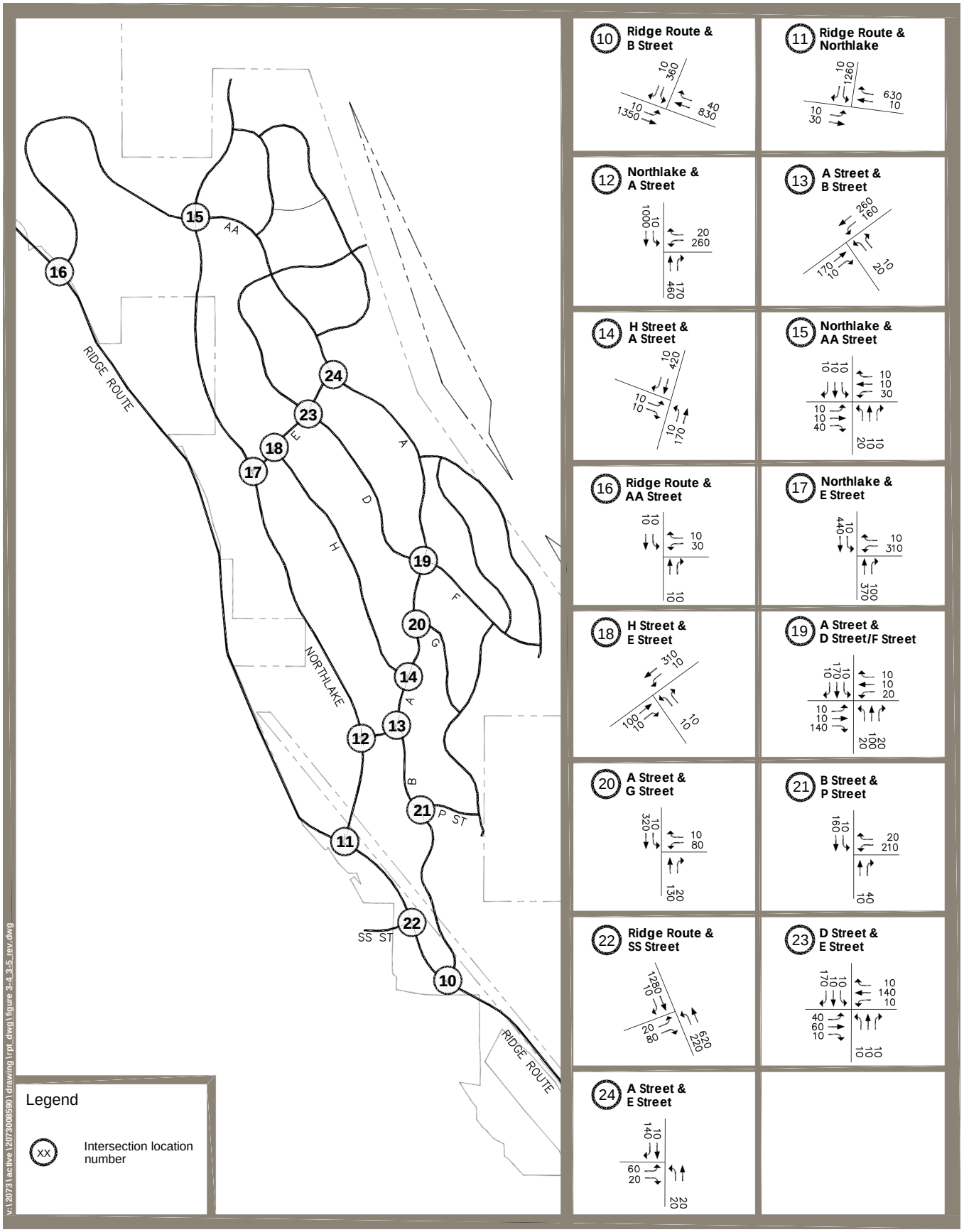

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Source: Stantec 2016

On-Site Intersection Turning Volumes – AM Peak Hour

Exhibit 5.11-9

NorthLake Specific Plan SEIR

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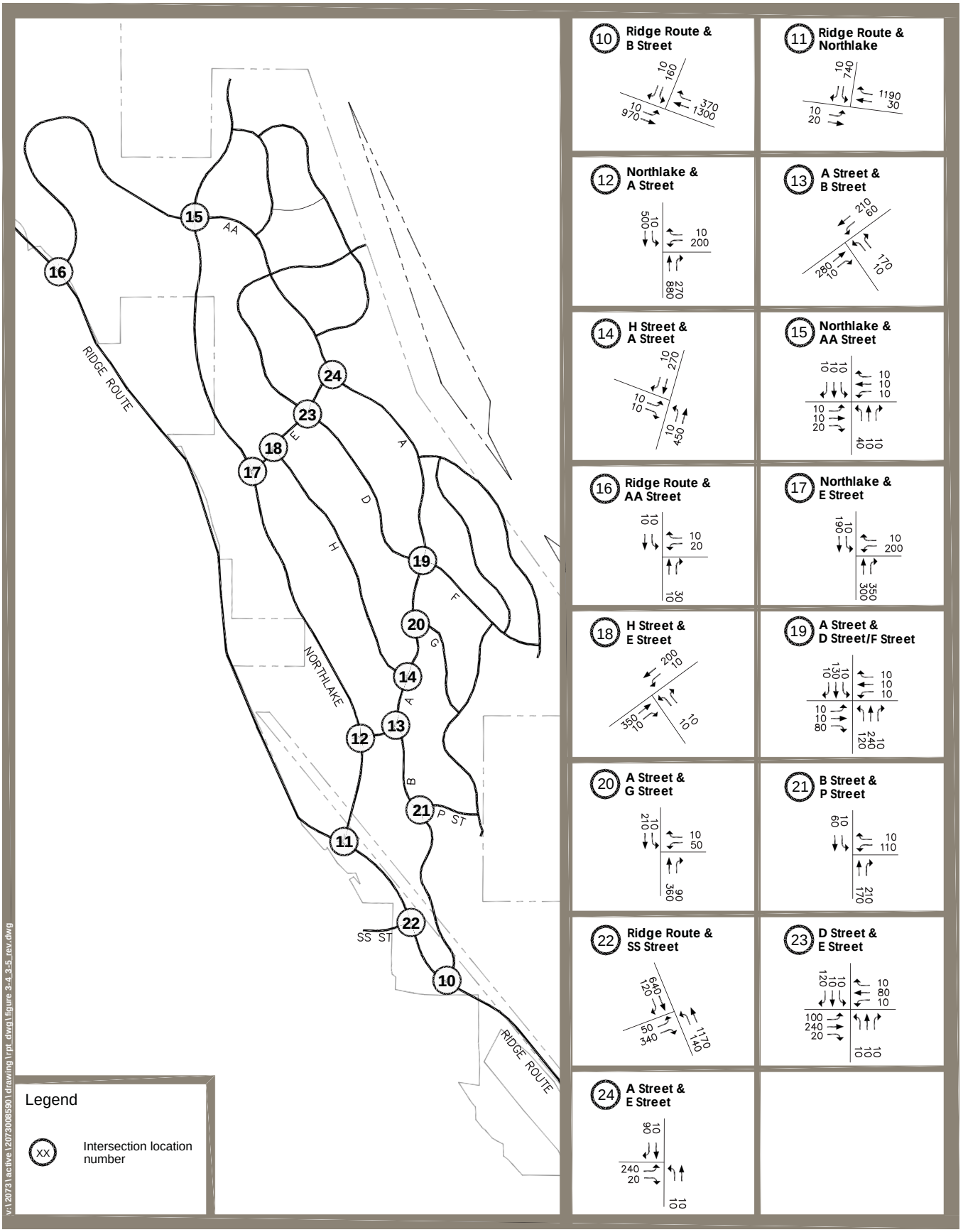

Source: Stantec 2016

On-Site Intersection Turning Volumes – PM Peak Hour

Exhibit 5.11-10

NorthLake Specific Plan SEIR

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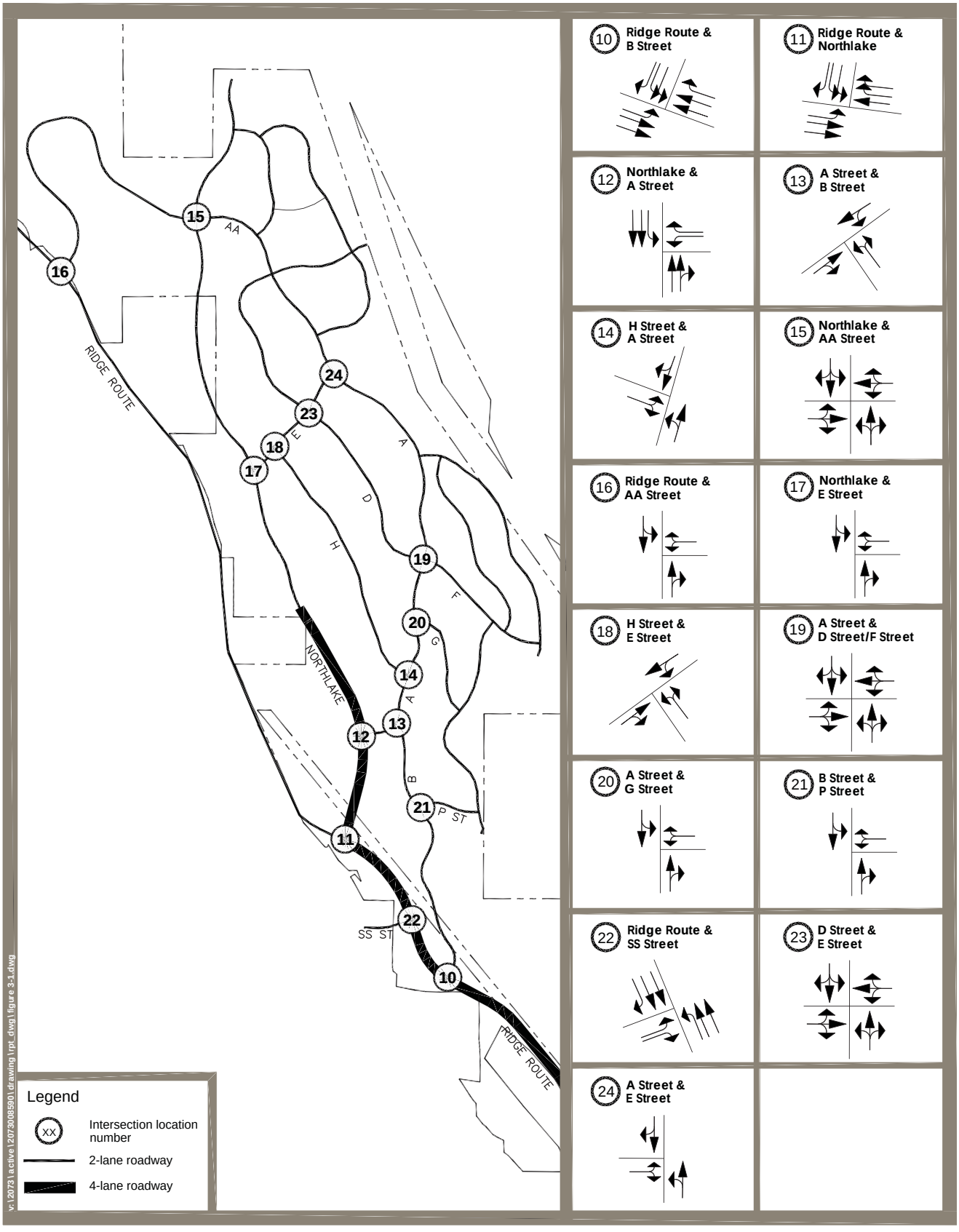

Source: Stantec 2016

On-Site Circulation System and Intersection Lane Configurations

Exhibit 5.11-11

NorthLake Specific Plan SEIR

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TABLE 5.11-17
PROJECT INTERSECTION CAPACITY UTILIZATION AND LEVEL OF SERVICE SUMMARY – BUILDOUT CONDITIONS (ON SITE)

Location	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
10. Ridge Route Rd and B Street	0.65	B	0.58	A
11. Ridge Route Rd and Northlake Blvd	0.56	A	0.39	A
12. Northlake Blvd and A Street	0.57	A	0. 60	A
13. B Street and A Street	0.38	A	0.43	A
14. H Street and A Street	0.39	A	0.40	A
15. Northlake Blvd and AA Street	0.20	A	0.19	A
16. Ridge Route Rd and AA Street	0.15	A	0.16	A
17. NorthLake and E Street	0.60	A	0.65	B
18. H Street and E Street	0.31	A	0.35	A
19. D Street and A Street	0.34	A	0.41	A
20. G Street and A Street	0.37	A	0.43	A
21. B Street and P Street	0.35	A	0.43	A
22. Ridge Route and SS Street	0.65	B	0.55	A
23. D Street and E Street	0.35	A	0.44	A
24. A Street and E Street	0.25	A	0.33	A

ICU: Intersection Capacity Utilization; LOS: level of service

Source: Stantec 2016a

Local (Off-Site) Roadway System and Freeway System

Project-generated ADT volumes are provided in Exhibit 5.11-12 for the local roadway system and freeway system. This distribution of Project trips corresponds to the Project's buildout horizon year of 2028. The corresponding Project-generated peak hour turning movement volumes are provided in Exhibit 5.11-13 and Exhibit 5.11-14 for the AM peak hour and PM peak hour, respectively.

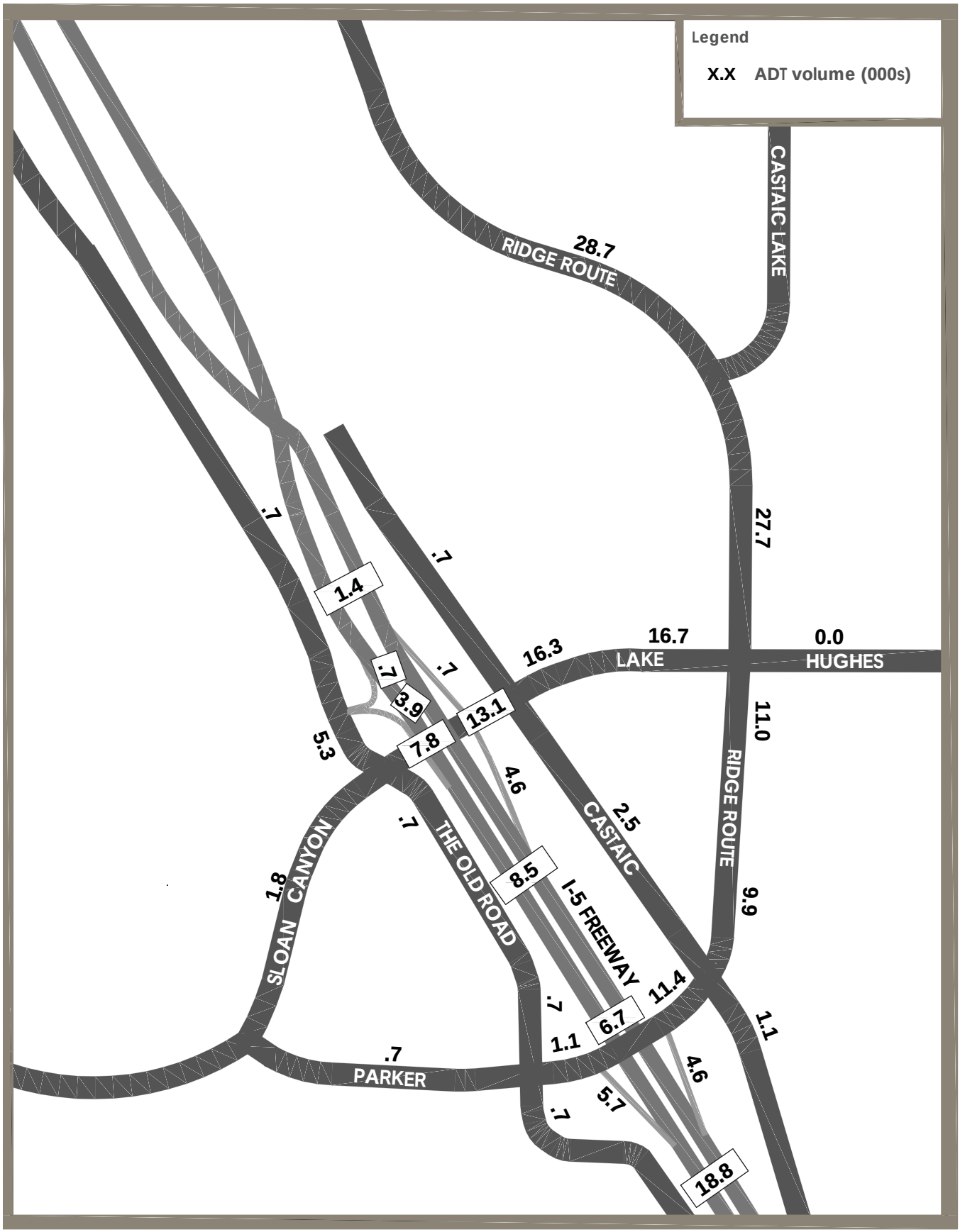
Existing Plus Project Analysis

The Existing Plus Project scenario depicts the addition of Project-generated traffic to existing traffic conditions. ADT forecasts for Existing Plus Project conditions are shown on Exhibit 5.11-15. In all cases, the existing roadway system has been used for this analysis as a baseline to determine Project impacts.

Existing Plus Project Impact Analysis – Local Roadway System

The peak hour intersection data can be found on Exhibit 5.11-16 and Exhibit 5.11-17 for the AM peak hour and PM peak hour, respectively. Table 5.11-18 gives the corresponding ICU values and LOS results, which provides a comparison between the Existing and With Project conditions. Exhibit 5.11-15 shows that, under Existing Plus Project conditions, the three intersections listed below would be significantly impacted by the Project in either the AM or PM peak hour. The agency with jurisdiction over the intersection is also identified in parenthesis.

- Ridge Route Road and Lake Hughes Road (County)
- I-5 southbound on-ramp and Parker Road (County/Caltrans)
- I-5 northbound off-ramp and Ridge Route Road (County/Caltrans)



Source: Stantec 2016

ADT Volumes – Project Only

Exhibit 5.11-12

NorthLake Specific Plan SEIR

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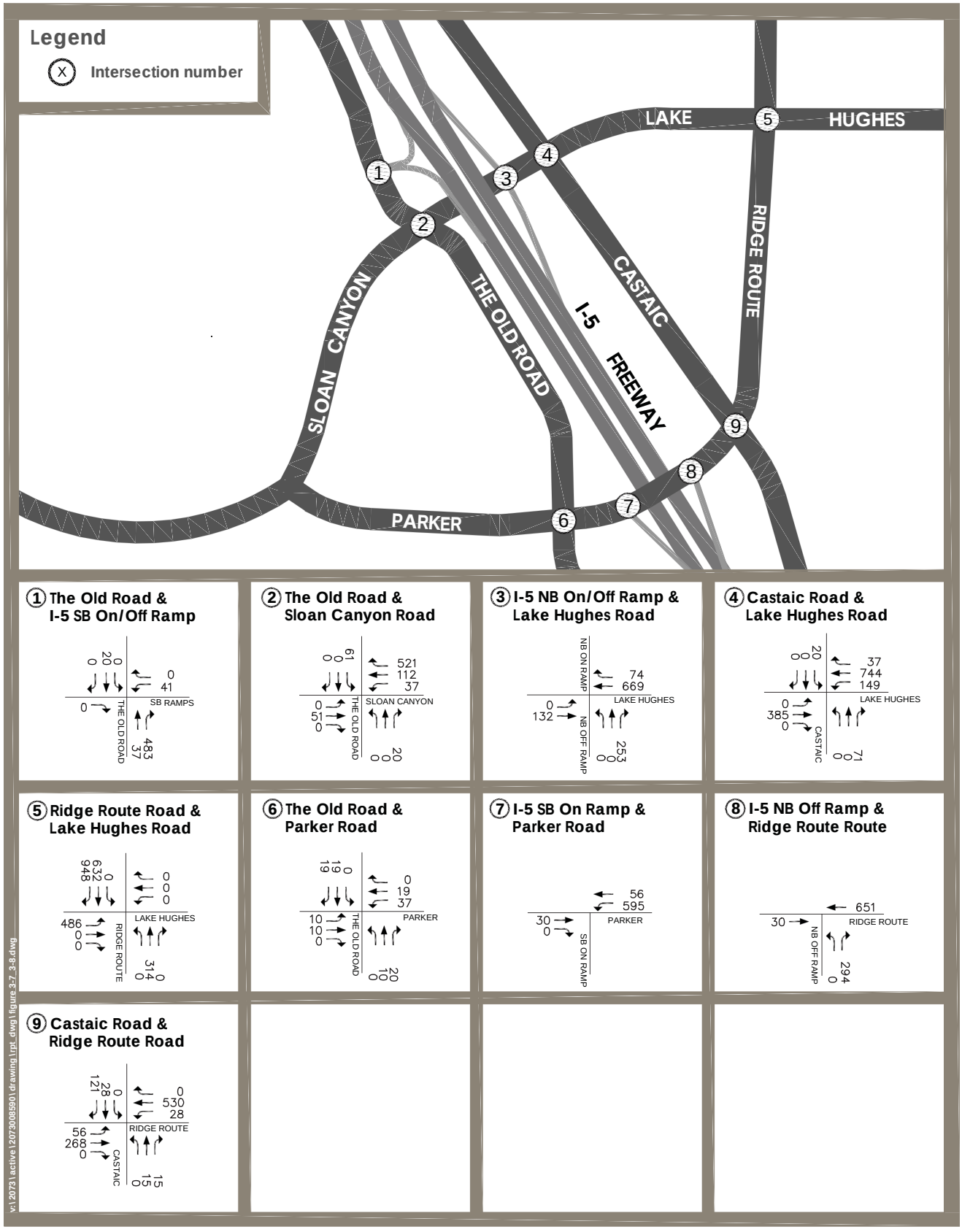

Source: Stantec 2016

Intersection Turning Lane Movement Volumes
AM Peak Hour – Project Only

Exhibit 5.11-13

NorthLake Specific Plan SEIR

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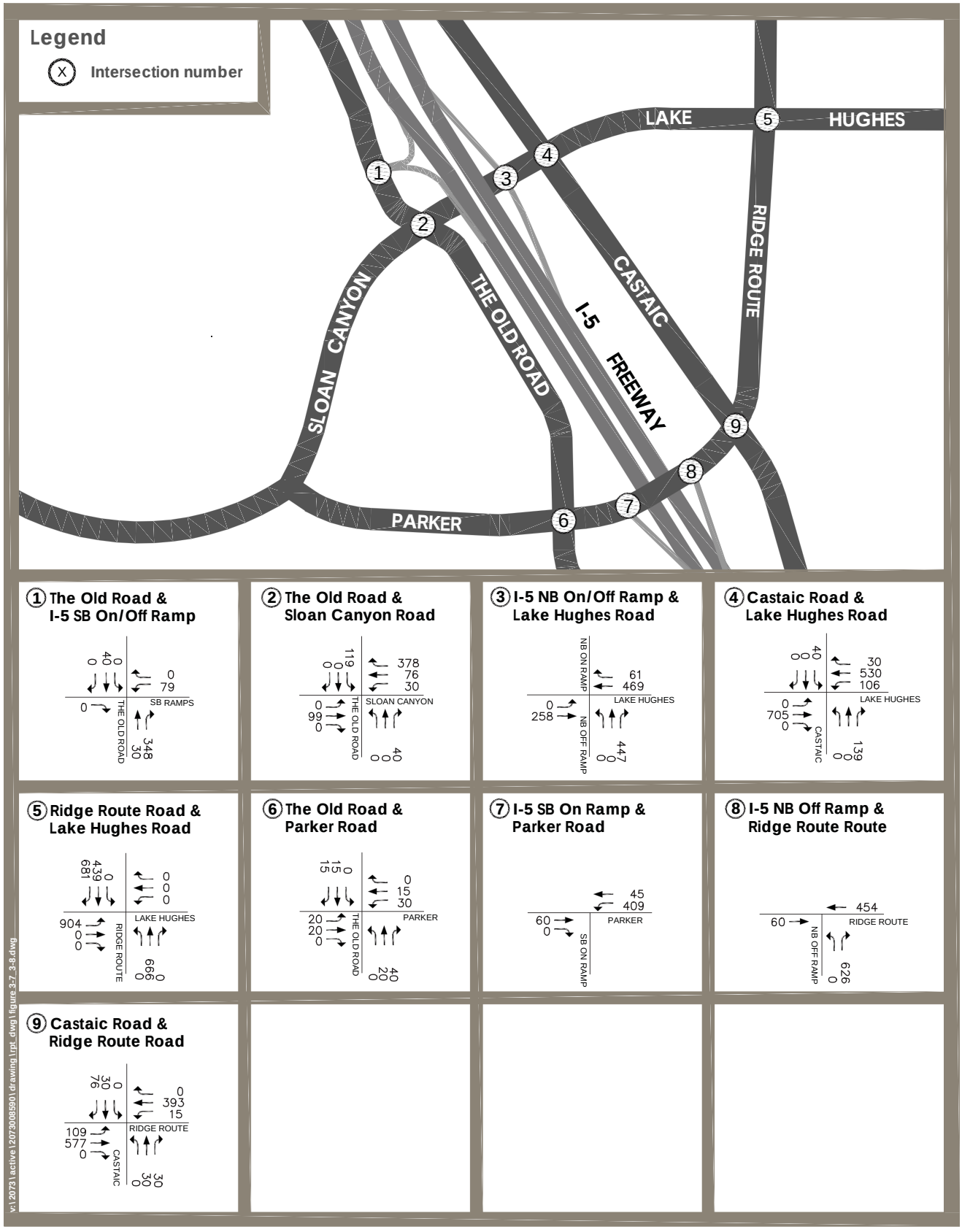

Source: Stantec 2016

Intersection Turning Lane Movement Volumes
PM Peak Hour – Project Only

Exhibit 5.11-14

NorthLake Specific Plan SEIR

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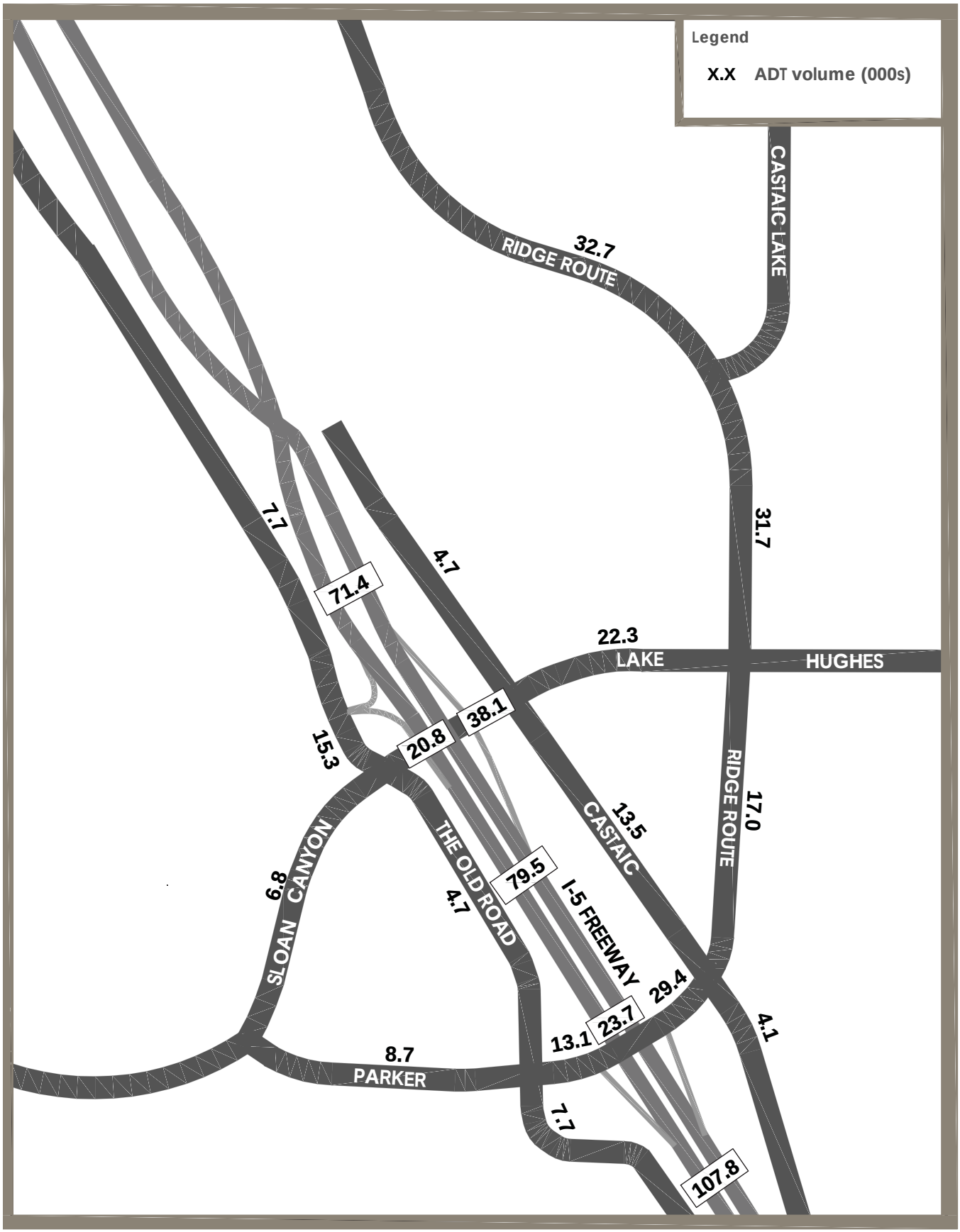

Source: Stantec 2016

ADT Volumes – Existing Plus Project

Exhibit 5.11-15

NorthLake Specific Plan SEIR

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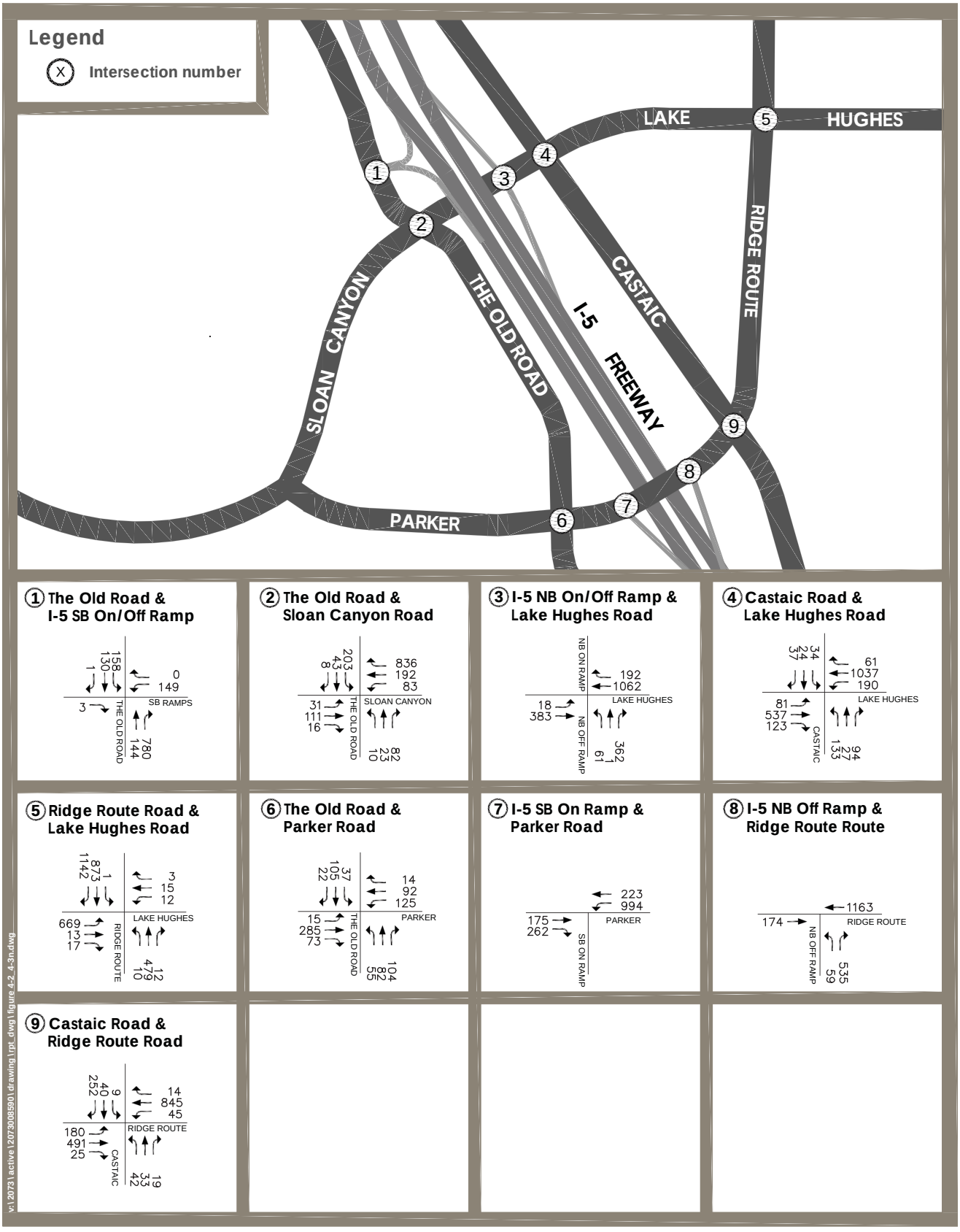

Source: Stantec 2016

Intersection Turning Lane Movement Volumes
AM Peak Hour – Existing Plus Project

Exhibit 5.11-16

NorthLake Specific Plan SEIR

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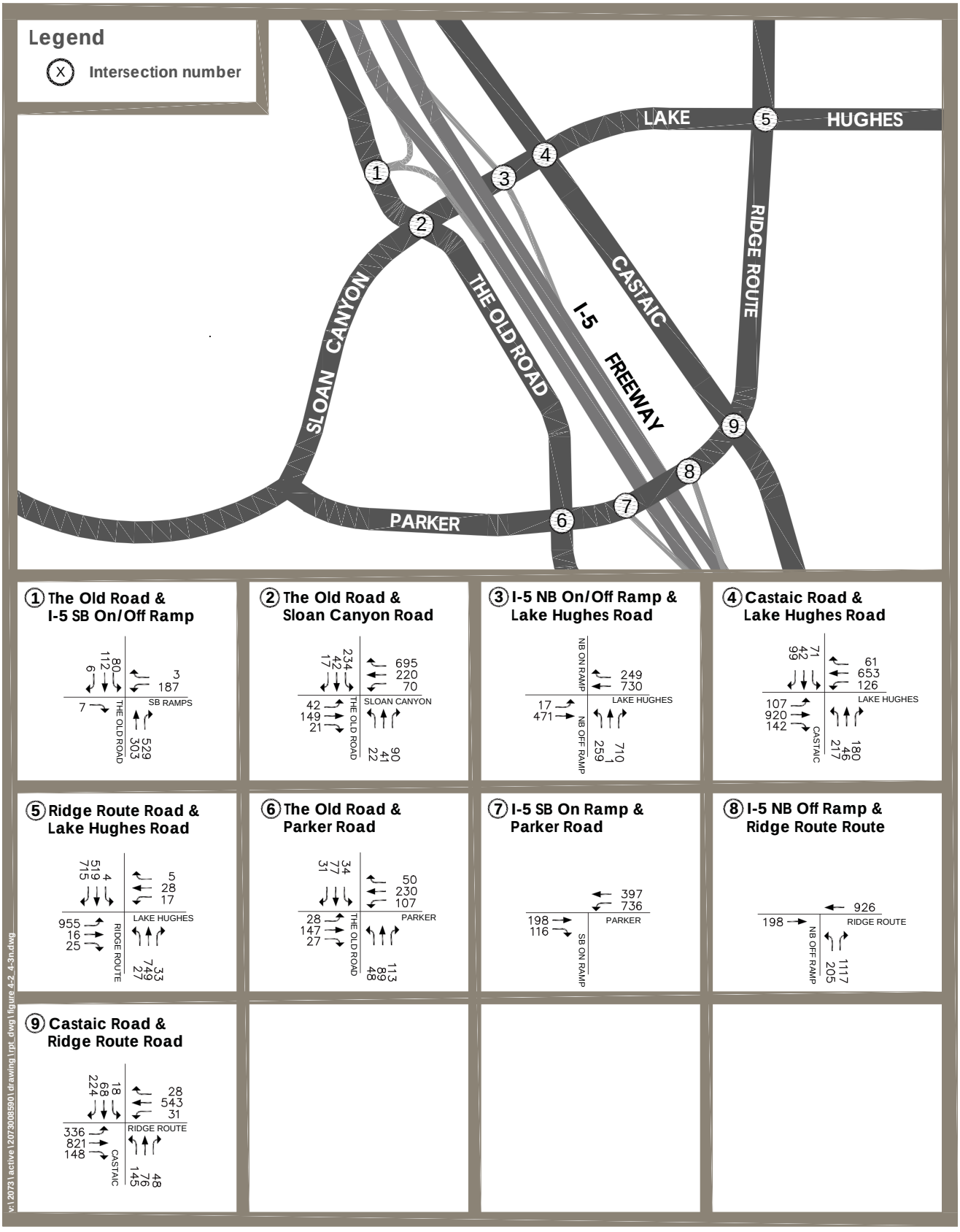

Source: Stantec 2016

Intersection Turning Lane Movement Volumes
PM Peak Hour – Existing Plus Project

Exhibit 5.11-17

NorthLake Specific Plan SEIR

BonTerra PSOMAS

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TABLE 5.11-18
EXISTING PLUS PROJECT INTERSECTION CAPACITY UTILIZATION AND LEVEL OF SERVICE SUMMARY

Location	Existing				Existing Plus Project				Difference	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
1. The Old Rd and I-5 SB Ramps	0.41	A	0.39	A	0.71	C	0.51	A	0.30	0.12
2. The Old Rd and Sloan Canyon Rd/Lake Hughes Rd	0.34	A	0.36	A	0.65	B	0.59	B	0.31	0.23
3. I-5 NB Ramps and Lake Hughes Rd	0.31	A	0.41	A	0.54	A	0.73	C	0.23	0.32
4. Castaic and Lake Hughes Rd	0.31	A	0.37	A	0.54	A	0.66	B	0.23	0.29
5. Ridge Route Rd and Lake Hughes Rd	0.31	A	0.19	A	0.94	E	0.95	E	**0.63**	**0.76**
6. The Old Rd and Parker Rd	0.45	A	0.42	A	0.51	A	0.51	A	0.06	0.09
7. I-5 SB On-Ramp and Parker Rd	0.60	A	0.52	A	0.99	E	0.81	D	**0.39**	**0.29**
8. I-5 NB Off-Ramp and Ridge Route Rd	0.46	A	0.55	A	0.87	D	1.03	F	**0.41**	**0.48**
9. Castaic and Ridge Route Rd	0.33	A	0.41	A	0.59	A	0.62	B	0.26	0.21

ICU: Intersection Capacity Utilization; LOS: level of service; I: Interstate; SB: southbound; NB: Northbound

Bold denotes a significant impact according to thresholds detailed in Table 5.11-5 and below:

An intersection is considered to be significantly impacted if the project increases the ICU by an amount equal to or greater than the amounts set forth below:

County Thresholds:	Pre-Project ICU	Project Increment
	0.71–0.80 (LOS C)[b]	greater than or equal to 0.04
	0.81–0.90 (LOS D)	greater than or equal to 0.02
	0.91 or more (LOS E and F)	greater than or equal to 0.01

Source: Stantec 2016a

Improvements necessary for each intersection to operate at an acceptable LOS[2], as defined previously in Table 5.11-5, are identified below for Project Buildout conditions.

- **Ridge Route Road and Lake Hughes Road.** The following improvements are recommended to maintain acceptable peak hour intersection operations and mitigate Project impacts for Existing Plus Project conditions:
    - Install traffic signal and include a southbound right-turn overlap phase.
    - Restripe the eastbound approach to include two left-turn lanes, one through lane and one right-turn lane.
    - In the northbound direction, add one right-turn lane.
    - In the westbound direction, add a dedicated right-turn lane.

2 An intersection is considered to be significantly impacted if the project increases the ICU by an amount equal to or greater than the amounts set forth below:

County Thresholds:	Pre-Project ICU	Project Increment
	0.71–0.80 (LOS C)[b]	greater than or equal to 0.04
	0.81–0.90 (LOS D)	greater than or equal to 0.02
	0.91 or more (LOS E and F)	greater than or equal to 0.01

- **I-5 Southbound On-Ramp and Parker Road.**[3] The following improvements are recommended to maintain acceptable peak hour intersection operations and mitigate Project impacts for Existing Plus Project conditions:
    - Reconstruct the bridge to four lanes.
    - Install traffic signal.
    - At the intersection, add one eastbound right-turn lane and two westbound left-turn lanes.
- **I-5 Northbound Off-Ramp and Ridge Route Road.** The following improvements are recommended to maintain acceptable peak hour intersection operations and mitigate Project impacts for Existing Plus Project conditions:
    - Reconstruct the bridge to four lanes.
    - Install traffic signal.
    - At the intersection, add a second northbound right-turn lane and a second westbound through lane.

Table 5.11-19 provides a comparison of anticipated LOS values for impacted intersections before and after the identified improvements. As shown, the significant impacts can be reduced to less than significant levels with implementation of recommended improvements; however, the intersections at I-5 southbound on-ramp and Parker Road and I-5 northbound off-ramp and Ridge Route Road are both under the jurisdiction of Caltrans. The Project Applicant and County will coordinate with Caltrans regarding recommended improvements; however, the County of Los Angeles cannot require Caltrans to implement the improvement and cannot construct the improvement without Caltrans' approval. For these reasons, impacts to the intersections of I-5 southbound on-ramp and Parker Road and I-5 northbound off-ramp and Ridge Route Road are conservatively considered to be significant and unavoidable.

TABLE 5.11-19
EXISTING PLUS PROJECT INTERSECTION CAPACITY UTILIZATION AND LEVEL OF SERVICE SUMMARY – WITH MITIGATION

Location	Existing				Existing Plus Project With Mitigation				Difference	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
5. Ridge Route Rd and Lake Hughes Rd	0.31	A	0.19	A	0.82	D	0.67	B	0.51	0.48
7. I-5 SB On-Ramp and Parker Rd	0.60	A	0.52	A	0.61	A	0.48	A	0.01	(0.04)
8. I-5 NB Off-Ramp and Ridge Route Rd	0.46	A	0.55	A	0.50	A	0.61	B	0.04	0.06

ICU: Intersection Capacity Utilization; LOS: level of service; I: Interstate; SB: southbound; NB: northbound

Source: Stantec 2016a

3 Mitigation measures for Existing Plus Project conditions would require that the Parker Road interchange be reconstructed in order to accommodate the volume of traffic with the Project. The ultimate buildout of the bridge is anticipated to have six lanes: four in the westbound direction and two in the eastbound direction. The ultimate configuration is not needed to mitigate the impacts under Existing Plus Project conditions. Therefore, a phased improvement to the bridge consisting of four lanes—three lanes in the westbound direction and one lane in the eastbound direction—would be adequate to mitigate the Project's impacts.

With the improvements described above, the Ridge Route at Lake Hughes intersection would be mitigated to a desirable LOS D, consistent with the threshold established in the Los Angeles County General Plan and the Santa Clarita Valley Area Plan, One Valley One Vision. However, the intersection would not be fully mitigated to the LOS C threshold utilized in the County's Traffic Impact Analysis Guidelines. Improvements to fully mitigate the intersection to the LOS C threshold were considered, such as a southbound free-right turn lane, however was determined to not be geometrically feasible. Another improvement that was considered to achieve the LOS C threshold was to convert an existing southbound through lane to a shared through/right turn lane. However, the lane conversion would not be desirable when considering the crosswalks and pedestrians.

Existing Plus Project Impact Analysis – Freeway System

Project-generated traffic was added onto the existing freeway system. Existing AADT freeway volumes with the Project trips are shown in Table 5.11-20 below.

TABLE 5.11-20
EXISTING PLUS PROJECT FREEWAY ANNUAL AVERAGE DAILY TRAFFIC SUMMARY

No.	Segment	Without Project	With Project
1	I-5 between Templin Hwy and Lake Hughes Rd	70,000	71,000
2	I-5 between Lake Hughes Rd and Parker Rd	71,000	80,000
3	I-5 between Parker Rd and Hasley Canyon Rd	89,000	108,000
4	I-5 between Hasley Canyon Rd and SR-126	109,000	124,000
5	I-5 between Calgrove and SR-14	193,000	197,000

I: Interstate; SR: State Route
Source: Stantec 2016a

The AM and PM peak hour freeway volumes for Existing Plus Project conditions are shown in Table 5.11-21. As shown, the Project increment exceeds the 0.02 CMP threshold at the following freeways segments:

- I-5 northbound between Lake Hughes Road and Parker Road (AM and PM)
- I-5 northbound between Parker Road and Hasley Canyon Road (AM and PM)
- I-5 southbound between Lake Hughes Road and Parker Road (AM and PM)
- I-5 southbound between Parker Road and Hasley Canyon Road (AM and PM)

However, although the Project increment exceeds the 0.02 threshold at the above-referenced freeway segments, the other criterion that would cause a Project to have a significant impact is for the freeway segment to operate deficiently (i.e., worse than LOS E), and this would not occur. All segments with the Project traffic would operate at LOS C or better (V/C less than or equal to 0.71). Hence, the Project would not result in a significant impact.

TABLE 5.11-21
EXISTING PLUS PROJECT FREEWAY PEAK HOUR VOLUMES AND VOLUME-TO-CAPACITY RATIO SUMMARY

No.	Segment	Lanes	Cap.	Existing				Existing Plus Project				Project Increment	
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
				Vol.	V/C	Vol.	V/C	Vol.	V/C	Vol.	V/C	AM	PM
Northbound													
1	I-5 between Templin Hwy and Lake Hughes Rd	4M	8,000	1,351	0.169	2,359	0.295	1,425	0.178	2,420	0.303	0.009	0.008
2	I-5 between Lake Hughes Rd and Parker Rd	4M	8,000	1,463	0.183	1,896	0.237	1,716	0.214	2,343	0.293	0.031	0.056
3	I-5 between Parker Rd and Hasley Canyon Rd	4M	8,000	1,833	0.229	2,376	0.297	2,380	0.298	3,349	0.431	0.069	0.134
4	I-5 between Hasley Canyon Rd and SR-126	4M +1A	9,000	2,245	0.249	2,910	0.323	2,671	0.297	3,746	0.416	0.048	0.093
5	I-5 between Calgrove and SR-14	4M + 1T[C]	9,200	3,976	0.432	5,153	0.560	4,076	0.443	5,350	0.582	0.011	0.022
Southbound													
1	I-5 between Templin Hwy and Lake Hughes Rd	4M	8,000	1,309	0.164	2,240	0.280	1,350	0.169	2,319	0.290	0.005	0.010
2	I-5 between Lake Hughes Rd and Parker Rd	4M	8,000	1,803	0.225	2,450	0.306	2,286	0.286	2,798	0.350	0.061	0.044
3	I-5 between Parker Rd and Hasley Canyon Rd	4M	8,000	2,261	0.283	3,071	0.384	3,339	0.417	3,828	0.478	0.134	0.094
4	I-5 between Hasley Canyon Rd and SR-126	4M	8,000	2,769	0.346	3,761	0.470	3,609	0.451	4,351	0.544	0.105	0.074
5	I-5 between Calgrove and SR-14	4M + 2T[C]	10,400	4,902	0.471	6,659	0.640	5,100	0.490	6,798	0.654	0.019	0.014

Cap: Capacity; Vol: Volume; V/C: volume-to-capacity; I: Interstate; M: Mixed Flow Lane; SR: State Route; A: Auxiliary Lane; T: Truck Lane; T[C] = Truck Lane (Climbing)

See Table 4.11-10 for lane capacities and significant impact thresholds of significance.
Source: Stantec 2016a

Year 2028 Horizon Year With Project and Cumulative Conditions

Peak ICU values and LOS that correspond with the Cumulative Conditions with Project are shown in Table 5.11-22, which provides a comparison between the Existing Conditions and the With Project Conditions.

TABLE 5.11-22
ICU SUMMARY – EXISTING AND CUMULATIVE CONDITIONS
(WITH PROJECT)

Location	Existing				Cumulative with Project				Increase	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
1. The Old Road & I-5 SB Ramps	0.41	A	0.39	A	0.78	C	0.62	B	**0.37**	0.23
2. The Old Road & Sloan/Lake Hughes	0.34	A	0.36	A	0.73	C	0.73	C	0.39	0.37
3. 1-5 NB Ramps & Lake Hughes	0.31	A	0.41	A	0.66	B	0.77	C	0.35	**0.36**
4. Castaic & Lake Hughes	0.31	A	0.37	A	0.53	A	0.53	A	0.22	0.16
5. Ridge Route and Lake Hughes	0.31	A	0.19	A	0.92	E	1.03	F	**0.61**	**0.84**
6. The Old Road & Parker	0.45	A	0.42	A	0.55	A	0.71	C	0.10	0.29
7. I-5 SB On Ramp & Parker	0.60	A	0.52	A	1.10	F	1.16	F	**0.50**	**0.64**
8. I-5 NB Off Ramp & Ridge Route	0.46	A	0.55	A	1.09	F	1.44	F	**0.63**	**0.89**
9. Castaic & Ridge Route	0.33	A	0.41	A	0.69	B	0.84	D	0.36	**0.43**

Bold – denotes significant impact (See Table 1-5 for impact criteria)
Source: Stantec 2016a

As shown in Table 5.11-22, under Cumulative Conditions With Project (Buildout Conditions), the following intersections would be significantly impacted through implementation of the Project and Cumulative Development:

- The Old Road and I-5 southbound ramps (AM only)
- I-5 northbound ramps and Lake Hughes Road (PM only)
- Ridge Route Road and Lake Hughes Road (AM and PM)
- I-5 southbound on-ramp and Parker Road (AM and PM)
- I-5 northbound off-ramps and Ridge Route Road (AM and PM)
- Castaic Road and Ridge Route Road (PM only)

Improvements necessary for each intersection to operate at an acceptable LOS are identified below.

- **The Old Road and I-5 Southbound Ramps.** The following improvements are recommended to maintain acceptable peak hour intersection operations and mitigate Project impacts for Cumulative Conditions With Project conditions:
    - Install traffic signal with a northbound right-turn overlap phasing.

As identified in MM 5.11-2, the Project Applicant would be required to pay a fair share fee toward implementing this improvement. If the County is unable to obtain sufficient funding from other sources to complete the construction of this improvement by the time that the Project becomes operational, then a significant impact would remain until the improvement is completed. The impact would remain unmitigated. Further, this intersection is also under the jurisdiction of Caltrans. The Project Applicant and County will coordinate with Caltrans regarding recommended improvements; however, the County of Los Angeles cannot require Caltrans to approve implementation of the improvement and cannot construct the improvement without Caltrans' approval. For these reasons, this impact is significant and unavoidable, despite the payment by the Project Applicant of its fair share fees

- **I-5 Northbound Ramps and Lake Hughes Road.** The following improvements are recommended to maintain acceptable peak hour intersection operations and mitigate Project impacts for Cumulative Conditions With Project conditions:
    - Install traffic signal.
    - Widen off-ramp to add one left-turn lane and restripe center lane to a shared left/through/right-turn lane.

  As identified in MM 5.11-2, the Project Applicant would be required to pay a fair share fee toward implementing this improvement. If the County is unable to obtain sufficient funding from other sources to complete the construction of this improvement by the time that the Project becomes operational, then a significant impact would remain until the improvement is completed. The impact would remain unmitigated. Further, this intersection is also under the jurisdiction of Caltrans. The Project Applicant and County will coordinate with Caltrans regarding recommended improvements; however, the County of Los Angeles cannot require Caltrans to approve implementation of the improvement and cannot construct the improvement without Caltrans' approval. For these reasons, this impact is significant and unavoidable, despite the payment by the Project Applicant of its fair share fees.

- **Ridge Route Road and Lake Hughes Road.** The following improvements are recommended to maintain acceptable peak hour intersection operations and mitigate Project impacts for Cumulative Conditions With Project conditions:
    - Install traffic signal and include southbound right-turn overlap phasing.
    - Restripe eastbound approach to include two left-turn lanes, one through lane and one right-turn lane.
    - In the northbound direction, add one right-turn lane.
    - In the westbound direction, add a dedicated right-turn lane.

  With the improvements described above, Ridge Route Road at Lake Hughes intersection would be mitigated to a desirable LOS C (0.78), better than the LOS D threshold established in the Los Angeles County General Plan and the Santa Clarita Valley Area Plan, One Valley One Vision. However, the intersection would not be fully mitigated to the LOS C (0.74) threshold utilized in the County's Traffic Impact Analysis Guidelines. Improvements to fully mitigate the intersection to the LOS C threshold were considered, such as a southbound free-right turn lane; however, this was determined to not be geometrically feasible. Therefore, this impact would remain significant and unavoidable.

- **I-5 Southbound On-Ramp and Parker Road.** The following improvements are recommended to maintain acceptable peak hour intersection operations and mitigate Project impacts for Cumulative Conditions With Project conditions:
    - Reconstruct bridge to 4 lanes.
    - Install traffic signal.
    - At intersection, add one eastbound right-turn lane and two westbound left-turn lanes.

  As identified in MM 5.11-2, the Project Applicant would be required to pay a fair share fee toward implementing this improvement. If the County is unable to obtain sufficient funding from other sources to complete the construction of this improvement by the time that the Project becomes operational, then a significant impact would remain until the improvement is completed. The impact would remain unmitigated. Further, this intersection is also under the jurisdiction of Caltrans. The Project Applicant and County will coordinate with Caltrans regarding recommended improvements; however, the County of Los Angeles cannot require Caltrans to approve implementation of the improvement and cannot construct the improvement without Caltrans' approval. For these reasons, this impact is significant and unavoidable, despite the payment by the Project Applicant of its fair share fees.

- **I-5 Northbound Off-Ramp and Ridge Route Road.** The following improvements are recommended to maintain acceptable peak hour intersection operations and mitigate Project impacts for Cumulative Conditions With Project conditions:
    - Reconstruct bridge to 4 lanes.
    - Install traffic signal.
    - At intersection, add a second northbound right-turn lane.
    - At intersection, add a second and third westbound through lane.

  As identified in MM 5.11-2, the Project Applicant would be required to pay a fair share fee toward implementing this improvement. If the County is unable to obtain sufficient funding from other sources to complete the construction of this improvement by the time that the Project becomes operational, then a significant impact would remain until the improvement is completed. The impact would remain unmitigated. Further, this intersection is also under the jurisdiction of Caltrans. The Project Applicant and County will coordinate with Caltrans regarding recommended improvements; however, the County of Los Angeles cannot require Caltrans to approve implementation of the improvement and cannot construct the improvement without Caltrans' approval. For these reasons, this impact is significant and unavoidable, despite the payment by the Project Applicant of its fair share fees.

- **Castaic Road and Ridge Route Road.** The following improvements are recommended to maintain acceptable peak hour intersection operations and mitigate Project impacts for Cumulative Conditions With Project conditions:
    - Install traffic signal.
    - Restripe northbound approach to include two left-turn lanes, one through lane and one right-turn lane.
    - In the eastbound direction, stripe a right-turn lane.
    - Signal modification to include southbound right-turn overlap phasing.

As identified in MM 5.11-2, the Project Applicant would be required to pay a fair share fee toward implementing this improvement. If the County is unable to obtain sufficient funding from other sources to complete the construction of this improvement by the time the Project becomes operational, and key milestones are achieved, the Project Applicant shall implement these improvements subject to a fee credit from the County's Castaic Bridge and Thoroughfare District, thereby reducing impacts to a less than significant level.

The identified impacts would be cumulative impacts and, therefore, the Project would be responsible for its fair share of the costs of the identified mitigation measures. Participation in the Castaic Bridge and Major Thoroughfare District would satisfy the Project's fair share obligations. Each of the identified improvements would fully mitigate the Project's significant impact, as shown in Table 5.11-23, with the exception of Ridge Route Road at Lake Hughes intersection. However, if the improvements are not completed at the time of Project build out, impacts would be significant unless and until the improvements are completed.

TABLE 5.11-23
ICU SUMMARY – EXISTING AND CUMULATIVE CONDITIONS (WITH PROJECT) MITIGATION

	Existing				Cumulative with Project Plus Mitigation				Increase	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
Location	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
1. The Old Road & I-5 SB Ramps	0.41	A	0.39	A	0.74	C	0.62	B	0.33	0.23
3. 1-5 NB Ramps & Lake Hughes	0.31	A	0.41	A	0.63	B	0.66	B	0.32	0.25
5. Ridge Route and Lake Hughes	0.31	A	0.19	A	0.78	C	0.74	C	0.47	0.55
7. I-5 SB On Ramp & Parker	0.60	A	0.52	A	0.67 (16.7 sec)[1]	B (B)[1]	0.67 (21.1 sec)[1]	B (C)[1]	0.07	0.15
8. I-5 NB Off Ramp & Ridge Route	0.46	A	0.55	A	0.53 (10.1 sec)[1]	A (B)[1]	0.82 (26.1 sec)[1]	D (C)[1]	0.07	0.27[2]
9. Castaic & Ridge Route	0.33	A	0.41	A	0.64	B	0.71	C	0.31	0.30

Bold – denotes significant impact (See Table 1-5 for criteria)
[1] – Values in parentheses indicate average delay (seconds/vehicle) and LOS based on HCM delay methodology
[2] – Not a significant impact under Caltrans methodology due to LOS C conditions based on HCM delay calculation.
Source: Stantec 2016a

Table 5.11-24 compares Existing Plus Project With Mitigation and Cumulative Plus Project With Mitigation. As shown, the I-5 northbound off-ramp and Ridge Route Road intersection would operate at LOS D under Cumulative Plus Project With Mitigation conditions using the ICU methodology, but would operate at a low LOS C using the HCM methodology, which is an acceptable LOS for a Caltrans intersection. Therefore, impacts at this intersection would be fully mitigated.

TABLE 5.11-24
ICU SUMMARY – EXISTING PLUS PROJECT MITIGATION AND CUMULATIVE CONDITION (WITH PROJECT) MITIGATION

Location	Existing Plus Project Plus Mitigation				Cumulative Plus Project Plus Mitigation				Increase	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
5. Ridge Route and Lake Hughes	0.82	D	0.67	B	0.78	C	0.74	C	-0.04	0.07
7. I-5 SB On Ramp & Parker	0.61	B	0.48	A	0.67 (16.7 sec) [1]	B (B) [1]	0.67 (21.1 sec) [1]	B (C) [1]	0.06	0.19
8. I-5 NB Off Ramp & Ridge Route	0.50	A	0.61	B	0.53 (10.1 sec) [1]	A (B)[1]	0.82 (26.1 sec) [1]	D (C) [1]	0.03	0.21[2]

[1] – Values in parentheses indicate average delay (seconds/vehicle) and LOS based on HCM delay methodology
[2] – Not a significant impact under Caltrans methodology due to LOS C conditions based on HCM delay calculation.
Source: Stantec 2016a

Cumulative Conditions Without Project Analysis

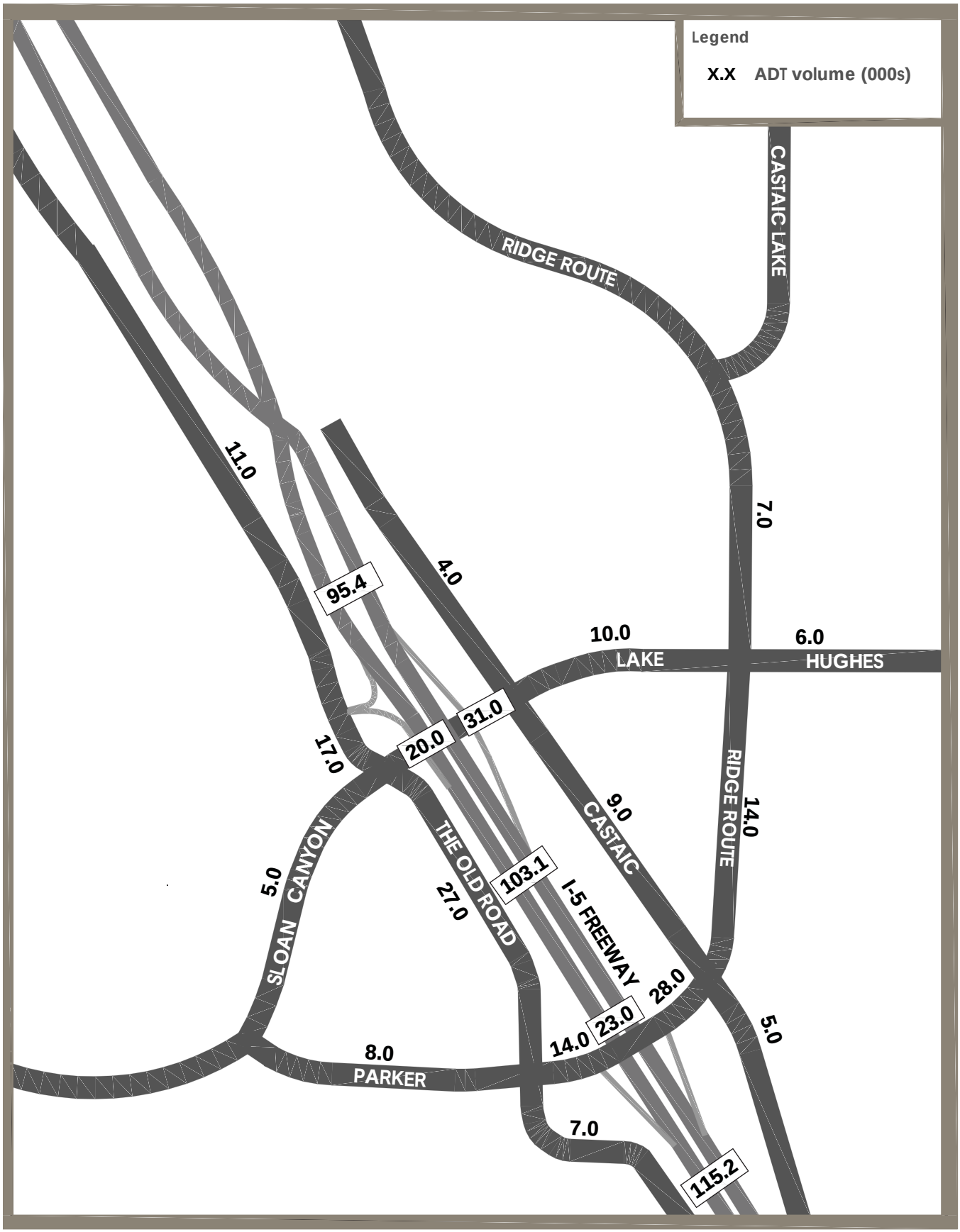
Year 2028 Cumulative Conditions ADT Volumes With Project are provided in Exhibit 5.11-18. The corresponding Cumulative Conditions With Project peak hour turning movement volumes are provided in Exhibit 5.11-19 and Exhibit 5.11-20 for the AM peak hour and PM peak hour, respectively.

Year 2028 Cumulative Conditions ADT volumes for the With Project condition are provided on Exhibit 5.11-21. The corresponding 2028 With Project peak hour turning movement volumes are provided in Exhibit 5.11-22 and Exhibit 5.11-23 for the AM peak hour and PM peak hour, respectively.

Year 2028 Horizon Year With Project and Cumulative Conditions – Intersection Operations Analysis

Peak hour ICU values and LOS that correspond with the 2028 Cumulative Conditions traffic forecasts referenced above are shown in Table 5.11-25, which provides a comparison between No Project and With Project conditions. The table indicates that under 2028 Cumulative Conditions With and Without Project, the six intersections listed below are forecasted to be significantly impacted by the Project. The agency with jurisdiction over the intersection is also identified in parentheses.

- The Old Road and I-5 southbound ramps (AM only) (County/Caltrans)
- I-5 northbound ramps and Lake Hughes Road (PM only) (County/Caltrans)
- Ridge Route Road and Lake Hughes Road (AM and PM) (County)
- I-5 southbound on-ramp and Parker Road (AM and PM) (County/Caltrans)
- I-5 northbound off-ramps and Ridge Route Road (AM and PM) (County/Caltrans)
- Castaic and Ridge Route Road (PM only) (County)



Source: Stantec 2013

ADT Volumes – 2028 Cumulative Conditions No Project Exhibit 5.11-18

NorthLake Specific Plan SEIR

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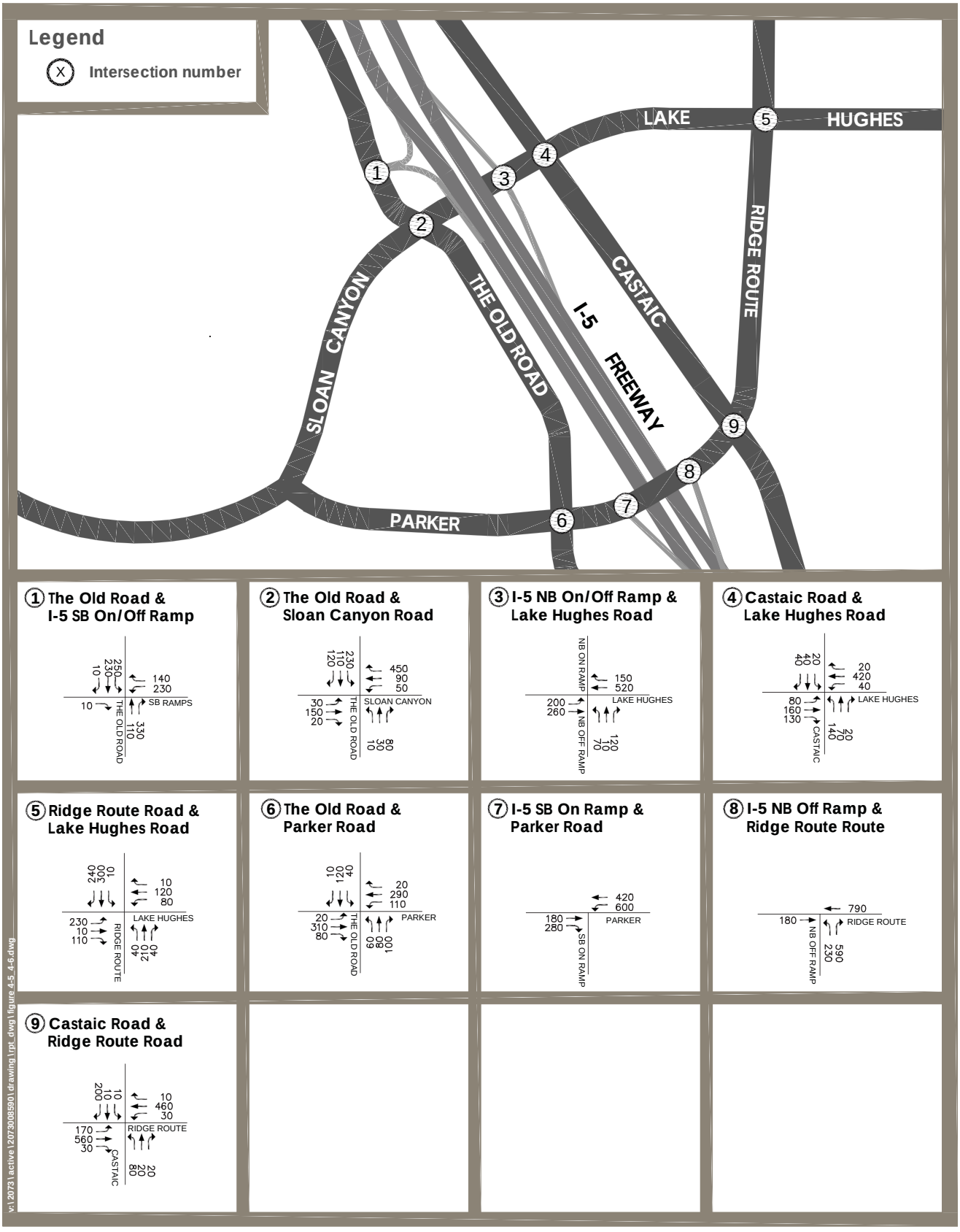

Source: Stantec 2013

Intersection Turning Lane Movement Volumes AM Peak Hour – 2028 Cumulative Conditions – No Project

Exhibit 5.11-19

NorthLake Specific Plan SEIR

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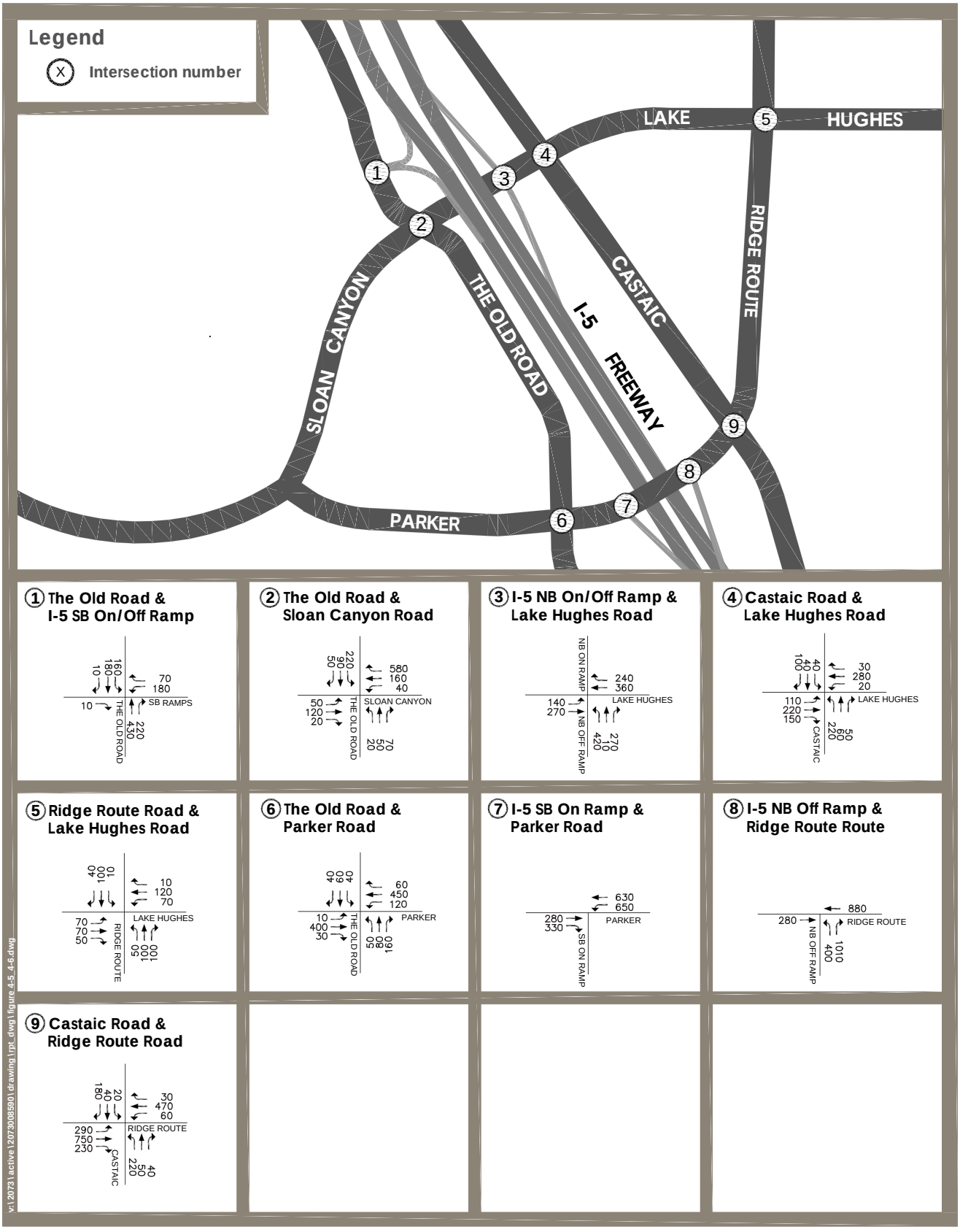

Source: Stantec 2013

Intersection Turning Lane Movement Volumes PM Peak Hour – 2028 Cumulative Conditions – No Project

Exhibit 5.11-20

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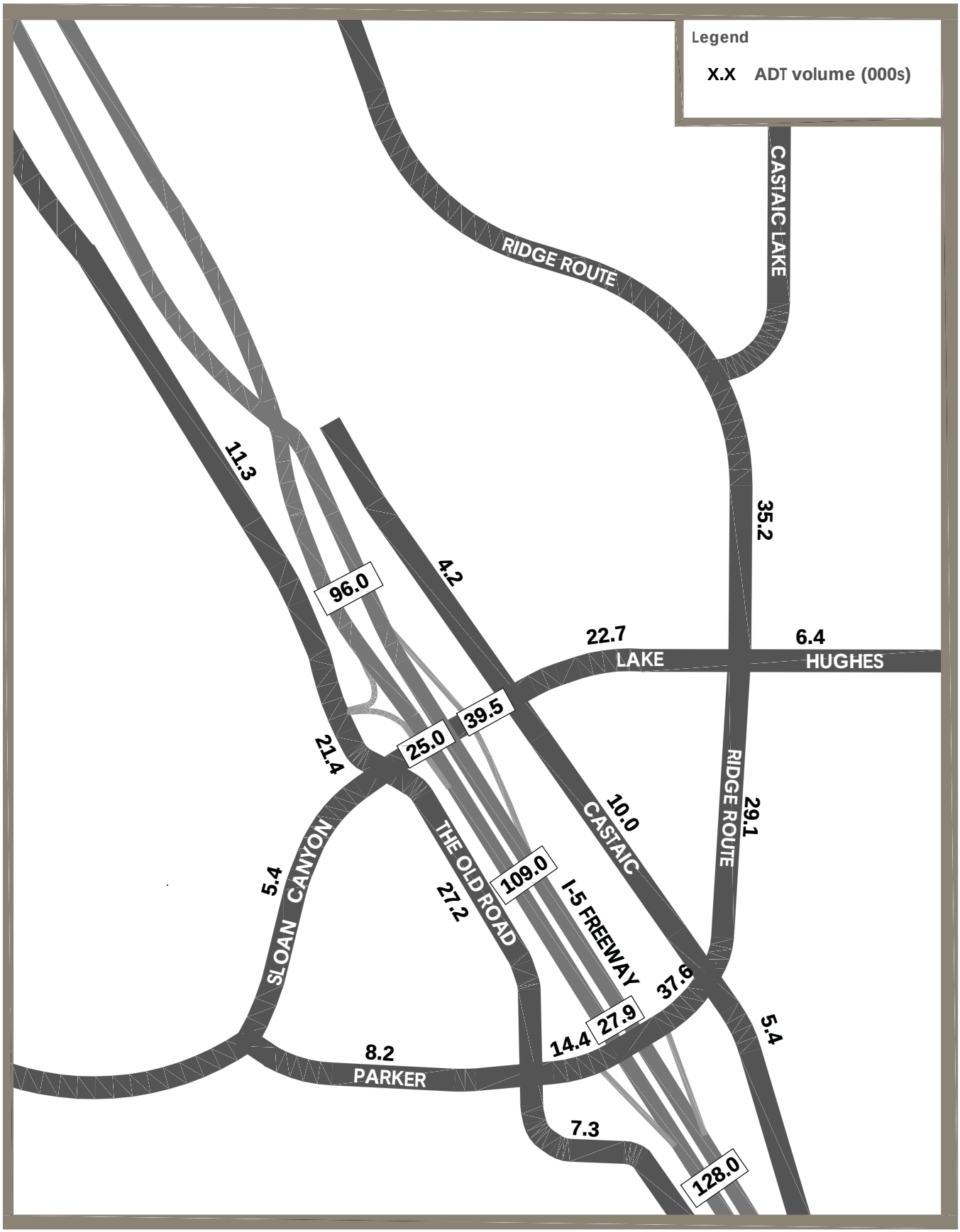

Source: Stantec 2013

ADT Volumes – 2028 Cumulative Conditions With Project Exhibit 5.11-21

NorthLake Specific Plan SEIR

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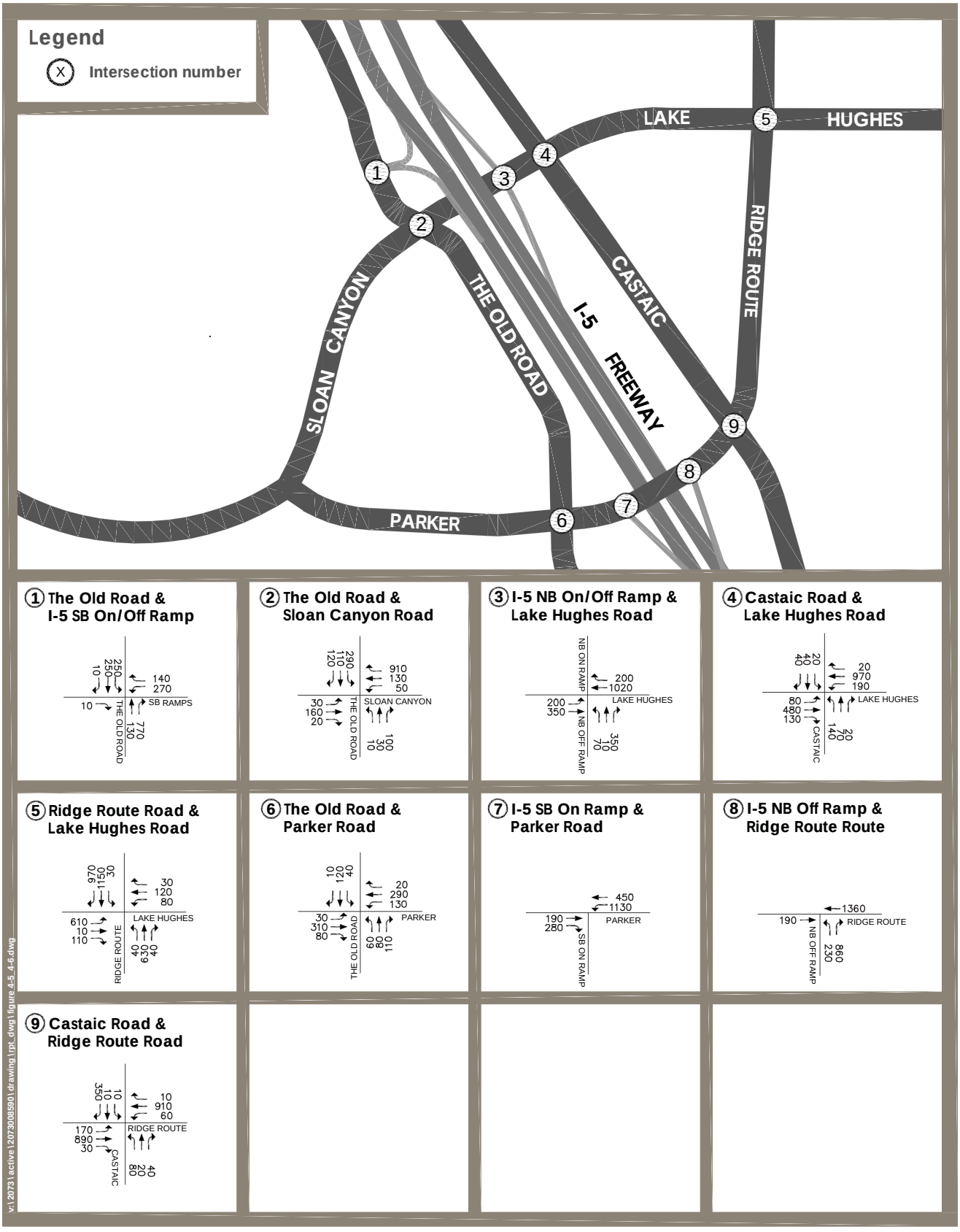

Source: Stantec 2016

Intersection Turning Lane Movement Volumes AM Peak Hour – 2028 Cumulative Conditions – With Project

Exhibit 5.11-22

NorthLake Specific Plan SEIR

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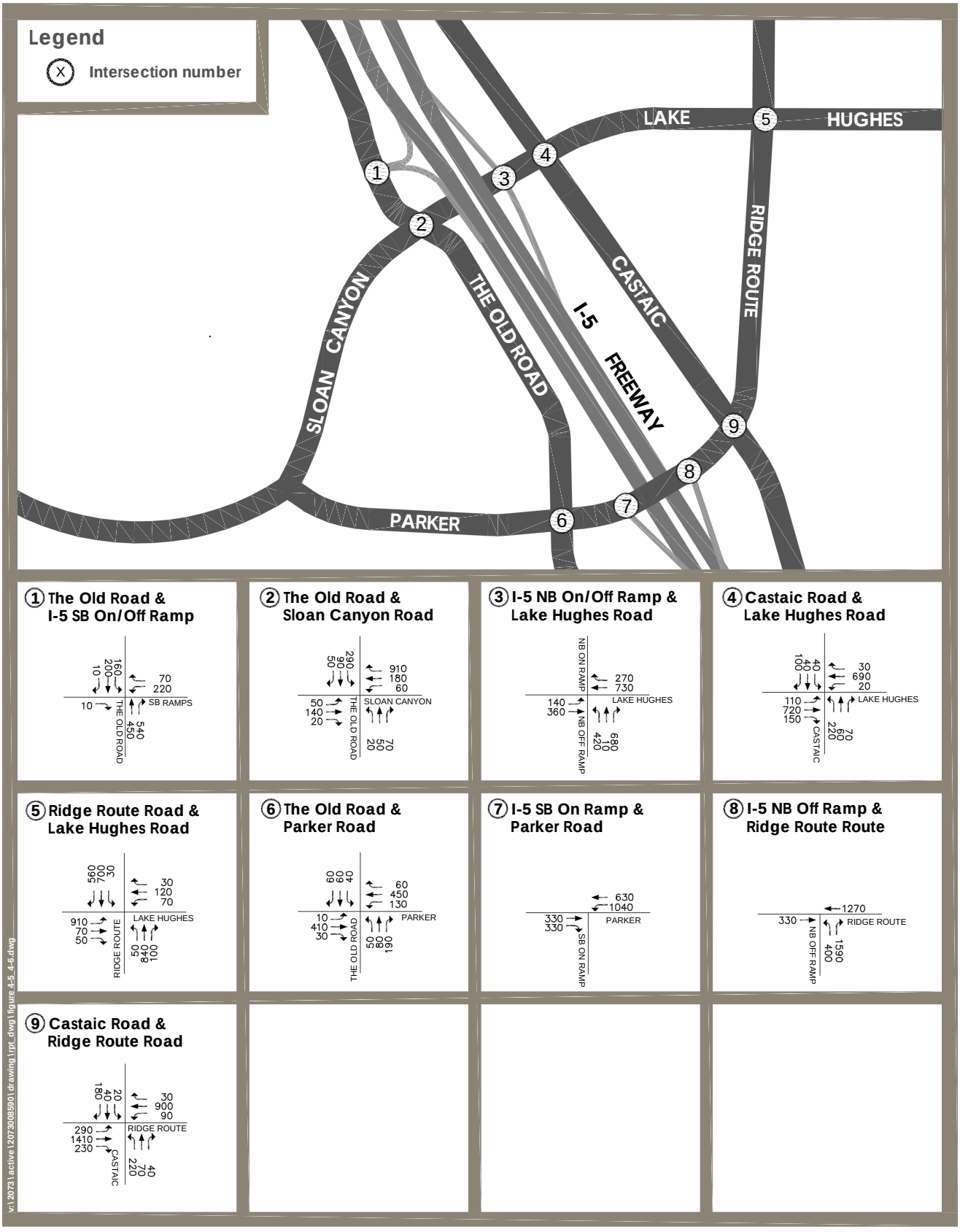

Source: Stantec 2016

Intersection Turning Lane Movement Volumes PM Peak Hour – 2028 Cumulative Conditions – With Project

Exhibit 5.11-23

NorthLake Specific Plan SEIR

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TABLE 5.11-25
2028 CUMULATIVE CONDITIONS WITH AND WITHOUT PROJECT INTERSECTION CAPACITY UTILIZATION SUMMARY

Location	Cumulative No Project				Cumulative With Project				Increase	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
1. The Old Rd and I-5 SB Ramps	0.50	A	0.58	A	0.78	C	0.62	B	**0.28**	0.04
2. The Old Rd and Sloan Canyon Rd/Lake Hughes Rd	0.43	A	0.52	A	0.73	C	0.73	C	0.30	0.21
3. I-5 NB Ramps and Lake Hughes Rd	0.49	A	0.65	B	0.66	B	0.77	C	0.17	**0.12**
4. Castaic and Lake Hughes Rd	0.36	A	0.40	A	0.53	A	0.53	A	0.17	0.13
5. Ridge Route Rd and Lake Hughes Rd	0.40	A	0.25	A	0.92	E	1.03	F	**0.52**	**0.78**
6. The Old Rd and Parker Rd	0.52	A	0.68	B	0.55	A	0.71	C	0.03	0.03
7. I-5 SB On-Ramp and Parker Rd	0.76	C	0.90	D	1.10	F	1.16	F	**0.34**	**0.26**
8. I-5 NB Off-Ramp and Ridge Route Rd	0.73	C	1.00	E	1.09	F	1.44	F	**0.36**	**0.44**
9. Castaic and Ridge Route Rd	0.46	A	0.62	B	0.69	B	0.84	D	0.23	**0.22**

ICU: Intersection Capacity Utilization; LOS: level of service; I: Interstate; SB: southbound; NB: northbound
Source: Stantec 2016a

These intersections are forecasted to exceed LOS thresholds, and thus have a significant cumulative impact due to traffic volumes generated by other reasonably foreseeable development in conjunction with Project traffic. The following improvements are needed for the identified intersections to operate at an acceptable LOS.

The Old Road and I-5 SB Ramps. The following improvements are recommended to maintain acceptable peak hour intersection operations and mitigate Project impacts for Horizon Year (2028) conditions:

- Install a traffic signal with northbound right-turn overlap phasing.

As identified in MM 5.11-2, the Project Applicant would be required to pay a fair share fee toward implementing this improvement. If the County is unable to obtain sufficient funding from other sources to complete the construction of this improvement by the time that the Project becomes operational, then a significant impact would remain until the improvement is completed. The impact would remain unmitigated. Further, this intersection is also under the jurisdiction of Caltrans. The Project Applicant and County will coordinate with Caltrans regarding recommended improvements; however, the County of Los Angeles cannot require Caltrans to approve implementation of the improvement and cannot construct the improvement without Caltrans' approval. For these reasons, this impact is significant and unavoidable, despite the payment by the Project Applicant of its fair share fee.

I-5 Northbound Ramps and Lake Hughes Road. The following improvements are recommended to maintain acceptable peak hour intersection operations for Horizon Year (2028) conditions:

- Install a traffic signal.
- Widen off ramp to add one left-turn lane and restripe center lane to a shared left-turn/through/right-turn lane.

As identified in MM 5.11-2, the Project Applicant would be required to pay a fair share fee toward implementing these improvements. If the County is unable to obtain sufficient funding from other sources to complete the construction of this improvement by the time that the Project becomes operational, then a significant impact would remain until the improvement is completed. The impact would remain unmitigated. Further, this intersection is also under the jurisdiction of Caltrans. The Project Applicant and County will coordinate with Caltrans regarding recommended improvements; however, the County of Los Angeles cannot require Caltrans to approve implementation of the improvement and cannot construct the improvement without Caltrans' approval. For these reasons, this impact is significant and unavoidable, despite the payment by the Project Applicant of its fair share fees.

Ridge Route Road and Lake Hughes Road. The following improvements are recommended to maintain acceptable peak hour intersection operations for Horizon Year (2028) conditions:

- Install traffic signal and include southbound right-turn overlap phasing.
- Restripe the eastbound approach to include two left-turn lanes, one through lane, and right-turn lane.
- In the northbound direction, add one right-turn lane.
- In the westbound direction, add a dedicated right-turn lane.

With the improvements described above, the Ridge Route at Lake Hughes intersection would be mitigated to a desirable LOS C (0.78), better than the LOS D threshold established in the Los Angeles County General Plan and the Santa Clarita Valley Area Plan, One Valley One Vision. However, the intersection would not be fully mitigated to the LOS C (0.74) threshold utilized in the County's Traffic Impact Analysis Guidelines. Improvements to fully mitigate the intersection to the LOS C threshold were considered, such as a southbound free-right turn lane, however was determined to not be geometrically feasible. Therefore, this impact would remain significant and unavoidable.

I-5 Southbound On-Ramp and Parker Road. The following improvements are recommended to maintain acceptable peak hour intersection operations for Horizon Year (2028) conditions:

- Reconstruct the bridge to four lanes.
- Install traffic signal.
- Configure the eastbound approach to include one through lane and one dedicated right-turn lane.
- Configure the westbound approach to include two left-turn lanes and one through lane, add two left-turn lanes and one through lane.

As identified in MM 5.11-2, the Project Applicant would be required to pay a fair share fee toward implementing these improvements. If the County is unable to obtain sufficient funding from other sources to complete the construction of this improvement by the time that the Project becomes operational, then a significant impact would remain until the improvement is completed. The impact would remain unmitigated. Further, this intersection is also under the jurisdiction of Caltrans. The Project Applicant and the County will coordinate with Caltrans regarding recommended improvements; however, the County of Los Angeles cannot require Caltrans to implement the improvement and cannot construct the improvement without Caltrans' approval. For these reasons, this impact is significant and unavoidable, despite the payment by the Project Applicant of its fair share fees.

I-5 Northbound Off-Ramp and Ridge Route Road. The following improvements are recommended to maintain acceptable peak hour intersection operations for Horizon Year (2028) conditions:

- Reconstruct the bridge to four-lanes.
- Install traffic signal.
- Modify the intersection to include the following: one northbound left-turn lane, two northbound right-turn lanes, one eastbound through lane, and three westbound through lanes.

As identified in MM 5.11-2, the Project Applicant would be required to pay a fair share fee toward implementing these improvements. If the County is unable to obtain sufficient funding from other sources to complete the construction of this improvement by the time that the Project becomes operational, then a significant impact would remain until the improvement is completed. The impact would remain unmitigated. Further, this intersection is also under the jurisdiction of Caltrans. The Project Applicant and the County will coordinate with Caltrans regarding recommended improvements; however, the County of Los Angeles cannot require Caltrans to approve implementation of the improvement and cannot construct the improvement without Caltrans' approval. For these reasons, this impact is significant and unavoidable, despite the payment by the Project Applicant of its fair share fees.

Castaic and Ridge Route Road. The following improvements are recommended to maintain acceptable peak hour intersection operations for Horizon Year (2028) conditions:

- Install traffic signal.
- Restripe the northbound approach to include two left-turn lanes, one through lane, and one right-turn lane.
- In the eastbound direction, stripe a right-turn lane.
- Modify the signal to include southbound right-turn overlap phasing.

As identified in MM 5.11-1, the Project Applicant would be required to pay a fair share fee toward implementing these improvements. If the County is unable to obtain sufficient funding for the construction of these improvements, the Project Applicant would be responsible for constructing the improvements.

Table 5.11-26 provides a comparison of intersection operations before and after implementation of the identified improvements. As shown, all intersections that are forecasted to experience

significant impacts can be reduced to less than significant levels with implementation of the recommended improvements. However, for the reasons described above, impacts at the following intersections would remain significant and unavoidable:

- The Old Road and I-5 Southbound Ramps
- I-5 Northbound Ramps and Lake Hughes Road
- I-5 Southbound On-Ramp and Parker Road
- I-5 Northbound Off-Ramp and Ridge Route
- Ridge Route and Lake Hughes Round

TABLE 5.11-26
CUMULATIVE CONDITIONS WITH MITIGATION INTERSECTION CAPACITY UTILIZATION SUMMARY

Location	Cumulative No Project				Cumulative With Project Plus Mitigation				Increase	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
1. The Old Rd and I-5 SB Ramps	0.50	A	0.58	A	0.74	C	0.62	B	0.24	0.04
3. I-5 NB Ramps and Lake Hughes Rd	0.49	A	0.65	B	0.63	B	0.66	B	0.14	0.01
5. Ridge Route Rd and Lake Hughes Rd	0.40	A	0.25	A	0.78	C	0.74	C	0.38	0.49
7. I-5 SB On-Ramp and Parker Rd	0.76	C	0.90	D	0.67	B	0.67	B	(0.09)	(0.23)
8. I-5 NB Ramp and Ridge Route Rd	0.73	C	1.00	E	0.53	A	0.82	D	(0.20)	(0.18)
9. Castaic and Ridge Route Rd	0.46	A	0.62	B	0.64	B	0.71	C	0.18	0.09

ICU: Intersection Capacity Utilization; LOS: level of service; I: Interstate; NB: northbound; SB: southbound
Source: Stantec 2016a

The identified impacts are cumulative impacts and, therefore, the project is responsible for its fair-share of the costs of the identified mitigation measures. Participation in the Castaic Bridge and Major Thoroughfare District will satisfy the project's fair share obligations. Each of the identified improvements would fully mitigate the project's significant impact, as shown in Table 5.11-26, with the exception of the Ridge Route at Lake Hughes intersection.

Year 2028 Horizon Year With Project and Cumulative Conditions – Freeway System

As previously discussed, future freeway forecasts were derived from multiple sources. Year 2028 Cumulative Conditions ADT Volumes With and Without the Project are shown in Table 5.11-27. Freeway lanes and capacities are shown in Table 5.11-28, along with directional peak hour volumes and the resulting V/C ratios and Project increments.

As can be seen in Table 5.11-29, while segments on I-5 from the Lake Hughes Road interchange to south of the Parker Road interchange contain a Project V/C ratio increment that exceeds 0.02, the freeway segments operate better than an LOS E (V/C less than or equal to 1.00). Therefore, these segments are not considered to be significantly impacted by the Project.

TABLE 5.11-27
2028 CUMULATIVE CONDITIONS FREEWAY ANNUAL AVERAGE DAILY TRAFFIC SUMMARY

No.	Segment	Without Project	With Project
1	I-5 between Templin Hwy and Lake Hughes Rd	95,000	96,000
2	I-5 between Lake Hughes Rd and Parker Rd	103,000	109,000
3	I-5 between Parker Rd and Hasley Canyon Rd	115,000	128,000
4	I-5 between Hasley Canyon Rd and SR-126	143,000	153,000
5	I-5 between Calgrove and SR-14	224,000	226,000
I: Interstate; SR: State Route Source: Stantec 2016a			

TABLE 5.11-28
2028 CUMULATIVE CONDITIONS WITH AND WITHOUT PROJECT FREEWAY PEAK HOUR VOLUMES AND VOLUME-TO-CAPACITY SUMMARY

No.	Segment	Lanes	Cap.	Without Project						With Project						Project Increment	
				AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour				
				Vol.	V/C	LOS	Vol.	V/C	LOS	Vol.	V/C	LOS	Vol.	V/C	LOS	AM	PM
Northbound																	
1	I-5 between Templin Hwy and Lake Hughes Rd	4M	8,000	3,543	0.443	B	5,403	0.675	C	3,593	0.449	B	5,433	0.679	B	0.006	0.004
2	I-5 between Lake Hughes Rd and Parker Rd	4M	8,000	3,948	0.493	B	5,995	0.749	C	4,178	0.522	B	6,405	0.801	C	0.029	0.051
3	I-5 between Parker Rd and Hasley Canyon Rd	4M + 1H	9,600	4,313	0.449	B	6,273	0.653	C	4,813	0.501	B	7,263	0.757	C	0.052	0.103
4	I-5 between Hasley Canyon Rd and SR-126	4M + 1H + 1A	10,600	4,845	0.457	B	6,796	0.641	C	5,235	0.494	B	7,568	0.714	C	0.037	0.073
5	I-5 between Calgrove and SR-14	4M + 1H + 1T[C]	10,800	7,791	0.721	D	9,396	0.870	D	7,883	0.730	D	9,578	0.887	D	0.009	0.017
Southbound																	
1	I-5 between Templin Hwy and Lake Hughes Rd	4M	8,000	5,569	0.696	B	3,389	0.424	B	5,609	0.701	C	3,429	0.429	B	0.005	0.005
2	I-5 between Lake Hughes Rd and Parker Rd	4M	8,000	6,087	0.761	C	3,712	0.464	B	6,527	0.816	D	4,032	0.504	B	0.055	0.040
3	I-5 between Parker Rd and Hasley Canyon Rd	4M + 1H	9,600	6,467	0.674	B	3,951	0.412	B	7,437	0.775	D	4,661	0.486	B	0.101	0.074
4	I-5 between Hasley Canyon Rd and SR-126	4M + 1H	9,600	7,125	0.742	C	4,459	0.465	B	7,881	0.821	D	5,012	0.522	C	0.079	0.058
5	I-5 between Calgrove and SR-14	4M + 1H + 2T[C]	12,000	9,976	0.831	D	7,678	0.640	C	10,154	0.846	D	7,808	0.651	C	0.015	0.011

Cap: capacity; Vol: volume; V/C: volume-to-capacity ratio; I: Interstate; M: Mixed Flow Lane; H: High Occupancy Vehicle or High Occupancy Toll Lane; A: Auxiliary Lane; T: Truck Lane T[C]: Truck Lane (Climbing); SR: State Route

Note: Totals may not add due to rounding.

Source: Stantec 2016a

Existing Plus Phase 1 Development Only

Development of the Phase 1 of the proposed Project would involve in reduction in vehicle miles traveled due to fewer residential units and fewer residents would drive outside of the development for work. Table 5.11-29, ICU and LOS Summary Existing Plus Phase 1 Development, shows the anticipated ICU and LOS for nine key study intersections.

TABLE 5.11-29
ICU AND LOS SUMMARY EXISTING PLUS PHASE 1 DEVELOPMENT

	Existing				Existing plus Phase 1				Difference	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
Location	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
1. The Old Road & I-5 SB Ramps	0.41	A	0.39	A	0.64	B	0.42	A	0.23	0.03
2. The Old Rd & Sloan/Lake Hughes	0.34	A	0.36	A	0.57	A	0.45	A	0.23	0.09
3. 1-5 NB Ramps & Lake Hughes	0.31	A	0.41	A	0.47	A	0.62	B	0.16	0.21
4. Castaic & Lake Hughes	0.31	A	0.37	A	0.47	A	0.55	A	0.16	0.18
5. Ridge Route and Lake Hughes	0.32	A	0.19	A	0.66	B	0.62	B	0.34	0.43
6. The Old Road & Parker	0.45	A	0.42	A	0.47	A	0.47	A	0.03	0.05
7. I-5 SB On Ramp & Parker	0.60	A	0.52	A	0.72	C	0.64	B	0.12	0.12
8. I-5 NB Off Ramp & Ridge Route	0.46	A	0.55	A	0.59	A	0.72	C	0.13	0.17
9. Castaic & Ridge Route	0.33	A	0.41	A	0.42	A	0.50	A	0.09	0.09
Source: Stantec 2016a										

As shown in the Table 5.12-29, with Phase 1 Development, most intersections within the study area continue to operate at LOS B or better. The locations closest to being impacted are the on and off-ramp intersections at Ridge Route/Parker Road, which are forecast to operate at LOS C with a peak hour ICU of 0.72, but would not be significantly impacted by Phase 1 Development based on the County's significant impact criteria. Therefore, Phase 1 Development would not result in any significant impacts. As shown, the Phase 1 Development does not result in significant off-site impacts.

Alternative Phase 1 Analysis

The TIA also included an analysis of potential impacts at study area intersections and freeway segments related to build-out of only the Phase 1 area of the proposed Project. Development of the Phase 1 Development Alternative, discussed in greater detail in Section 6, Alternatives to the Proposed Project, would involve in reduction in vehicle miles traveled due to fewer residential units and fewer residents would drive outside of the development for work. Table 5.11-30, ICU and LOS Summary Existing Plus Phase 1 Development Alternative, shows the anticipated ICU and LOS for nine key study intersections.

TABLE 5.11-30
ICU AND LOS SUMMARY EXISTING PLUS PHASE 1
DEVELOPMENT ALTERNATIVE

Location	Existing				Existing plus Phase 1				Difference	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
1. The Old Road & I-5 SB Ramps	0.41	A	0.39	A	0.65	B	0.42	A	0.24	0.03
2. The Old Rd & Sloan/Lake Hughes	0.34	A	0.36	A	0.59	A	0.45	A	0.25	0.09
3. 1-5 NB Ramps & Lake Hughes	0.31	A	0.41	A	0.48	A	0.61	B	0.17	0.20
4. Castaic & Lake Hughes	0.31	A	0.37	A	0.48	A	0.54	A	0.17	0.17
5. Ridge Route and Lake Hughes	0.31	A	0.19	A	0.74	C	0.59	A	0.43	0.40
6. The Old Road & Parker	0.45	A	0.42	A	0.48	A	0.47	A	0.03	0.05
7. I-5 SB On Ramp & Parker	0.60	A	0.52	A	0.74	C	0.64	B	0.14	0.12
8. I-5 NB Off Ramp & Ridge Route	0.46	A	0.55	A	0.62	B	0.71	C	0.16	0.16
9. Castaic & Ridge Route	0.33	A	0.41	A	0.43	A	0.50	A	0.10	0.09
Source: Stantec 2016a										

As shown in the Table 5.11-30, with the Phase 1 Development Alternative, most intersections within the study area continue to operate at LOS B or better. The locations closest to being impacted are the on and off-ramp intersections at Ridge Route/Parker Road, which are forecast to operate at LOS C with a peak hour ICU of 0.72, but would not be significantly impacted by the Phase 1 Development Alternative based on the County's significant impact criteria.

Construction-Impact Analysis

Construction of the proposed project would generate temporary trips associated with construction activities, as described in Section 4.0, of this Draft EIR. It is anticipated that construction of the proposed project would be phased based on market demand.

Construction-related traffic would primarily be associated with mass grading including movement of soils within the Project site, delivery of building materials and construction equipment, removal of construction debris, and construction workers commuting to/from the project site. The amount of construction traffic would vary daily depending on the nature of the activity. In general, phased construction of the proposed uses is not anticipated to result in substantial construction-related trip volumes, including heavy truck trips, except possibly for the initial demolition and clearing stages, which would generate the highest number of heavy truck trips. All grading materials are anticipated to be balanced on the Project site; therefore, the primary source of construction-related traffic would occur during the building phases of the Project, with a total of 700 daily one-way trips, or 350 daily round trips for Phase 1 and a total of 340 daily one-way trips, or 170 daily round trips for Phase 1. As noted in Section 5.4, Energy, construction traffic is expected to access the Project site from I-5 at Lake Hughes Road, which leads to Ridge Route Road, and which is the most direct and shortest route from the site to the regional freeway system.

As described in MM 5.11-3, to minimize traffic impacts during construction, a Construction Traffic Control Plan will be prepared and submitted to the County; this plan will describe safe detours,

provide temporary traffic-control measures during construction activities, and identify requirements to be met when one or more travel lanes are obstructed during construction. To reduce traffic congestion, the plan would also include, as necessary, appropriate, and practicable, the following activities: implementing temporary traffic controls (e.g., a flag person) during all phases of construction to maintain smooth traffic flow; implementing signage for detours, if needed; assigning dedicated turn lanes for movement of construction trucks and equipment on and off the site; scheduling construction activities that affect traffic flow on the arterial system to off-peak hours; consolidating truck deliveries; rerouting construction trucks away from congested streets or sensitive receptors; and synchronizing signals to improve traffic flow. Conducting construction activities in compliance with the Traffic Control Plan would reduce potential impacts related to construction traffic to less than significant levels.

Level of Significance without Mitigation: Significant Impact

Recommended SCVAP 2012 EIR Mitigation Measures: None

Level of Significance with SCVAP 2012 EIR Mitigation: Significant Impact

Recommended 1992 EIR Mitigation Measures: None.

Level of Significance with 1992 EIR Mitigation: Significant Impact

Recommended Project Specific Mitigation Measures:

MM 5.11-1 Prior to the issuance of building permits for Phase 2, the Project Applicant shall submit evidence to the County that the following intersection improvements have been or are being completed, unless Caltrans has not approved the measure.

- **Ridge Route Road and Lake Hughes Road.** Install traffic signal and include a southbound right-turn overlap phase. Restripe the eastbound approach to include two left-turn lanes, one through lane and one right-turn lane. In the northbound direction, add one right-turn lane. In the westbound direction, add a dedicated right-turn lane.
- **I-5 Southbound On-Ramp and Parker Road.** Reconstruct the bridge to four lanes. Install traffic signal. At the intersection, add one eastbound right-turn lane and two westbound left-turn lanes.
- **I-5 Northbound Off-Ramp and Ridge Route Road.** Reconstruct the bridge to four lanes. Install traffic signal. At the intersection, add a second northbound right-turn lane and add a second westbound through lane.

OFF-SITE MITIGATION MEASURES FOR PROJECT-SPECIFIC (EXISTING PLUS PROJECT) IMPACTS

Location	Jurisdiction	Mitigation
5. Ridge Route Rd and Lake Hughes Rd	County	Install traffic signal and include a southbound right-turn overlap phase. Restripe eastbound approach to include two left-turn lanes, one through lane and one right-turn lane. In the northbound direction, add one right-turn lane. In the westbound direction, add a dedicated right-turn lane. [1]
7. I-5 SB On-Ramp and Parker Rd	County/ Caltrans	Reconstruct bridge to 4 lanes. Install Traffic Signal. At intersection add one eastbound right-turn lane and two westbound left-turn lanes.
8. I-5 NB Off-Ramp and Ridge Route Rd	County/ Caltrans	Reconstruct bridge to 4 lanes. Install Traffic Signal. At intersection add a second northbound right-turn lane and add a second westbound through lane.

[1] With the improvements described above, Ridge Route Road at Lake Hughes intersection would be mitigated to a desirable LOS C (0.78), better than the LOS D threshold established in the Los Angeles County General Plan and the Santa Clarita Valley Area Plan, One Valley One Vision. However, the intersection would not be fully mitigated to the LOS C (0.74) threshold utilized in the County's Traffic Impact Analysis Guidelines. Improvements to fully mitigate the intersection to the LOS C threshold were considered, such as a southbound free-right turn lane; however, this was determined to not be geometrically feasible. Therefore, this impact would remain significant and unavoidable.

I: Interstate; SB: southbound; NB: northbound.

Source: Stantec 2016a

MM 5.11-2 Prior to issuance of a building permit and in compliance with the County's Castaic Bridge and Major Thoroughfare Construction Fee District, the Project Applicant shall pay their fee based on the per unit fee applicable at that time. These fees will be used to fund transportation projects throughout the County's Castaic Bridge and Major Thoroughfare District, including improvements required to mitigate impacts related to the *NorthLake Specific Plan*; however, the priority assigned to individual projects is at the County's discretion. After development of Phase 1, the Project Applicant shall be responsible for monitoring of traffic conditions at the six impacted intersections, beginning at the time of first occupancy, to determine the point at which the identified improvements for each intersection would be required. Monitoring shall be required at the following milestones: 1,000 dwelling units or 100,000 square feet of commercial development, 2,000 dwelling units or 200,000 square feet of commercial development, and 3,000 dwelling units or 300,000 square feet of commercial development. The monitoring requirement for each intersection shall cease upon construction of the required improvement or at full buildout of the *NorthLake Specific Plan,* whichever comes first. If these intersection improvements will not be constructed by the County prior to the identified time, the Project Applicant shall implement these improvements subject to a fee credit from the County's Castaic Bridge and Thoroughfare District.

2028 WITH PROJECT OFF-SITE MITIGATION MEASURES FOR PROJECT AND CUMULATIVE IMPACTS

Location	Jurisdiction	Mitigation
1. The Old Rd and I-5 SB Ramps	County/ Caltrans	Install traffic signal with a northbound right-turn overlap phasing.
3. I-5 NB Ramps and Lake Hughes Rd	County/ Caltrans	Install traffic signal. Widen off ramp to add one left-turn lane and restripe center lane to a shared left/through/right turn lane.
5. Ridge Route Rd and Lake Hughes Rd	County	Install traffic signal and include southbound right-turn overlap phasing. Restripe eastbound approach to include two left-turn lanes, one through lane and one right-turn lane. In the northbound direction, add one right-turn lane. In the westbound direction, add a dedicated right-turn lane.[1]
7. I-5 SB On-Ramp and Parker Rd	County/ Caltrans	Reconstruct bridge to 4 lanes. Install traffic signal. Eastbound lane configuration includes one through lane and one dedicated right-turn lane. In the westbound direction, two left-turn lanes and one through lane.
8. I-5 NB Off-Ramp and Ridge Route Rd	County/ Caltrans	Reconstruct bridge to 4 lanes. Install traffic signal. At intersection add a second northbound right-turn lane and add a second and third westbound through lane.
9. Castaic and Ridge Route Rd	County	Install traffic signal. Restripe northbound approach to include two left-turn lanes, one through lane, and one right-turn lane. In the eastbound direction, stripe a right-turn lane. Signal modification to include southbound right-turn overlap phasing.

[1] With the improvements described above, Ridge Route Road at Lake Hughes intersection would be mitigated to a desirable LOS C (0.78), better than the LOS D threshold established in the Los Angeles County General Plan and the Santa Clarita Valley Area Plan, One Valley One Vision. However, the intersection would not be fully mitigated to the LOS C (0.74) threshold utilized in the County's Traffic Impact Analysis Guidelines. Improvements to fully mitigate the intersection to the LOS C threshold were considered, such as a southbound free-right turn lane; however, this was determined to not be geometrically feasible. Therefore, this impact would remain significant and unavoidable.

I: Interstate; SB: southbound; NB: northbound.

Source: Stantec 2016a

MM 5.11-3 Prior to construction activities, the Project Applicant shall prepare and submit a detailed Construction Traffic Control Plan to the County of Los Angeles Department of Public Works for review and approval. The Construction Traffic Control Plan shall describe in detail safe detours and provide temporary traffic control during construction activities for the project. To reduce traffic congestion, the Plan shall include, as necessary, appropriate, and practicable, the following: temporary traffic controls (e.g., a flag person) during all phases of construction to maintain smooth traffic flow; dedicated turn lanes for movement of construction trucks and equipment on and off site; scheduling of construction activities that affect traffic flow on the arterial system to off-peak hours; consolidation of truck deliveries; rerouting of construction trucks away from congested streets or sensitive receptors; and/or signal synchronization to improve traffic flow.

Net Level of Significance: Significant and Unavoidable. The proposed Project would result in the following significant and unavoidable impacts:

- **The Old Road and I-5 Southbound Ramps.** Horizon Year 2028 (The intersection is partially under Caltrans' jurisdiction).
- **I-5 Northbound Ramps and Lake Hughes Road.** Horizon Year 2028 (The intersection is partially under Caltrans' jurisdiction).
- **I-5 Southbound On-Ramp and Parker Road.** Existing Plus Project and Horizon Year 2028 (This intersection is partially under Caltrans' jurisdiction).

- **I-5 Northbound Off-Ramp and Ridge Route Road.** Existing Plus Project and Horizon Year 2028 (This intersection is partially under Caltrans' jurisdiction).
- **Ridge Route Road and Lake Hughes Road.** Horizon Year 2028.

These impacts remain significant and unavoidable because the intersection is under the jurisdiction of another agency (Caltrans) and the County cannot require that agency to approve and implement the required physical improvements.

Threshold 5.11-2 Would the Project conflict with an applicable congestion management program (CMP), including, but not limited to, level of service standards and travel demand measures, or other standards established by the CMP for designated roads or highways.

The Los Angeles County Congestion Management Program (CMP) requires that a proposed development address two major subject areas with respect to traffic impacts. These are the Project's impacts on the CMP highway system and the Project's impacts on the local and regional transit systems.

According to the CMP guidelines, the geographical area examined in a CMP traffic impact analysis (TIA) consists of the CMP monitoring locations that meet the following criteria:

- CMP intersections where a proposed Project will add 50 or more trips during either the AM or PM weekday peak hours (determined based on adjacent street traffic).
- Mainline freeway locations where a Project will add 150 or more trips in either direction during either the AM or PM weekday peak hours.

There are no CMP intersections located within the Castaic community, with the nearest two locations being Chiquito Canyon Road/State Route (SR) 126 (8.5 miles south), Valencia Boulevard/Magic Mountain Parkway (9 miles south), and Railroad Avenue/Lyons Avenue (12 miles south).

The number of trips to and from the Project site is forecasted to include more than 50 peak hour trips at the Chiquito Canyon Road/SR-126 intersection (70 peak hour trips). Therefore, a CMP analysis of Chiquito Canyon Road/SR-126 intersection is required since the peak hour volume exceeds 50 Project trips. Since the Valencia Boulevard/Magic Mountain Parkway intersection and the Railroad Avenue/Lyons Avenue intersection would each have less than 50 Project-related peak hour trips, no CMP analysis is required for these intersections.

The intersection LOS method specified by the CMP is identical to the method used by the County of Los Angeles Department of Public Works and the traffic study for County intersections. Table 5.11-31 summarizes the results of the intersection LOS analysis for the CMP intersection. As shown, the intersection would operate at an unacceptable LOS F before the addition of Project traffic. The table shows that the Project would not result in a significant impact to the intersection, and therefore would not require mitigation measures. While the Project does not require mitigation measures at this intersection, the "Westside Bridge and Major Thoroughfare Construction Fee District Report" includes improvements to the Chiquito Canyon and SR-126 intersection that would improve the intersection LOS from LOS F to LOS C in the AM peak hour and LOS D in the PM peak hour.

TABLE 5.11-31
CONGESTION MANAGEMENT PLAN ANALYSIS

Location	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
110. Chiquito Canyon Road and SR-126				
- Existing Conditions	0.35	A	0.39	A
- Cumulative Conditions (2028) Without Project	1.78	F	1.70	F
- Cumulative Conditions (2028) With Project	1.78	F	1.70	F
- Cumulative Conditions with Planned Improvements*	0.78	C	0.82	D

ICU: Intersection Capacity Utilization; LOS: level of service; SR: State Route

* "Westside Bridge and Major Thoroughfare Construction Fee District Report," Los Angeles County Department of Public Works, February 2011.

Source: Stantec 2016a

With respect to the mainline freeway, the CMP monitoring locations nearest to The Project site are the following:

- I-5 north of SR-126
- I-5 north of SR-14

As shown in Table 5.11-32, the proposed Project is forecasted to add 150 or more peak hour trips to both of these monitoring locations. At the segment of I-5 north of the SR-126, the Project would contribute a maximum of 772 vehicles per hour in the northbound direction and a maximum of 756 vehicles per hour in the southbound direction. This would not be a significant impact based on CMP criteria because a freeway mainline segment is considered to be significantly impacted if each of two conditions are met: the segment is forecast to operate deficiently (i.e., worse than LOS E) and compared to the V/C in the no-project alternative, the V/C in the with-project alternative increases by greater than or equal to 0.02. In this case, the segment operates at a LOS B in the PM peak hour (max 772 vehicles in NB direction) and LOS D in the AM peak hour (max 756 in SB direction). At the I-5 segment north of SR-14, the Project would contribute a maximum of 182 vehicles per hour in the northbound direction and a maximum of 178 vehicles per hour in the southbound direction. The next two closest CMP freeway monitoring locations do not meet the CMP analysis criteria since the maximum number of Project trips at those locations is less than 150 vehicles per hour during the peak hour.

TABLE 5.11-32
FREEWAY VOLUME SUMMARY – CONGESTION MANAGEMENT PROGRAM MONITORING LOCATION

Segment	Peak Hour Project Volumes			
	Northbound		Southbound	
	AM	PM	AM	PM
I-5 between Hasley Canyon Rd and SR-126	**390**	**772**	**756**	**553**
I-5 between Calgrove and SR-14	92	**182**	**178**	130

I: Interstate; SR: State Route
Bold – exceeds CMP impact analysis criteria of 150 vehicles/hour
Source: Stantec 2016a

As to the estimated number of transit trips, Project buildout is forecasted to generate approximately 35,477 ADT. To estimate the number of Project trips that would use public transit, the number of Project vehicle trips is multiplied by an occupancy factor (1.4), which is provided in the CMP, to determine total person trips. The number of person trips is then multiplied by the applicable Metropolitan Transportation Authority (MTA) factor (3.5 percent), which is also provided in the CMP, to determine the number of transit trips generated by the Project (presuming that Santa Clarita Transit (SCT) extends the existing transit routes into the site). Based on this calculation, the Project would generate approximately 1,700 daily transit trips, as shown in Table 5.11-33.

TABLE 5.11-33
TRANSIT TRIP SUMMARY

	Time Period		
	Daily	AM Peak Hour	PM Peak Hour
Vehicle Trips	35,477	2,870	3,500
Person Trips*	49,668	4,018	4,900
Factor to Transit Trips	3.5%	3.5%	3.5%
Total Transit Trips	**1,738**	**141**	**172**

* Person Trips = Vehicle Trips x 1.4
Sources: Stantec 2016a

With respect to the Project's impacts on transit service, while the County does not have standards applicable to future development such as the proposed Project, the demand for transit service that would result from the Project (approximately 140 to 170 peak hour trips as shown in Table 5.11-33) has the potential to impact transit services.

The Project would facilitate the use of public transit by providing areas designated for bus stops in accordance with County standards and transit provider requirements. As discussed in Section 4.0, Project Description, the Project would expand the local transit network by adding to the existing transit service to enhance the service near the Project site and would additionally provide shuttles to major employment centers. Meanwhile, the current transit arrangement is anticipated to continue to serve local residents of the area, connecting residential areas with employment and commercial centers.

With respect to commuter rail, Metrolink, which is governed by the Southern California Regional Rail Authority (SCRAA), provides commuter rail service between the Antelope Valley and

Downtown Los Angeles; it also links Ventura, Los Angeles, San Bernardino, Riverside, Orange, and San Diego counties with transfer service between the bus and rail systems. The Metrolink station closest to the Project site is located along Soledad Canyon Road east of Bouquet Canyon Road in the City of Santa Clarita. A second Metrolink station is located along Railroad Avenue, just south of Lyons Canyon Road. Long-range plans include a potential Metrolink extension along the SR-126 corridor.

The applicant has coordinated with the applicable transit provider to identify appropriate bus stops. To ensure that adequate transit capacity to serve the proposed project is available in the future, mitigation is proposed that requires the project applicant, at the time of building permit issuance, to pay applicable transit mitigation fees (if adopted), with appropriate credits applied for applicant provided facilities, unless the payment of such fees is modified by an approved transit mitigation agreement. These facilities and the proposed mitigation will reduce the transit related impacts to a less than significant level.

Level of Significance without Mitigation: Less than significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None.

Level of Significance with SCVAP 2012 EIR Mitigation: Less than significant.

Recommended 1992 EIR Mitigation Measures: None.

Level of Significance with 1992 EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant. The proposed Project would not conflict with the Los Angeles County Congestion Management Program. Impacts would be less than significant and no mitigation is required.

Threshold 5-11.3 Would the Project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Public Transportation

The SCT is the primary bus service operator in the Castaic community. SCT provides two fixed-route transit lines within close proximity to the Project site: Routes 1 and 636. SCT Route 1 provides service between Castaic and Val Verde to the McBean Regional Transit Center with 11 stops near the Project site. Route 1 also stops through the Valencia Commerce Center and Valencia Industrial Center. Route 636 is a supplemental school day service route between West Ranch High School and the Castaic area with 13 stops within the Project site.

Future bus transit routes are anticipated to be introduced in the Project area in order to provide services for the new Castaic Middle School.

The applicant has coordinated with the applicable transit provider to identify appropriate bus stops. To ensure that adequate transit capacity to serve the proposed project is available in the future, mitigation is proposed that requires the project applicant, at the time of building permit issuance, to pay applicable transit mitigation fees (if adopted), with appropriate credits applied for applicant provided facilities, unless the payment of such fees is modified by an approved transit

mitigation agreement. These facilities and the proposed mitigation will reduce the transit related impacts to a less than significant level.

Active Transportation

The County of Los Angeles has a Bicycle Master Plan (BMP). At this time, the BMP does not address facilities in the Castaic community. Consultations with the County have indicated that the existing portion of Ridge Route Road south of Lake Hughes Road has been designated as a proposed Class II facility.

A central goal of the approved Specific Plan is to encourage the use of alternative transportation systems in order to effectively reduce miles traveled by automobiles; every NorthLake neighborhood would be connected to an extensive trail network. Meandering multi-use trails designed for pedestrian, bicycle, and equestrian use have been included along the Principal Highway leading into the Project site from Ridge Route Road and along the Primary Collector running north-south within the central portion of the community. Neighborhood trails would connect homes to the larger network, bringing all community amenities within pedestrian, bicycle, or equestrian access reducing the dependence on the automobile for transportation and encouraging healthy lifestyle choices.

An Access and Circulation Plan was approved as part of the 1992 *NorthLake Specific Plan.* The Access and Circulation Plan provides circulation and design standards for the layout of arterial highways and local collector streets in support of the NorthLake land use plan. The proposed Project would implement the Access and Circulation Plan, including integrating non-vehicular uses such as pedestrian and bicycle facilities. The project would include a network of bicycle facilities, trails and sidewalks to accommodate pedestrians and encourage non-motorized active transportation. Bicycle facilities are proposed along Ridge Route Road, Northlake Boulevard, A Street and B Street. A Class I bike lane is proposed along the west side of Ridge Route Road from Northlake Hills Elementary School to the Ridge Route Road and Northlake Boulevard intersection, where it would continue along Northlake Boulevard. Class II bike lanes are proposed along B Street and A Street. The proposed Project would include roadway improvements, including sidewalks and on-site bike racks; it is also located near existing bus routes. The proposed Project would not conflict with the City's adopted policies, plans, or programs supporting alternative modes of transportation. Impacts would be less than significant and no mitigation is required.

Level of Significance without Mitigation: Less than significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None.

Level of Significance with SCVAP 2012 EIR Mitigation: Less than significant.

Recommended 1992 EIR Mitigation Measures: None.

Level of Significance with 1992 EIR Mitigation: Less than significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant. The proposed Project would provide or accommodate non-vehicular transportation facilities and would not conflict with adopted policies supporting alternative transportation. Impacts would be less than significant and no mitigation is required.

Recommended Mitigation Measures: None.

Net Level of Significance: Less than significant. The proposed Project would provide or accommodate non-vehicular transportation facilities and would not conflict with adopted policies supporting alternative transportation. Impacts would be less than significant and no mitigation is required.

5.11.8 CUMULATIVE IMPACTS

As identified in the analysis presented under Threshold 5.11-1, the proposed Project would result in significant and unavoidable cumulative impacts at the following intersections:

- **The Old Road and I-5 Southbound Ramps.** Horizon Year 2028 (The intersection is partially under Caltrans' jurisdiction).
- **I-5 Northbound Ramps and Lake Hughes Road.** Horizon Year 2028 (The intersection is partially under Caltrans' jurisdiction).
- **I-5 Southbound On-Ramp and Parker Road.** Horizon Year 2028 (This intersection is partially under Caltrans' jurisdiction).
- **I-5 Northbound Off-Ramp and Ridge Route Road.** Horizon Year 2028 (This intersection is partially under Caltrans' jurisdiction).
- **Ridge Route Road and Lake Hughes Road.** Horizon Year 2028.

These impacts remain significant and unavoidable because the intersection is under the jurisdiction of another agency (Caltrans) and the County cannot require that agency to approve and implement the required physical improvements.

Additionally, Ridge Route Road at Lake Hughes intersection would be mitigated to a desirable LOS C (0.78), better than the LOS D threshold established in the Los Angeles County General Plan and the Santa Clarita Valley Area Plan, One Valley One Vision. However, the intersection would not be fully mitigated to the LOS C (0.74) threshold utilized in the County's Traffic Impact Analysis Guidelines. Improvements to fully mitigate the intersection to the LOS C threshold were considered, such as a southbound free-right turn lane; however, this was determined to not be geometrically feasible. Therefore, this impact would remain significant and unavoidable.

5.11.9 IMPACT CONCLUSION

The proposed Project would result in significant Project-level and cumulative impacts at six of the Project's study area intersections. Implementation of MMs 5.11.1 and 5.11.2 would reduce impacts to less than significant levels for one of the intersections. The Project Applicant and County will coordinate with Caltrans regarding recommended improvements and potential improvements required to reduce impacts to the extent feasible; however, impacts at the following four intersections would remain significant and unavoidable because the intersection is under the jurisdiction of another agency (Caltrans) and the County cannot require that agency to approve and implement the required physical improvements.

- **The Old Road and I-5 Southbound Ramps.** Horizon Year 2028 (The intersection is partially under Caltrans' jurisdiction).
- **I-5 Northbound Ramps and Lake Hughes Road.** Horizon Year 2028 (The intersection is partially under Caltrans' jurisdiction).

- **I-5 Southbound On-Ramp and Parker Road.** Existing Plus Project and Horizon Year 2028 (This intersection is partially under Caltrans' jurisdiction).
- **I-5 Northbound Off-Ramp and Ridge Route Road.** Existing Plus Project and Horizon Year 2028 (This intersection is partially under Caltrans' jurisdiction).

Additionally, the following intersection would be mitigated to LOS C (0.78), better than the LOS D threshold established in the Los Angeles County General Plan and the Santa Clarita Valley Area Plan, One Valley One Vision. However, the intersection would not be fully mitigated to the LOS C (0.74) threshold utilized in the County's Traffic Impact Analysis Guidelines. Improvements to fully mitigate the intersection to the LOS C threshold were considered, such as a southbound free-right turn lane; however, this was determined to not be geometrically feasible. Therefore, this impact would remain significant and unavoidable.

- **Ridge Route Road at Lake Hughes.** Existing Plus Project and Horizon Year 2028.

5.11.10 REFERENCES

Los Angeles County Department of Regional Planning (LACDRP). 2016 (March 1, accessed). *Healthy Design and Livable Communities.* Los Angeles, CA: LACDRP. http://planning.lacounty.gov/hdo.

Stantec Consulting Services, Inc. (Stantec). 2016a (September). *NorthLake Traffic Impact Analysis*. Irvine, CA: Stantec.

———. 2016b (April). *Project Description – Northlake Specific Plan SEIR and Northlake TIA Differences*. Irvine, CA: Stantec.

5.12 UTILITIES

5.12.1 METHODOLOGY

This section of the Supplemental Environmental Impact Report (SEIR) describes potential utility and service impacts related to the proposed Project and the potential impacts of the proposed Project on water supply and water service infrastructure. The analysis provided below relies primarily on the following documents:

Water Supply

- Castaic Lake Water Agency's (CLWA's) *2010 Urban Water Management Plan* (UWMP).
- Sikand Engineering Associates' (Sikand's) 2015 *Hydraulic Analysis for NorthLake Development Preliminary*, included in Appendix K-1 to this SEIR.
- *SB 610 Water Supply Assessment, NorthLake Specific Plan VTTM No. TR073336* (WSA), prepared by Newhall County Water District (NCWD) in January 2016 and included in Appendix K-2 to this SEIR.

Wastewater

- Sikand's 2016 *NorthLake Sewer Area Study Report*, included in Appendix K-3 to this SEIR.
- Sikand's 2016 *NorthLake Sewer Area Study Map*, included in Appendix K-3 to this SEIR.

Solid Waste

The solid waste analysis relies on information gathered from the Los Angeles County Department of Public Works Solid Waste Information Management System as well as the California Department of Resources Recycling and Recovery (CalRecycle).

Additionally, it should be noted that analysis related to electricity and natural gas is included in Section 5.4, Energy.

5.12.2 BACKGROUND INFORMATION

1992 NorthLake Specific Plan Environmental Impact Report

The following summary reflects conditions existing at the time of preparation and certification of the 1992 *NorthLake Specific Plan Environmental Impact Report* (1992 SP EIR), which is incorporated by reference and is included as background information to provide a context for the scope of this SEIR analysis.

The 1992 SP EIR states that project development will increase the demand for both potable and non-potable water uses. At the time of the analysis, it was determined that the local water purveyor, the Newhall County Water District (NCWD), had available water supplies to service the project's water needs. The approved and certified 1992 SP EIR found that the NorthLake Specific Plan development would require approximately 1,821 acre-feet per year (afy) of water from the NCWD for domestic water uses and an additional 1,029 afy for irrigation purposes. Irrigation water requirements were to be met with reclaimed water either from the on-site water reclamation facility identified as a project feature in the 1992 *NorthLake Specific Plan* or from the County Sanitation

District's Wastewater Treatment Plant. As such, it was concluded that the project would have a less than significant impact on the water supply.

Although the 1992 SP EIR found that the project would have a less than significant impact related to water supply, in order to ensure that water demands would be minimized to the maximum extent feasible, it was recommended that the applicant provide all on-site water system improvements and contribute to required new or upgraded existing off-site improvements in an effort to meet all water supply needs for the NorthLake development. Additionally, the 1992 SP EIR recommended that the approved final design plans incorporate the use of showerheads, lavatory faucets, and sink faucets that comply with efficiency standards set forth in the *California Administrative Code* (Title 20, Section 1604[f]). It was also recommended that the final design plans require low flush toilets to be installed as specified in Section 17921.3 of the *California State Health and Safety Code.*

The 1992 SP EIR included the requirement that a Landscape Plan be prepared and submitted to the County for approval prior to approval of final design plans. Irrigation systems would be properly designed, installed, operated, and maintained to prevent the waste of water. "Drip" irrigation and other water application techniques which conserve water (such as soil moisture sensors and automatic irrigation systems) would be incorporated in parks and publicly maintained landscape areas. Landscaping would also emphasize drought-tolerant vegetation where not irrigated.

According to the 1992 SP EIR, the project would result in the generation of substantial amounts of solid waste per year, which would contribute to diminishing landfill capacity and would significantly impact existing and future solid waste collection and disposal systems in the north county area. It was determined that the project would generate limited quantities of hazardous materials, both household and commercial/light industrial. According to the 1992 SP EIR, it was recommended that the project applicant submit a recycling program for the NorthLake development to the County for approval which would reduce the amount of solid waste generated by the project. It was also recommended that the approved final design plans depict the location of recycling areas and collection/storage units for use by all occupants and users of commercial/industrial facilities.

2012 Santa Clarita Valley Area Plan Environmental Impact Report

The following summary reflects conditions existing at the time of preparation of the Santa Clarita Valley Area Plan 2012 (SCVAP 2012) EIR, which is incorporated by reference and is included as further background information to provide a context for the scope of this SEIR analysis. This section discusses wastewater; solid waste; and electricity, natural gas, and telecommunications.

According to the SCVAP 2012 EIR, the need for new water or wastewater treatment facilities or expansion of existing facilities as buildout of the SCVAP 2012 occurs would be determined by the Santa Clarita Valley Sanitation District (SCVSD). The SCVSD provides wastewater conveyance, treatment, and disposal services for residential, commercial, and industrial users in the County and the City of Santa Clarita. The construction of new facilities would be subject to California Environmental Quality Act (CEQA) review.

The SCVAP 2012 EIR states that solid waste from the SCVAP 2012 area is primarily disposed of at the Chiquita Canyon Landfill, Antelope Valley Landfill, and the Sunshine Canyon Landfill. Generation of solid waste would increase as the population increases with buildout of the Area Plan. At buildout, the SCVAP 2012 EIR projected that development within the SCVAP 2012 area would generate approximately 200,909.2 tons per year or 550.4 tons per day. Correspondingly, the SCVAP 2012 EIR identifies the need for additional landfill capacity and related support facilities. The SCVAP 2012 includes several mitigation measures to reduce the anticipated solid

waste generated by construction and development in the SCVAP 2012 area; however, it was determined that potential impacts related to solid waste facilities would be significant and unavoidable.

According to the SCVAP 2012 EIR, Southern California Edison (SCE) is the primary provider of electric service to the SCVAP 2012 area. Natural gas service is provided by SoCalGas, which operates numerous gas pipelines in the SCVAP 2012 area that range in size from 2- to 34-inch mains. Telephone service to the SCVAP 2012 area is provided by AT&T and Verizon Communications, and cable television service is provided by Time Warner Cable. The SCVAP 2012 EIR concluded that demand for service for these utilities would increase with development of the SCVAP 2012 area; however, implementation of the proposed SCVAP 2012 policies and mitigation measures would reduce impacts to less than significant levels.

5.12.3 EXISTING CONDITIONS

Water Supply and Infrastructure

Water Purveyors

One wholesale water agency, CLWA, and four retail water purveyors provide water service to most residents of the Santa Clarita Valley. The four retail purveyors are NCWD, Los Angeles County Waterworks District No. 36, the Santa Clarita Water Division of CLWA, and the Valencia Water Company (VWC) (CLWA 2015); these four purveyors are collectively referred to as the "Local Purveyors" in this section. This discussion focuses on NCWD and CLWA as these agencies may be affected by the proposed Project.

NCWD was formed in 1953. It is a municipal utility providing potable water to more than 44,936 people in an area of more than 34 square miles in the Santa Clarita Valley. NCWD's service area is composed of four separate water service areas (Newhall, Castaic, Pinetree, and Tesoro), and includes portions of the City of Santa Clarita and unincorporated portions of Los Angeles County in the communities of Newhall, Canyon Country, Saugus, and Castaic. NCWD supplies water from local groundwater and imported water from CLWA. NCWD delivered approximately 11,000 acre-feet (af) of water via approximately 9,700 connections in 2005 (NCWD).

The CLWA was formed for the purpose of providing a supplemental supply of imported water from the California State Water Project (SWP) to the Local Purveyors in the Santa Clarita Valley through a contract with the California Department of Water Resources (DWR). The CLWA serves an area of 195 square miles in Los Angeles and Ventura counties. The CLWA, as a SWP Contractor, holds a water supply contract with DWR with a Table A Amount of 95,200 af.[1] The CLWA also operates two water treatment facilities: the Rio Vista Water Treatment Plant and the Earl Schmidt Filtration Plant. The Rio Vista Water Treatment Plant is rated to process 30 million gallons per day (mgd) and expansion of the plant to 60 mgd is planned. The Earl Schmidt Filtration Plant is rated to processes 56 mgd.

1 Table A Amount (formerly referred to as "entitlement") is named for the "Table A" in each SWP contractor's Water Supply Contract. It contains an annual buildup in Table A Amounts of SWP water, from the first year of the Water Supply Contract through a specific year based on growth projections made before the Water Supply Contract was executed. The CLWA has augmented its Table A Amount through the acquisition of contract rights from the Devil's Den Water District (in 1991) and from the acquisition of contract rights from the Kern County Water Agency via the Wheeler Ridge-Maricopa Water Storage District (in 1999). The total of all SWP Contractors' maximum Table A Amounts is currently about 4.17 million af.

As noted on Exhibit 5.12-1, Water District Boundaries, the proposed Project site is located within the Castaic service area of the NCWD. The NCWD has an existing 3.0-million-gallon (MG) water tank in service as well as existing water supply lines in and adjacent to the Project site.

Water Supply

There are two main water supplies for the Santa Clarita Valley—local supplies and imported supplies. Local supplies consist of groundwater and recycled water, and imported supplies consist of SWP water and SWP-related supplies such as groundwater banking programs, transfers, and purchases. A summary of these supplies is provided below.

Groundwater

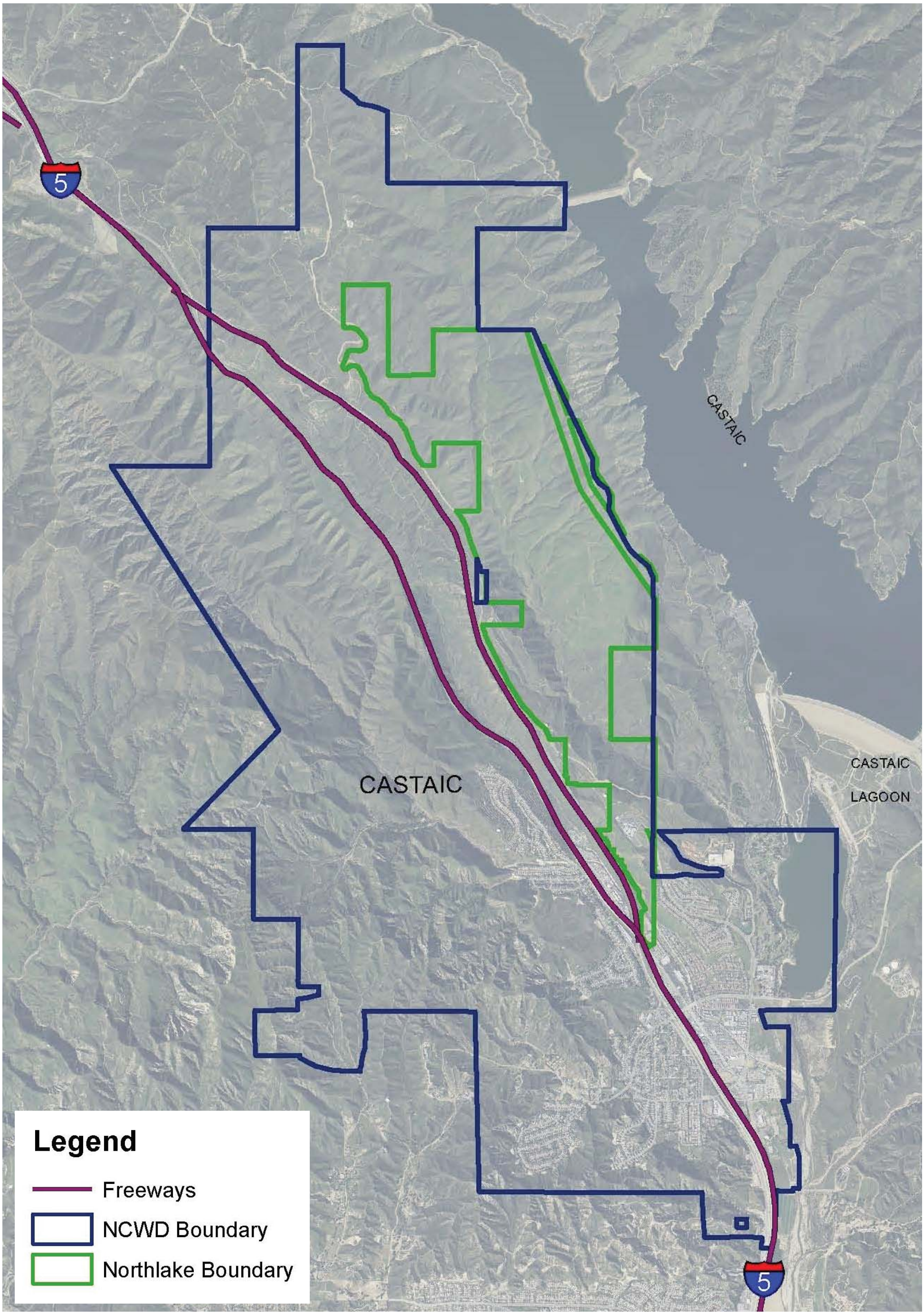
The East Subbasin of the Santa Clara River Valley Groundwater Basin (Basin) is the sole source of groundwater for urban use in the Santa Clarita Valley. Two aquifers in this Basin are used for domestic and agricultural supply: the Alluvial aquifer and the Saugus Formation aquifer.

The CLWA and the Local Purveyors adopted a regional Groundwater Management Plan (GWMP) in December 2003. This Plan satisfies all applicable requirements (including those outlined in Assembly Bill [AB] 134 and AB 3030 and associated sections of the *California Water Code*). The GWMP outlines four specific management goals for the East Subbasin:

1) Development of integrated surface water, groundwater, and recycled water supplies to meet existing and projected demands for municipal, agricultural, and other water supply.
2) Assessment of groundwater basin conditions to determine a range of operational yield values that will make use of local groundwater conjunctively with SWP and recycled water to avoid groundwater overdraft.
3) Preservation of interrelated surface water resources, which includes managing groundwater to not adversely impact surface and groundwater discharges or quality to downstream basin(s).
4) Preservation of groundwater quality, including active characterization and resolution of any groundwater contamination problems.

As described in the GWMP, the groundwater component of overall water supply in the Valley is managed based on a groundwater operating plan developed to meet water requirements (municipal, agricultural, small domestic) while maintaining the Basin in a sustainable condition (i.e., no long-term depletion of groundwater or interrelated surface water). This operating plan also addresses groundwater contamination issues in the Basin. The groundwater operating plan is based on the concept that pumping can vary from year to year to allow increased groundwater use in dry periods and increased recharge during wet periods and to collectively ensure that the Basin is adequately replenished through various wet/dry cycles. As formalized in the GWMP, the operating yield concept has been quantified as ranges of annual pumping volumes (GWMP 2015).

A Memorandum of Understanding (MOU) process was memorialized as part of the GWMP to include the development of a numerical groundwater flow model, intended to determine the yield of the basin under existing land uses and under existing groundwater and surface water development conditions. The MOU was prepared and implemented in 2001 and involved a collaborative process between the CLWA, the retail water purveyors, and United Water Conservation District (UWCD) in Ventura County. As part of the MOU process, the databases for each of the cooperating agencies were integrated, allowing continual and comprehensive monitoring and reporting on the status of Basin conditions and the geologic and hydrologic aspects of the stream-aquifer system. The MOU was also established to assess the yield of the



Source: NCWD 2015

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Water District Boundaries

Exhibit 5.12-1

NorthLake Specific Plan Project

N W E S 0.5 0.25 0 0.5 Miles

BonTerra PSOMAS

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basin under future land use conditions and future ranges of surface water importation, groundwater development and recycled water use through various hydrologic conditions. The current Basin Yield Analysis, prepared in 2009, identify the amounts and allocations of groundwater in the UWMP (UWMP 2010).

Three formal technical reports have been produced through implementation of the GWMP. The first report, dated April 2004, documents the construction and calibration of the groundwater flow model for the Santa Clarita Valley. The second report, dated August 2005, presents the modeling analysis of the Local Purveyors' groundwater operating plan, described below. The primary conclusion of the modeling analysis is that the groundwater operating plan will not cause detrimental short- or long-term effects to the groundwater and surface water resources in the Valley and is therefore, sustainable. The most recent report is the twelfth annual report which presents the modeling analysis of the current groundwater operating plan, which are incorporated into the 2010 UWMP. The annual report concluded that "the groundwater operating plan would not cause detrimental short or long term effort to the groundwater and surface water resources in the (Santa Clarita) Valley and is therefore sustainable". (UWMP 2010).

Alluvial Aquifer

The groundwater operating plan includes pumping from the Alluvial aquifer in the range of 30,000 to 40,000 afy in average/normal years and slightly reduced pumping (30,000 to 35,000 afy) in locally dry years (UWMP 2010).

In 2002, as part of ongoing monitoring of wells for perchlorate contamination, perchlorate was detected in one well in the Alluvial aquifer located near the former Whittaker-Bermite facility. The detected concentration was slightly below the Notification Level for perchlorate (6 micrograms per liter [µg/L]), and the well was subsequently sealed and the capacity was replaced by a new well. In early 2005, perchlorate was detected in a second well in the Alluvial aquifer. Following the installation of wellhead treatment (in the fall of 2005), the second well was returned to water supply service in 2007 (UWMP 2010).

Saugus Formation

The groundwater operating plan includes pumping from the Saugus Formation in the range of 7,500 to 15,000 afy in average/normal years; it also includes planned dry-year pumping from the Saugus Formation of 15,000 to 25,000 afy for a drought year and can increase to between 21,000 and 25,000 afy when water deliveries are reduced for 2 consecutive years and between 21,000 and 35,000 afy when water deliveries from SWP are reduced for 3 consecutive years. Such short-term pumping can be recharged during subsequent wet/normal years at a reduced rate of pumping (7,500 to 15,000 afy) to allow groundwater levels and storage to recover, as it has in historical periods (UWMP 2010).

In 1997, perchlorate was discovered in four Saugus Formation wells in the vicinity of the former Whittaker-Bermite facility: two of these wells were returned to service in January 2011, one was sealed and the capacity was replaced by a new well, and the fourth is currently out of service. In 2006, perchlorate was detected in very low concentrations in a Saugus Well; the concentration was tested and has always been below the detection limit for reporting and the well remains in service. In 2010, perchlorate was detected in VWC's Saugus Well 201, which was subsequently removed from service (UWMP 2010).

Recycled Water

The CLWA recognizes the importance of recycled water as a reliable source of additional water to meet projected increasing water demands. In 1993 and 2002, Draft Recycled Water System Master Plans were prepared for the CLWA service area, and recycled water service was initiated in July 2003. A Program Environmental Impact Report was certified in March 2007 that addressed the various phases for a recycled water system as outlined in the 2002 Recycled Water Master Plan. Phase 1 of the Recycled Water System Master Plan has been constructed and is able to deliver 1,700 afy of water to the VWC service area. Recycled water deliveries in 2009 were 328 af (UWMP 2010). The CLWA is currently in the process of designing Phases 2A and 2C of the Recycled Water Projects, which are intended to supply approximately 1,600 afy of recycled water and would extend the current recycled water system service areas (CLWA).

Existing and Planned Imported Water

State Water Project

About half of the water supply for Santa Clarita Valley is provided from imported water sources. The SWP is a large water supply, storage, and distribution system authorized by an act of the California State Legislature in 1959. The SWP extends more than 600 miles from northern California terminating at Castaic Lake (CLWA). The SWP includes 34 storage facilities, reservoirs, and lakes; 20 pumping plants; 4 pumping-generating plants; 5 hydroelectric power plants; and approximately 701 miles of open canals and pipelines (DWR). The primary water source for the SWP is the runoff from rain and melting snow from the mountains and waterways around Feather River. Feather River and other local waterways lead to Lake Oroville and the Oroville Dam in Butte County. Lake Oroville represents the official start of the SWP and includes three power plants, a forebay, and an afterbay. Water is released from Oroville Dam into Feather River, eventually converging with the Sacramento River and into the Sacramento-San Joaquin Delta. Some of the water is pumped through the North Bay Aqueduct to Napa and Solano counties and the remaining water travels south to the Delta. In the southern Delta, water is pumped by the Banks Delta Pumping Plant into the 444-mile-long California Aqueduct and flows by gravity into the San Luis Joint-Use Complex. Water in this section of the California Aqueduct serves both the SWP and the federal Central Valley Project. Water is then conveyed through the central San Joaquin Valley with a portion splitting into the Coastal Branch Aqueduct, which serves San Luis Obispo and Santa Barbara counties. The remainder of the water is pumped up to the Edmonston Pumping Plant, which lifts the water up and over the Tehachapi Mountains. The water is then split into the East Branch (which flows to Lake Perris) and the West Branch (which flows to Castaic Lake and Castaic Lagoon) (DWR).

In 1960, the DWR began executing individual Water Supply Contracts with public agencies throughout the State of California for financing and constructing SWP facilities designed to deliver water to each public agency (“SWP contractors” or “contractors” collectively refer to the public agencies that hold SWP Water Supply Contracts with the DWR). There are currently 29 contractors and the majority of these contracts are set to expire in 2035. Each Water Supply Contract identifies a Table A Amount, the annual maximum amount of water to which an SWP Contractor has a contract right. Each Contractor annually submits a request to DWR for water delivery in the following year in any amount up to the Contractor’s Table A Amount. The current combined maximum Table A amount is 4,172,000 afy, and it is recognized that annual deliveries will be less than this established amount in some years and more than the established amount in other years, based on various factors impacting the availability of SWP water. Multiple factors affect the availability of existing and future SWP water supplies in any year, including (1) water availability at the source, (2) water rights with priority over the SWP, (3) climate change, (4) regulatory restrictions on SWP Delta exports (imposed by federal biological opinions and State

Water Quality Plans), (5) ongoing environmental and policy planning efforts, and (6) Delta levee failure (SWP). The Water Supply Contracts provide that, in a year when DWR is unable to deliver total Contractor requests, deliveries to all contractors will be reduced so that total deliveries equal total available supply for that year. A water supply contract was established in 1963 between DWR and the CLWA, known at the time as the Upper Santa Clara Valley Water Agency (DWR). According to the original contract, the Table A amount for year 19 and each succeeding year thereafter was 23,000 afy. According to Amendment No. 18 to this contract, the annual entitlement (Table A Amount) was increased to 95,200 afy beginning in 2000 and for each succeeding year thereafter (DWR).

The CLWA owns and operates various water conveyance pipelines and water treatment facilities to convey water delivered from the SWP. The CLWA operates four major facilities that treat and convey treated water to the retail purveyors.

- **Earl Schmidt Intake Pump Station (ESIPS).** The ESIPS consists of a pump station with pumping units that are used when the water level in Castaic Lake falls below the level necessary to convey water via gravity flow from the reservoir to the filtration plant. The ESIPS can deliver 56 million gallons per day (mgd) of water to the Earl Schmidt Filtration Plant.
- **Earl Schmidt Filtration Plant (ESFP).** The ESFP treats SWP water for domestic use through ozonation, coagulation, contact clarification, and filtration through anthracite filters, and chloramination occurs after treatment. The ESFP currently has a capacity of 56 mgd.
- **Rio Vista Intake Pump Station (RVIPS).** The RVIPS pumps water via a 102-inch raw water pipeline from the Metropolitan Water District Foothill Feeder to the Rio Vista Water Treatment Plant.
- **Rio Vista Water Treatment Plant (RVWTP).** The RVWTP treats water for domestic use and has a current treatment capacity of 66 mgd. The facility's treatment process includes ozonation, coagulation, contact clarification, and filtration through anthracite filters, and chloramination occurs after treatment (CLWA).

Buena Vista/Rosedale-Rio Bravo Water Storage District

The CLWA has worked with the Buena Vista Water Storage District (BVWSD) and Rosedale-Rio Bravo Water Storage District (RRBWSD) to develop a water acquisition agreement. Under this agreement, BVWSD/RRBWSD annually delivers 11,000 af of water to the CLWA via the California Aqueduct. From this point, the water travels through the SWP and into Castaic Lake.

Banking Programs

Flexible Storage Account. Under the current CLWA Flexible Storage Account, the CLWA is permitted to store up to 6,060 af of water in Castaic Lake. The CLWA may withdraw water from its share of flexible storage and must replace any water it withdraws from flexible storage within five years. The CLWA manages this storage by keeping the account full in normal and wet years and then delivering that stored amount (or a portion of it) during dry periods. The account is refilled during the next year that adequate SWP supplies are available to CLWA to do so (CLWA).

Semitropic Groundwater Banking Projects. The CLWA has two groundwater banking agreements with the Semitropic Water Storage District. The CLWA stored 45,920 af of water, which is recoverable through 2023. This banking project improves the reliability of CLWA's supplies (CLWA).

Rosedale-Rio Bravo Water Storage District Groundwater Storage, Banking, Exchange, Extraction and Conjunctive Use Program. The CLWA has a water banking agreement with the RRBWSD located westerly of Bakersfield in Kern County (CLWA). From 1962 through 2013, the RRBWSD has taken delivery of approximately 3.4 million af of imported surface water supplies for storage and future use RRBWSD. The CLWA has stored 100,000 af of water, which will be withdrawn to meet future demands when required. This banking project improves the reliability of CLWA's supplies (CLWA).

Exchange Program

In 2011, 80 percent of the contracted SWP Table A amount was allocated to the CLWA, which exceeded the demand for the year. The CLWA entered into a two-for-one exchange program where the excess water (24,000 af) was delivered to the RRBWSD and West Kern Water District (WKWD). In exchange for this delivery, the CLWA will receive 12,000 af of water through 2021 (CLWA).

Summary of Existing and Planned Water Supply

Existing and planned water supplies are shown by source in Table 5.12-1 below, as well as the associated assumptions and caveats, drawn primarily from CLWA's 2010 UWMP. Existing and planned banking programs are summarized in Table 5.12-1, but because these programs would typically be used only during dry years, they are not included as part of the existing and planned water supply for the Santa Clarita Valley.

TABLE 5.12-1
PROJECTED EXISTING AND PLANNED AVERAGE/NORMAL YEAR WATER SUPPLIES AND DEMANDS IN THE CASTAIC LAKE WATER AGENCY SERVICE AREA (ACRE-FEET)

	Supply (af)							
Water Supply Sources	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Existing Supplies								
Existing Groundwater[a]								
Alluvial Aquifer	24,000	24,000	24,000	25,000	25,000	25,000	25,000	25,000
Saugus Formation[b]	9,225	10,225	10,225	10,225	10,225	10,225	10,225	10,225
Total Existing Groundwater	*33,225*	*34,225*	*34,225*	*35,225*	*35,225*	*35,225*	*35,225*	*35,225*
Existing Recycled Water[c]								
Total Existing Recycled Water	*325*	*325*	*325*	*325*	*325*	*325*	*325*	*325*
Imported (Wholesale)								
SWP Table A Supply[d]	58,100	57,900	57,600	57,400	57,400	57,400	57,400	57,400
Flexible Storage Accounts (CLWA)	–	–	–	–	–	–	–	–
Buena Vista-Rosedale	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000
Nickel Water – Newhall Land	1,607	1,607	1,607	1,607	1,607	1,607	1,607	1,607
Total Imported	*70,707*	*70,507*	*70,207*	*70,007*	*70,007*	*70,007*	*70,007*	*70,007*
Banking Programs[e]								
Rosedale-Rio Bravo	–	–	–	–	–	–	–	–
Semitropic	–	–	–	–	–	–	–	–
Semitropic – Newhall Land	–	–	–	–	–	–	–	–
Total Existing Banking Programs	–	–	–	–	–	–	–	–
Total Existing Supplies	**104,257**	**105,057**	**104,757**	**105,557**	**105,557**	**105,557**	**105,557**	**105,557**

TABLE 5.12-1
PROJECTED EXISTING AND PLANNED AVERAGE/NORMAL YEAR WATER SUPPLIES AND DEMANDS IN THE CASTAIC LAKE WATER AGENCY SERVICE AREA (ACRE-FEET)

	Supply (af)							
Water Supply Sources	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Planned Supplies								
Future Groundwater[f]								
Alluvial Aquifer	–	1,000	2,000	3,000	4,000	5,000	6,000	7,000
Saugus Aquifer	1,375	1,375	1,375	1,375	1,375	1,375	1,375	1,375
Total Future Groundwater	*1,375*	*2,375*	*3,375*	*4,375*	*5,375*	*6,375*	*7,375*	*8,375*
Future Recycled Water								
Total Future Recycled Water	*975*	*2,725*	*5,225*	*7,775*	*10,275*	*13,775*	*17,275*	*20,975*
Banking Programs								
Total Banking Programs	–	–	–	–	–	–	–	–
Total Planned Supplies	**2,350**	**5,100**	**8,600**	**12,150**	**15,650**	**20,150**	**24,650**	**29,350**
Total Existing & Planned Supplies	***106,607***	***110,157***	***113,357***	***117,707***	***121,207***	***125,707***	***130,207***	***134,907***
Demand without Conservation[(g)]	80,070	88,484	96,898	105,312	113,726	122,140	130,554	138,968
20x2020 Reduction[(h)]	9,027	19,626	21,166	22,770	24,342	25,914	27,486	29,058
Reduction from Recycled Water(i)	1,300	3,050	5,550	8,100	10,600	14,100	17,600	21,300
Reduction from Water Conservation[(j)]	7,727	16,576	16,662	16,748	16,833	16,919	17,005	17,091
Demand with Conservation[(k)]	72,343	71,908	80,236	88,564	96,892	105,220	113,549	121,877

af: acre-feet; SWP: State Water Project; CLWA: Castaic Lake Water Agency; SCWD: Santa Clarita Water District

[a] Existing groundwater supplies represent the quantity of groundwater anticipated to be pumped with existing wells. As indicated in Tables 3-8 and 3-9 and Tables 3-4 and 3-5 of the 2009 Groundwater Basin Yield Analysis, individual purveyors may have well capacity in excess of quantities shown in this table. As indicated in 2010 UWMP Table 3-10, existing and planned groundwater pumping remain within the groundwater operating plan shown on Table 3-5.

[b] The SCWD's existing Saugus 1 and Saugus 2 wells resumed production in 2011 with the completion of the perchlorate treatment facility.

[c] Recycled water projections from 2010 UWMP Table 4-3.

[d] SWP supplies are based on the Department of Water Resources "2009 State Water Project Delivery Reliability Report."

[e] Not needed in average/normal years.

[f] Planned groundwater supplies represent new groundwater well capacity that may be required by an individual purveyor's production objectives in the Alluvial Aquifer and the Saugus Formation. As indicated in Table 3-10, existing and planned groundwater pumping remain within the groundwater operating plan shown on Table 3- 5 of the 2010 UWMP.

[g] Demand without Conservation data from 2010 UWMP Table 2-2.

[h] 20x2020 Reduction for the Region from 2010 UWMP Table 2-22.

[i] Recycled Water Reduction for the Region from 2010 UWMP Table 2-22; does not include demands from Honor Rancho.

[j] Reduction from Water Conservation calculation for Region from 2010 UWMP Table 2-22.

[k] Demand with Conservation is Demand without Conservation minus Reduction from Water Conservation.

Source: NCWD 2015.

Water Supply Specific to Newhall County Water District

The Newhall County Water District (NCWD) has been identified as the retail water purveyor for the Proposed Project. NCWD is one of four water purveyors in the Santa Clarita Valley and currently supplies a population of approximately 44,000 with over 9,600 service connections. NCWD distributes a combination of imported water from the Castaic Lake Water Agency (CLWA): imported State Water Project (SWP) water and additional reliability supplies and groundwater from local wells from the Alluvial Aquifer and Saugus Formation.

Imported water sources include Table A contract amounts from the SWP and additional water sources available. The CLWA has an annual Table A contract amount from the State Water Project in the amount of 95,200 acre-feet (af). Additional water sources available include: the Buena Vista/Rosedale-Rio Bravo Water Storage District Water Acquisition in the amount of 11,000 af; Nickel Water in the amount of 1,607 af; Flexible Storage Accounts in the amount of 6,060 af; Semitropic Water Storage District Banking in the amount of 35,970 af; Rosedale-Rio Bravo Storage District Water Banking in the amount of 97,176 af; Rosedale-Rio Bravo Water Storage District Water Banking 2-for-1 Program in the amount of 9,509 af; West Kern Water District 2-for-1 Program in the amount of 2,500 af; and the Newhall Land-Semitropic Water Storage District Banking in the amount of 33,953 af.

Local groundwater sources include the Alluvial Aquifer and the Saugus Formation. During the past 5-year period (2010 to 2014), NCWD's production was approximately 2,192 af from the Alluvial Aquifer and approximately 4,065 af from the Saugus Formation.

CLWA currently has a contract with the Los Angeles County Sanitation District for 1,700 afy of recycled water that became available in 2003). However, the NCWD does not currently have any infrastructure in place to utilize recycled water, but the NCWD does indirectly benefit because any recycled water use will allow for an offset of potable water supplies (including groundwater and SWP water) to be used in other areas of the Santa Clarita Valley, including the Proposed Project.

Water Supply Infrastructure

The NCWD operates and maintains 22 reservoirs and 147 miles of distribution and transmission lines to total a combined storage capacity of 24.7 MG (NCWD). A 30-inch-diameter iron pipeline is located on site along Ridge Route Road. An existing water tank with a capacity of three MG is located on site along Ridge Route Road, approximately 500 feet due north of Northlake Hills Elementary School, and would serve the proposed Project.

New water facilities that would be constructed as part of the proposed Project include pump stations, six new water tanks, and their associated conveyance pipelines (see Exhibit 4-8, Water Service in Section 4.0, Project Description). The water tanks are necessary to provide adequate water and adequate water pressure. The existing water line along Ridge Route Road would be extended to provide services to the proposed NorthLake community. Water line easements would be required, and a final map of water line connections would be prepared when Project plans are being finalized.

Sewage Treatment Services

Sanitation Districts of Los Angeles County

The County Sanitation Districts of Los Angeles County (LACSD) are a confederation of 24 independent special districts that serve the sewage/wastewater treatment and solid waste management needs of over 5.5 million people in Los Angeles County. The Sanitation Districts' service areas cover approximately 824 square miles and include service to 78 cities and unincorporated territories in the County (LACSD 2016a).

Collectively, the Sanitation Districts own, operate, and maintain over 1,400 miles of main trunk sewers and 11 wastewater treatment plants with a total design capacity of 634.6 million gallons per day (mgd) (LACSD 2016a). The Sanitation Districts currently receive, convey, and treat an average of 510 mgd of wastewater. Approximately 32 percent (165 mgd) of all treated effluent is suitable for reuse. Treated effluents from these facilities are either discharged to the ocean, surface waters or land, or are reused for applications such as landscape irrigation, groundwater recharge, and industrial processing (LACSD 2015).

Wastewater generated by developed areas in the vicinity of the Project area is treated by Santa Clarita Valley Sanitation District (SCVSD), which is one of the districts represented by LACSD, at the Valencia Water Reclamation Plant (VWRP). The VWRP is located approximately six miles south of the NorthLake site and is linked with the Saugus Water Reclamation Plant (SWRP) to form a regional wastewater system for the Santa Clarita Valley called the Santa Clarita Valley Joint Sewerage System (SCVJSS) (LACSD 2016b). The SWRP provides primary, secondary, and tertiary treatment for 6.5 mgd of wastewater, and all wastewater solids are conveyed to the VWRP via trunk sewers for treatment (LACSD 2016c). The VWRP has a treatment capacity of 21.6 mgd of wastewater and provides primary, secondary, and tertiary treatment (LACSD 2016b). Both the VWRP and the SWRP discharge effluent into the Santa Clara River (LACSD 2016b, c).

Sewage Treatment System

The SCVSD provides sewerage services for the Santa Clarita Valley. The proposed Project would be annexed to SCVSD.

Wastewater Conveyance

The Project site is located in the future service area of the LACSD and would be served by SCVSD. As the Project site is presently undeveloped, no wastewater is currently being generated on site. An existing 15-inch and 18-inch sewer line was built in Ridge Route and Castaic Lake Drive in 1998 in conjunction with the construction for Tract 44429 and to provide service to the NorthLake Specific Plan development. This sewer was based on development of the NorthLake Specific Plan Project site with 3,698 new residential units, an additional elementary school, and a large commercial area along the proposed NorthLake Boulevard. Wastewater flow originating from the proposed Project would discharge into a local sewer line and flow through existing local sewer lines that are maintained by the Los Angeles County Consolidated Sewer Maintenance District (LACountyCSMD 2016) for eventual conveyance to the Castaic Trunk Sewer, located in Ridge Route Road at Lake Hughes Road. This 12-inch-diameter trunk sewer has a design capacity of 1.8 mgd to 3.0 mgd and conveyed a peak flow of 0.6 mgd when last measured in 2015 (LACSD 2015).

Cumulative Design Capacity

The SCVJSS has a permitted treatment capacity of 28.1 mgd (6.5 mgd at SWRP and 21.6 mgd at the VWRP) and currently processes an average flow of 19.3 mgd (LACSD). A 2-phase expansion of the VWRP was approved and will ultimately increase the treatment capacity of the SCVJSS by a total of 15 mgd. The first phase of 9.0 mgd was completed in 2003; the second phase, which has not been completed as of May 2015, will consist of an additional 6 mgd and would increase the total treatment capacity of the SCVJSS to 43.1 mgd.

Expansions will be financed through the LACSD's connection fee program. The Facilities Plan estimates that there would be room to further expand the VWRP by an additional 3.0 mgd after 2015 resulting in a cumulative total capacity of 46.1 mgd. According to the 2015 SCVJSS Facilities Plan and EIR, if wastewater flows develop more rapidly than flow projections indicate, the proposed facilities could be built sooner to match the growth. As an alternative, the LACSD can operate above the treatment facilities' average capacity (closer to the peak capacities as the LACSD has done in the past) until facilities are expanded.

Solid Waste

The Project site is currently undeveloped and does not support uses or activities that are considered a source of solid waste generation. Implementation of the proposed Project would, however, result in a change in the existing land use conditions, and operations would generate daily volumes of solid waste. As such, information about current solid waste management operations and trends within the region is provided.

Regional Solid Waste Generation and Disposal

According to the Los Angeles County Department of Public Works Solid Waste Information Management System, there are currently 21 active landfills located within and serving the County of Los Angeles. Of these 21 landfills, 10 are classified to accept municipal solid waste. The nearest four landfill facilities to the Project site are identified in Table 5.12-2, Overview of Landfill Facilities. As shown, the 4 facilities located nearest the Project site have a combined remaining permitted capacity of nearly 100 million tons and 3 of the 4 have an estimated remaining lifespan of over 20 years.

An overview of each facility is provided in Table 5.12-2, Overview of Landfill Facilities.

TABLE 5.12-2
OVERVIEW OF LANDFILL FACILITIES

Landfill	Location	Remaining Permitted Capacity (million tons)	Maximum Daily Capacity (tons)	Estimated Remaining Life
Chiquita Canyon Landfill	29201 Henry Mayo Dr, Valencia	6.23	5,000	4
Sunshine Canyon Landfill	14747 San Fernando Rd, Sylmar	80.81	12,100	22
Antelope Valley	1200 West City Ranch Rd, Palmdale	5.51	3,564	27
Lancaster Landfill	600 East Ave F, Lancaster	3.92	5,100	29
Total for Facilities within Immediate Vicinity of Project Site		**96.47**	**25,764**	**4–29 years**
Source: LACDPW 2015				

The Sanitation Districts of Los Angeles County have another option of refuse being transported to local landfills. This option is called "Waste-by-Rail" and includes an integrated system of local and remote infrastructure to use railroads as a means to transport refuse (SDLAC 2015a). The nearest "waste-by-rail" disposal facility is the Mesquite Regional Landfill. The Mesquite Regional Landfill is Southern California's first operating landfill that is permitted to receive waste by rail. The landfill is located in Imperial County and has an estimate project life of approximately 100 years. It is currently permitted to receive nonhazardous (Class III) municipal solid waste from Southern California counties (SDLAC 2015b).

5.12.4 RELEVANT PLANS, POLICIES AND REGULATIONS

State

Water Supply

Sustainable Groundwater Management Act of 2014

The Sustainable Groundwater Management Act of 2014 is a three-bill legislative package (Assembly Bill 1739 and Senate Bills 1168 and 1319) administered by the State Department of Water Resources and the State Water Resources Control Board that requires the formation of local groundwater sustainability agencies (GSAs). Any local agency or combination of local agencies that overlie a groundwater basin may be a GSA for that basin. GSAs must assess the conditions of their local basin and adopt a groundwater sustainability plan (GSP). Sustainable groundwater management is defined as the management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results.

Urban Water Management Planning Act

The Urban Water Management Planning Act (UWMP Act) (*California Water Code,* Section 10610 et. seq.) was enacted in 1983 and applies to municipal water suppliers, such as the CVWD, that serve more than 3,000 customers or provide more than 3,000 afy of water. The UWMP Act requires these suppliers to prepare and update their UWMP every five years to demonstrate an appropriate level of reliability in supplying anticipated short-term and long-term water demands during normal, single-dry, and multiple-dry years.

Water Conservation in Landscaping Act

The Water Conservation in Landscaping Act of 2006 (Assembly Bill [AB] 1881) requires Cities and Counties, including Charter Cities and Charter Counties, to adopt landscape water conservation ordinances by January 1, 2010. In accordance with this Act, the DWR prepared a Model Water Efficient Landscape Ordinance, as contained in the *California Code of Regulations* (Title 23, Division 2, Chapter 2.7). Cities and Counties had the option to adopt DWR's ordinance or to develop their own.

Water Conservation Act of 2009

The Water Conservation Act of 2009 or Senate Bill 7 (SBX7_7) was approved in November 2009 and requires urban water retail suppliers in California to reduce per capita water use by at least ten percent on or before December 31, 2015, and to achieve a 20 percent reduction by December 31, 2020. In their 2010 UWMPs, urban retail water suppliers were required to include the baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates

and references to the supporting data. Urban wholesale water suppliers must also include an assessment of present and proposed measures, programs, and policies needed to achieve the water use reductions required by this Act. While it does not require existing customers to undertake changes in product formulation, operations, or equipment that would reduce water use, suppliers may provide technical assistance and financial incentives to those customers to implement efficiency measures for process water.

Urban retail water suppliers and agricultural water suppliers would not be eligible for State water grants or loans for surface water or groundwater storage, recycling, desalination, water conservation, water supply reliability, or water supply augmentation unless they comply with the water conservation requirements established by this Act.

20x2020 Water Conservation Plan

The 20x2020 Water Conservation Plan, issued by the DWR in 2010 pursuant to the Water Conservation Act of 2009 (SBX7_7), established a water conservation target of 20 percent reduction in water use by 2020 compared to the 2005 baseline use.

Senate Bill 610 and Senate Bill 221

Senate Bill (SB) 610 amended the *California Public Resources Code* in 2001 to improve the link between information on water supply availability and land use decisions. Under SB 610 (codified in the *California Water Code* beginning at Section 10910), Cities or Counties approving certain projects subject to the California Environmental Quality Act (CEQA) are required to identify any public water system that may supply water and request those water systems to prepare a water supply assessment (WSA). A WSA is required for any project that is subject to CEQA and that proposes one or more of the following:

- A residential development of more than 500 dwelling units.
- A shopping center or business establishment with either 1,000 employees or more than 500,000 square feet (sf) of floor space.
- A commercial office development with either 1,000 employees or more than 250,000 sf of floor space.
- A hotel or motel with more than 500 rooms.
- An industrial development that has 1,000 employees, occupies more than 40 acres of land, or has more than 650,000 sf of floor space.
- A mixed-use project that includes one or more of the requirements above.
- A project that would require water that is equal to or more than the water demand of 500 dwelling units.
- A project that is served by a public water system having fewer than 5,000 service connections; a proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections; or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by a residential development that would represent an increase of 10 percent or more in the number of the public water system's existing service connections.

The WSA is required to be included in any environmental document prepared for the project, and the WSA may include an evaluation of any information included in that environmental document. A determination shall be made whether the projected water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses. Specifically, SB 610 requires the WSA to include the following:

- A discussion of whether the public water system's total projected water supplies available during normal, single-dry, and multiple-dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing.
- The identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project and water received in prior years pursuant to those entitlements, rights, and contracts.
- A description of the quantities of water received in prior years by the public water system under the existing water supply entitlements, water rights, or water service contracts.
- A demonstration of water supply entitlements, water rights, or water service contracts by the following means:
    a. Written contracts or other proof of entitlement to an identified water supply.
    b. Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system.
    c. Federal, State, and local permits for construction of necessary infrastructure associated with delivering the water supply.
    d. Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.
- The identification of other public water systems or water service contract holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system.
- If groundwater is included for the supply for a proposed project, the following additional information is required:
    a. Review of any information contained in the Urban Water Management Plan (UWMP) relevant to the identified water supply for the proposed project.
    b. Description of any groundwater basin(s) from which the proposed project will be supplied. Adjudicated basins must have a copy of the court order or decree adopted and a description of the amount of groundwater the public water system has the legal right to pump. For non-adjudicated basins, information on whether the DWR has identified the basin as over-drafted or has projected that the basin will become over-drafted if present management conditions continue, in the most current bulletin of DWR that characterizes the condition of the basin, and a detailed description of the efforts being undertaken in the basin to eliminate the long-term overdraft condition.
    c. Description and analysis of the amount and location of groundwater pumped by the public water system for the past five years from any groundwater basin which the proposed project will be supplied. Analysis should be based on information that is reasonably available, including, but not limited to, historic use records.

d. Description and analysis of the amount and location of groundwater projected to be pumped by the public water system from any groundwater basin by which the proposed project will be supplied. Analysis should be based on information that is reasonably available, including, but not limited to, historic use records.

e. Analysis of the sufficiency of the groundwater from the basin(s) from which the proposed project will be supplied.

In summary, a WSA must include an evaluation of the sufficiency of the water supplies available to the water supplier to meet existing and anticipated future demands (including the demand associated with the project) over a 20-year horizon that includes normal, single-dry, and multiple-dry years. SB 610 also identifies information that should be included in the UWMP if groundwater is identified as a source of water. Information must include a description of all water supply projects and programs that may be undertaken to meet total projected water use. SB 610 prohibits eligibility for funds from specified bond acts until the plan is submitted to the State.

In addition to the SB 610 requirements listed above, the published decision in the *Vineyard Area Citizens For Responsible Growth, Inc. v. City Of Rancho Cordova* case (Supreme Court of California [2007] 40 Cal.4th 412, Vineyard) generated several additional requirements related to certain principles for analytical adequacy under CEQA. To summarize, in the Vineyard case, the California Supreme Court held that the analysis of long-term water supplies in the EIR prepared for a 6,015-acre mixed-use project with a multi-phase, 20-year buildout was procedurally and factually inadequate. Procedurally, the court concluded that the EIR improperly claimed to tier from a future regional water planning environmental document; failed to explicitly incorporate and/or tier from the impact and mitigation discussion of another relevant EIR; and relied on a mitigation measure that would curtail development if an adequate water supply did not materialize without analyzing the environmental impacts of such action. Factually, the court concluded the that the EIR did not explain discrepancies between the estimated surface water supply and water demand at buildout and estimates contained in the Water Forum EIR, an important regional water planning document (RMM 2011).

Finally, SB 221 requires land use planning agencies to include (as a condition in any tentative map that includes a subdivision involving more than 500 dwelling units) a requirement to obtain written verification from the applicable public water system that states that sufficient water supplies are available for the subdivision or, where there is no existing water supplier, from a consultant directed by the City or County. SB 221 also requires a City or County to deny approval of a tentative or parcel map if the City or County finds that the project does not have a sufficient, reliable water supply, as defined in the bill.

Propositions 13, 50, 84, and 1

Through California voters' approval, State funding has been made available to increase the reliability of State water supplies. In March 2000, California voters approved Proposition 13, which authorized the State to issue $1.97 billion of its general obligation bonds for water projects (SWRCB 2007). Additionally, California voters approved Proposition 50 in November 2002 and Proposition 84 in November 2006, which authorized State issuance of $3.4 billion and $5.4 billion, respectively, of its general obligation bonds for water projects (LAO 2006). And in November 2014, voters overwhelmingly approved Proposition 1, which authorized $7.5 billion in bonds expected to provide a significant infusion of funding for water projects and programs. Types of water projects eligible for funding under Propositions 13, 50, 84, and 1 include water conservation, groundwater storage, surface storage, water treatment, water quality, recycled water, water security, and Colorado River water management projects.

Mandatory Water Conservation

Following Governor Brown's declaration of a State of Emergency, on July 15, 2014, the State Water Board adopted Resolution No. 2014-0038 prohibiting several activities, including (1) the application of potable water to outdoor landscapes in a manner that causes excess runoff; (2) the use of a hose to wash a motor vehicle except where the hose is equipped with a shut-off nozzle; (3) the application of water to driveways and sidewalks; and (4) the use of potable water in non-recirculating ornamental fountains. The State Water Board resolution also directed urban water suppliers to implement the stage of their water shortage contingency plans that impose mandatory restrictions on outdoor irrigation of ornamental landscaping or turf with potable water and report monthly water production information to the State Water Board (LADPW- Drought).

On April 1, 2015, Governor Brown signed Executive Order (EO) B-29-15, which contains a total of 31 directives—the primary requirement being a 25 percent statewide water reduction in potable urban water use through February 28, 2016, as compared to the amount used in 2013. EO B-29-15 requires the State Water Resources Control Board to impose restrictions to achieve the 25 percent reduction and is directed to consider the relative per capita water usage of each water supplier's service area. Those areas with high per capita use will be required to achieve proportionally greater reductions than those with low use (LADPW- Drought).

Solid Waste

California Integrated Waste Management Act (Assembly Bill 939)

The California Integrated Waste Management Act of 1989 (AB 939), created the Board now known as California Department of Resources Recycling and Recovery (CalRecycle) and accomplished the following: (1) it required each jurisdiction in the state to submit detailed solid waste planning documents for CalRecycle approval; (2) it set diversion requirements of 25 percent in 1995 and 50 percent in 2000; (3) it established a comprehensive statewide system of permitting, inspections, enforcement, and maintenance for solid waste facilities; and (4) it authorized local jurisdictions to impose fees based on the types or amounts of solid waste generated. Jurisdictions select and implement the combination of waste prevention, reuse, recycling, and composting programs that best meet the needs of their community while achieving the diversion requirements.

Solid Waste Disposal Measurement Act of 2008 (Senate Bill 1016)

The purpose of the Solid Waste Disposal Measurement Act of 2008 (SB 1016) is to make the process of goal measurement (as established by AB 939) simpler, more timely, and more accurate. SB 1016 builds on AB 939 compliance requirements by implementing a simplified measure of jurisdictions' performance. SB 1016 accomplishes this by changing to a disposal-based indicator—the per capita disposal rate—which uses only two factors: (1) a jurisdiction's population (or in some cases employment) and (2) its disposal, as reported by disposal facilities.

Each year CalRecycle calculates each jurisdiction's per capita (per resident or per employee) disposal rates. If business is the dominant source of a jurisdiction's waste generation, CalRecycle may use the per employee disposal rate. Each year's disposal rate will be compared to that jurisdiction's 50 percent per capita disposal target. As such, jurisdictions will not be compared to other jurisdictions or the statewide average, but they will only be compared to their own 50 percent per capita disposal target. Among other benefits, per capita disposal is an indicator that allows for jurisdiction growth because, as residents or employees increase, report-year disposal tons can increase and still be consistent with the 50 percent per capita disposal target. A comparison of

the reported annual per capita disposal rate to the 50 percent per capita disposal target will be useful for indicating progress or other changes over time.

Assembly Bill 341

On October 6, 2011, Governor Brown signed AB 341 establishing a State policy goal that no less than 75 percent of solid waste generated be source reduced, recycled, or composted by 2020, and requiring the CalRecycle to provide a report to the Legislature that recommends strategies to achieve the policy goal by January 1, 2014. The bill also mandates that local jurisdictions implement commercial recycling by July 1, 2012. CalRecycle will review each jurisdiction's commercial recycling program every two to four years for compliance with AB 341. Businesses and public entities generating four cubic yards of trash or more and multi-family residential dwellings with five or more units are required to establish and maintain recycling service under AB 341.

California Solid Waste Reuse and Recycling Access Act of 1991

Faced with the challenge of trying to implement AB 939, the California Solid Waste Reuse and Recycling Access Act of 1991 was passed by the State legislature and instructs the California Integrated Waste Management Board (CIWMB) to draft a "model ordinance" for the disposal of construction waste associated with development projects. Since 1994, the CIWMB model ordinance has been in effect for the County of Los Angeles. On January 4, 2005, the County of Los Angeles adopted the Construction and Demolition (C&D) Debris Recycling and Rescue Ordinance. This ordinance will require most development projects in unincorporated areas to recycle or reuse 50 percent of the debris generated. The County of Los Angeles began accepting Recycling and Reuse Plans on April 5, 2005 (LACDPW 2007). As of January 1, 2011, Los Angeles County adopted the Green Building Standards Code, which sets forth recycling requirements for construction and demolition projects in the unincorporated areas of Los Angeles County. For residential construction projects of five or more dwelling units, the projects must recycle a minimum of 65 percent of the debris generated by weight. Because the provisions of the Green Building Standards Code are more stringent than the C&D Ordinance of 2005, these provisions are enforced by the Department of Public Works for all construction and demolition projects submitted after January 1, 2011.

Local

Water Supply

Newhall County Water District Urban Water Management Plan

The 2010 UWMP (2010 UWMP) was adopted by NCWD on June 22, 2011, and appropriately filed with the California Department of Water Resources (DWR). The 2010 UWMP was a regional planning effort by NCWD, CLWA, and the other Santa Clarita Valley water purveyors that built upon previous documents, specifically the 2005 UWMP. The 2010 UWMP includes the following eight major sections:

1. Introduction
2. Water Use
3. Water Resources
4. Recycled Water
5. Water Quality
6. Reliability Planning

7. Water Demand Management Measures
8. Water Shortage Contingency Planning

The timing of the Proposed Project places it within the timeframe for calculating "planned future uses" within the 2050 water supply projection included in the 2010 UWMP. The 2010 UWMP projects an annual growth rate in water demand of approximately 1.5 percent over a 40-year period for the Santa Clarita Valley. The 2010 UWMP anticipated increases in the number of commercial accounts and demand in acre-feet through 2050. According to the WSA, the proposed Project falls within the demand anticipated for projects within NCWD's service area through 2050 (see Table 2-4 in the 2010 UWMP).

In December, 2014, DWR provided the most recent analysis of delivery reliability estimates to the SWP contractors (DWR Reliability Report, 2013). In NCWD's judgment, the 2010 UWMP updated with the recent reliability report provides the best available information regarding water supply and demand projections.

County Sanitation District Wastewater Ordinance

The LACSD has adopted a Wastewater Ordinance for the operation and financing of its wastewater conveyance, treatment, and disposal facilities. Under this ordinance, the LACSD requires Industrial Wastewater Discharge Permits that regulate industrial wastewater discharges to protect the public sewage system (LACSD 1998).

Green Building Standards Code

In response to the mandates set forth in the 2010 California Green Building Standards Code (CalGreen Code), the Board of Supervisors initially adopted the Los Angeles County Green Building Standards Code into Title 31 of the County Code. In 2013, the County adopted the updated 2013 CalGreen Code by reference into Title 31 of the County Code, with certain changes and modifications. These modifications include required compliance with the County's Low Impact Development Standards (Chapter 12.84 of Title 12 of the County Code); landscaping requirements (e.g., use of automatic irrigation system controllers, no more than 25 percent of landscaped areas covered with turf; and no less than 75 percent of landscaped areas planted with non-invasive drought-tolerant plants); and construction and demolition debris recycling, salvage, and/or reuse of a minimum of 65 percent of the non-hazardous construction and demolition debris by weight or volume.

Los Angeles County General Plan

The Los Angeles County General Plan establishes policies in the Public Services and Facilities Element related to the implementation of water facilities for new developments.

Public Services and Facilities Element

- **Policy PS/F 1.1:** Discourage development in areas without adequate public services and facilities.
- **Policy PS/F 1.2:** Ensure that adequate services and facilities are provided in conjunction with development through phasing or other mechanisms.
- **Policy PS/F 1.7:** Consider resource preservation in the planning of public facilities.
- **Policy PS/F 2.1:** Support water conservation measures.

- **Policy PS/F 3.1:** Increase the supply of water though the development of new sources, such as recycled water, gray water, and rainwater harvesting.
- **Policy PS/F 4.1:** Encourage the planning and continued development of efficient countywide sewer conveyance treatment systems.
- **Policy PS/F 4.3:** Ensure the proper design of sewage treatment and disposal facilities, especially in landslide, hillside, and other hazard areas.

Table 5.9-2, County General Plan Consistency, in Section 5.9, Land Use, analyzes the consistency of the proposed Project with these policies.

Santa Clarita Valley Area Plan 2012

Conservation and Open Space Element

This Plan establishes policies in the Conservation and Open Space Element related to water supply:

- **Policy CO-4.1.2:** Provide examples of water conservation in landscaping through use of low water use landscaping in public spaces such as parks, landscaped medians and parkways, plazas, and around public buildings.
- **Policy CO-4.1.3:** Require low water use landscaping in new residential subdivisions and other private development projects, including a reduction in the amount of turfgrass.
- **Policy CO-4.1.5:** Promote the use of low-flow and/or waterless plumbing fixtures and appliances in all new non-residential development and residential development of five or more dwelling units.
- **Policy CO-4.1.7:** Apply water conservation policies to all pending development projects, including approved tentative subdivision maps to the extent permitted by law. Where precluded from adding requirements by vested entitlements, encourage water conservation in construction and landscape design.
- **Policy CO-4.1.9:** Support the development of additional facilities to store or bank stormwater, particularly on lands located outside the groundwater recharge areas that are depicted on Figure CO-10.
- **Policy CO-4.1.10:** Support emerging methods and technologies for the on-site capture, treatment, and infiltration of stormwater and greywater, and amend the County Code to allow these methods and technologies when they are proven to be safe and feasible.
- **Policy CO-4.2.1:** In cooperation with the Sanitation District and other affected agencies, expand opportunities for use of recycled water for the purposes of landscape maintenance, construction, water recharge, and other uses as appropriate.
- **Policy CO-4.2.2:** Require new development to provide the infrastructure needed for delivery of recycled water to the property for use in irrigation, even if the recycled water main delivery lines have not yet reached the site, where deemed appropriate by the reviewing authority.
- **Policy CO-4.2.6:** Require that all new development proposals demonstrate a sufficient and sustainable water supply prior to approval.
- **Policy CO-4.4.4:** Promote the extension of sanitary sewers for all urban uses and densities, to protect groundwater quality, where feasible.

Table 5.9-3, Santa Clarita Valley Area Plan Consistency, in Section 5.9, Land Use, analyzes the consistency of the proposed Project with these policies.

Newhall County Water District Ordinance No. 112

In July 2005, the NCWD's Board of Directors adopted Ordinance No. 112, which addresses water conservation, shortage, drought, and emergency response procedures. NCWD's Water Conservation Action Plan states that no water user shall waste water or make, cause, or permit the use of water for any purpose contrary to any provision of Ordinance No. 112, or in quantities in excess of the use permitted by the conservation stage in effect. If excessive use (water leaks and/or waste) is detected from any water user, a four-stage enforcement plan detailed in the ordinance and including documentation and fines shall be followed.

Wastewater Infrastructure and Treatment

County Sanitation District Wastewater Ordinance

Refer to Local Water Supply discussion, above.

Connection Fee Ordinance

Each District of the LACSD separately adopted a Connection Fee Ordinance that sets forth the unit rate charges for the privilege of connecting facilities to the sewerage system or for the privilege of increasing the strength or quantity of wastewater discharged from connected facilities and to provide for the collection of fees (LACSD). Payment of this fee ensures that all LACSD sewer and wastewater treatment facilities would be upgraded, as necessary, to adequately serve the future development. These upgrades or improvements would be implemented by LACSD on an as needed basis.

Solid Waste

County of Los Angeles Integrated Waste Management Plan

In accordance with AB 939 described above, the County adopted its most recent Integrated Waste Management Plan (IWMP) in 1996, which includes the following components: Source Reduction and Recycling Element (SRRE), Household Hazardous Waste Element (HHWE), Countywide Siting Element, and Non-Disposal Facility Element (NDFE). The County SRRE describes policies and programs that the County must implement for its unincorporated areas to achieve the State's mandate of 25 and 50 percent waste disposal reductions by the years 1995 and 2000, respectively. The County HHWE provides for the management of household hazardous waste generated by the residents in its jurisdiction. The Countywide Household Hazardous Waste Management Program, which consists of permanent collection centers and public education/information services, has been formulated to serve residents throughout the County in a convenient and cost-effective manner. The Countywide Siting Element (CSE) projects waste generation and waste disposal capacity within the County. The County NDFE identifies all existing, expansions of existing, and proposed new non-disposal facilities that will be needed to implement its SRRE.

Construction and Demolition Debris Recycling and Reuse Ordinance

The County's Construction and Demolition Debris Recycling and Reuse Ordinance requires all construction projects to recycle at least 50 percent of construction wastes. The ordinance is Chapter 20.87 (Construction and Demolition Debris Recycling and Reuse) in Title 20 of the Los

Angeles County Code. The ordinance states that at least 50 percent (by weight) of all C&D debris, soil, rock, and gravel removed from a project site must be recycled or reused unless a lower percentage is approved by the Director of Public Works. A Recycling and Reuse Plan (RRP) must be submitted to the Department of Public Works, Environmental Programs Division after an application for a permit has been filed for a project. The RRP must contain a project description; the estimated total weight of C&D wastes; the total weight that would be recycled or reused; vendors for the recycled or reused C&D wastes; and the percentage recycled and reused. Upon County approval of the RRP, annual progress reports and a final compliance report showing documentation and receipts that the RRP was implemented must be submitted.

Green Building Standards Code

Refer to Local Water Supply discussion, above.

Recycling and Waste Reduction Policies

The County has adopted a number of specific policies to recycle and reduce waste from County operations and facilities. These include the purchase and use of re-refined motor oil in all County motorized vehicles and equipment; purchase and use of 30 percent recycled-content paper; mandated recycling programs; electronic waste surplus donation; recycling or donation of used printer cartridges; an environmental purchasing policy; reduced paper-based correspondence; beverage container collection and recycling; paper collection and recycling; purchase and use of remanufactured laser toner cartridges for black and white printers and copiers; restricted use of styrofoam containers; and prohibited use of plastic carryout bags.

County of Los Angeles General Plan

The Los Angeles County General Plan establishes policies in the Public Services and Facilities Element related to solid waste for new developments.

Public Services and Facilities Element

- **Policy PS/F 5.1:** Maintain an efficient, safe and responsive waste management system that reduces waste while protecting the health and safety of the public.
- **Policy PS/F 5.2:** Ensure adequate disposal capacity by providing for environmentally sound and technically feasible development of solid waste management facilities, such as landfills and transfer/processing facilities.
- **Policy PS/F 5.5:** Reduce the County's waste stream by minimizing waste generation and enhancing diversion.
- **Policy PS/F 5.7:** Encourage the recycling of construction and demolition debris generated by public and private projects.
- **Policy PS/F 5.8:** Ensure adequate and regular waste and recycling collection services.

Table 5.9-2, County General Plan Consistency, in Section 5.9, Land Use, analyzes the consistency of the proposed Project with these policies.

Santa Clarita Valley Area Plan 2012

The SCVAP 2012 requires the *NorthLake Specific Plan* to address the following policy from its Conservation and Open Space Element:

Conservation and Open Space Element

- **Policy CO-1.3.2:** Promote reducing, reusing, and recycling in all Land Use designations and cycles of development.

Table 5.9-3, Santa Clarita Valley Area Plan Consistency, in Section 5.9, Land Use, analyzes the consistency of the proposed Project with these policies.

5.12.5 THRESHOLDS CRITERIA

Thresholds Addressed in the Initial Study

The Initial Study prepared for the proposed Project (included in Appendix A) and circulated with the Notice of Preparation (NOP) concluded that Project implementation would not result in significant impacts for the thresholds of significance listed below. Further analysis of these thresholds in this SEIR is not required (a summary of the analysis presented in the Initial Study is provided in Section 7.1, Effects Determined Not to be Significant, of this Draft SEIR):

- Would the project exceed wastewater treatment requirements of either the Los Angeles or Lahontan Regional Water Quality Control Boards?

Thresholds Addressed in this Supplemental Environmental Impact Report

The County of Los Angeles utilizes an Initial Study Questionnaire with Thresholds of Significance specific to the County. The Initial Study for the proposed Project concluded that additional analysis of the following thresholds of significance is required in this Draft SEIR. The Project will be considered to have a significant effect related to water if the Project would:

- Have insufficient water supplies available to serve the project demands from existing entitlements and resources, considering existing and projected water demands from other land uses.
- Create water or wastewater system capacity problems, or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.
- Not comply with federal, State, and local statutes and regulations related to solid waste.

The following threshold is addressed in Section 5.4, Energy, of this SEIR.

- Would the project create energy utility (electricity, natural gas, propane) system capacity problems, or result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

5.12.6 RELEVANT PROJECT CHARACTERISTICS

Water Supply and Infrastructure

As discussed in Section 4.0, Project Description, several existing water tanks and their associated pumps would serve the proposed project, including 1 existing water tank and construct 5 new water tanks to provide a combined capacity of 13.35 MG of water. Additional pump stations would

be constructed or expanded as necessary to ensure adequate water pressure and availability. Further, existing water infrastructure (i.e., water mains and pipelines) would be extended onto the Project site to serve the proposed land uses. The conceptual Water Service Plan is shown in Exhibit 4-8, Water Service, in Section 4.0, Project Description, and will be finalized in coordination with both the County Department of Public Works and the NCWD.

Wastewater

The Project would involve the installation of a new gravity sewer line within the proposed and existing Ridge Route Road from the project's secondary access ("B" Street) on Ridge Route Road to the existing LACSD (trunk line) located at Lake Hughes Drive. The NorthLake project itself will gravity flow through the collector and local street networks to a proposed lift station located off of "B" Street. A force main from this proposed lift station would be constructed in "B" Street and connect to the proposed gravity sewer in Ridge Route Road. The conceptual Sewer Service Plan is shown in Exhibit 4-9, Wastewater Service, in Section 4.0, Project Description. All on-site sewer lines will be owned and maintained by the Los Angeles County Consolidated Sewer Maintenance Districts. Off-site improvements to LACSD facilities would be sized to accommodate the Project. These improvements and upgrades would be funded through the Project's payment of connection fees and would be undertaken by LACSD on an as-needed basis to serve the Project and other development in the area.

5.12.7 ENVIRONMENTAL IMPACTS

Impact Analysis

Threshold 5.12-1 Would the project create water or wastewater system capacity problems, or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects?

Water System

Construction Impacts

The proposed water conveyance and storage system would be constructed within the development areas as defined in Section 4.0, Project Description, and construction-related impacts are analyzed throughout this SEIR, including short-term air quality and noise impacts.

On-site Operational Impacts

The proposed Project would result in a total increase in water demand of 2,575 afy at Project buildout, thereby affecting existing water treatment and conveyance facilities. As part of the approved Specific Plan (1992) requirements, the proposed Project would provide all on-site water system improvements including a total of seven water tanks (one existing and six new tanks), new or expanded pump stations, and the required conveyance pipelines connecting the development to the existing off-site water system. All water system improvements would be sized at the final engineering stage of development. Irrigation systems would be properly designed, installed, operated and maintained to prevent the waste of water. "Drip" irrigation and other water application techniques that conserve water (e.g., soil moisture sensors and automatic irrigation systems) would be used in parks and publicly maintained landscape areas. All fixtures and appliances would meet or exceed State and local water efficiency standards, as mandated by State and local code and ordinance requirements; therefore, MM 4.9.2 of the SCVAP EIR would not apply to the Project.

The proposed Project would increase the demand on potable water resources. New on-site water conveyance and storage facilities are included in the design to serve the proposed Project site. According to the *Hydraulic Analysis for NorthLake Development Preliminary* prepared for the proposed Project by Sikand Engineering Associates (2015a), the storage facilities include the construction of five new water tanks and use of one the existing 3-MG water tanks with a combined capacity of 13.35 MG, these facilities would provide adequate water pressure and storage for firefighting to the Project site. The existing water line along Ridge Route Road would also be extended to the Project site. Water line easements would be required and a final map of water line connections would be determined during the final design and approval (see Exhibit 4-8, Water Service, in Section 4.0, Project Description). Construction of new pipelines and facilities would be in compliance with standard construction management practices for controlling on- and off-site runoff and erosion. Implementation of these facilities as part of the proposed Project would provide a benefit to the general area in that an immediate water source for fire protection would be in place.

Off-site Operational Impacts

As shown on Exhibit 4-8, Water Service, and as identified in the WSA, the Project would be required to connect to the NCWD facilities, resulting on potentially significant impacts related to existing off-site water conveyance and treatment facilities. Connection fees would be paid in compliance with NCWD requirements (MM 5.12-3), which would reduce these impacts to less than significant levels.

Wastewater System

Construction Impacts

The proposed wastewater collection system would be constructed within the development areas as defined in Section 4.0, Project Description, and construction-related impacts are analyzed throughout this SEIR, including short-term air quality and noise impacts.

On-Site Operational Impacts

Development of the proposed Project would generate an increase in wastewater flows. SCVSD would provide sewer services via the SCVJSS, including wastewater conveyance, treatment, and disposal services. The wastewater collection system is comprised of service connections that tie into a local collection line network. The local network, comprised of primary and secondary collectors, collects sewage flows directly from developments and discharges it into the Sanitation Districts sewer trunk lines. From the sewer trunks, wastewater is discharged into water reclamation plants where it is treated. The Sanitation Districts are responsible for the construction and maintenance of trunk sewers. Flow levels and pipe condition are checked biennially. Local lines are owned and maintained by the Los Angeles County Consolidated Sewer Maintenance Districts within its borders. The method by which Sanitation District trunk sewer lines are expanded is funded is via connection fee. In accordance with MM 5.12-3, the Santa Clarita Valley Sanitation District's Connection Fee Program requires that prior to being connected to the system, a new user must pay for their fair share of the County Sanitation District's sewerage system expansion. Expansion of local Los Angeles County Consolidated Sewer Maintenance lines are the responsibility of the Project Applicant.

The *NorthLake Sewer Area Study Report VTTM 073336 Back-up Data and Calculations*, prepared for the proposed Project by Sikand Engineering Associates in February 2016 and the revised *NorthLake Sewer Area Study Map* in February 2016, were prepared to evaluate the anticipated wastewater flows from the proposed Project and to determine the required wastewater

pipe sizes needed to accommodate the proposed development. Projected wastewater flows were calculated based on peak flow coefficients according to the proposed land uses and, as shown on Exhibit 4-9, Wastewater Service, from Section 4.0, Project Description, required pipe sizes were determined.

Off-Site Operational Impacts

As noted previously, the proposed Project would increase wastewater flows. According to the *NorthLake Sewer Area Study Map*, Project-generated wastewater flows would require upgrades to off-site LACDPW and LACSD facilities as detailed in MM 5.12-8 and 5.12-9, respectively. Specifically, these upgrades would include the following per the approved sewer area study dated March 21, 2016:

Los Angeles County Department of Public Works Facilities

- Upsize existing 15-inch VCP to 18-inch VCP from Manhole (MH) 82 to MH 38
- Upsize existing 15-inch VCP to 18-inch VCP from MH 37 to MH 38
- Upsize existing 15-inch VCP to 18-inch VCP from MH 35 to MH 36
- Upsize existing 18-inch VCP to 21-inch VCP from MH 174 to MH 34
- Upsize existing 18-inch VCP to 21-inch VCP from MH 174 to MH 111
- Upsize existing 12-inch VCP to 21-inch VCP from MH 111 to 124

Los Angeles County Sanitation Districts Facilities

- Upsize 12-inch VCP Trunk Line District #32 Castaic Trunk Sewer – Section 4

Additionally, wastewater would be treated by the VWRP, which has the capacity to provide primary, secondary and tertiary treatment of 21.6 million gallons per day. As noted previously, the LACSD requires payment of connection fees to fund necessary infrastructure construction and upgrades. The responsibility of new construction or upgrades falls onto LACSD and these improvements are implemented on an as needed basis, as determined by LACSD. Therefore, payment of these connection fees is considered to be adequate mitigation and would reduce impacts to LACSD-owned and operated facilities to less than significant levels. Implementation of MM 5.12-8, in addition to MM 5.12-3 through 5.12-5, and MM 5.12-14, MM 5.12-20, and MM 5.12-22, would reduce impacts related to wastewater to less than significant levels.

Level of Significance without Mitigation: Potentially Significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None

Level of Significance with SCVAP 2012 EIR Mitigation: Potentially Significant.

Recommended 1992 SP EIR Mitigation Measures:

MM 5.12-1 The project applicant shall provide all onsite water system improvements and shall contribute to required new or upgraded existing offsite improvements to meet all water supply needs for the proposed development. (1992 SP EIR MM 4.12.1)

MM 5.12-2 All water system improvements shall be sized at the water improvement plan check stage of development. (1992 SP EIR MM 4.12.2)

MM 5.12-3 Project connection fees would be deposited into a capital improvement fund to help pay for new facilities and expansion required by the Districts; (1992 SP EIR MM 4.9.3)

MM 5.12-4 Payment of the connection fees is required for issuance of a permit to connect the project to surrounding Los Angeles County Sanitation District facilities, if necessary. (1992 SP EIR MM 4.9.4)

MM 5.12-5 Routine testing of pre-discharge treated effluent should be conducted to monitor compliance with established water quality control limits. (1992 SP EIR MM 4.9.7)

Level of Significance with 1992 SP EIR Mitigation: Potentially Significant.

Recommended Project Specific Mitigation Measures:

MM 5.12-6 Prior to issuance of occupancy permits, the Project Applicant shall provide evidence to the County of payment of connection fees in compliance with the requirements of the Newhall County Water District.

MM 5.12-7 Prior to connection to the Los Angeles County Sanitation District's wastewater system, the Project Applicant shall provide evidence of payment of the Santa Clarita Valley Sanitation District's Connection Fee Program.

MM 5.12-8 Prior to issuance of occupancy permits, the Project Applicant shall coordinate with the Los Angeles County Sanitation Districts to upsize the existing 12-inch VCP Castaic Trunk Sewer in Ridge Route Road (south of the intersection with Lake Hughes Road), as determined necessary by the LA County Sanitation Districts to accommodate future flow volumes.

Net Level of Significance: Less than significant.

Threshold 5.12-2 Would the project have sufficient reliable water supplies available to serve the project demands from existing entitlements and resources, considering existing and projected water demands from other uses?

The proposed Project would result in an increase in water demand and would affect existing water supplies. A Project-specific Water Supply Assessment was prepared in August 2015 to further evaluate the adequacy of CLWA's water supplies to meet the anticipated demands of the proposed Project.

Projected Water Demand

The WSA estimates water total potable water demand at approximately 2,580 acre-feet per year (AFY), as shown in Table 5.12-3.

As discussed in the WSA, the amount of water delivered by NCWD has historically been less than the calculated demand. Tables 5.12-4 through 5.12-7 identify the existing and planned supplies and how they would be used during Normal, Single-Dry, and Multiple-Dry Years. According to the WSA, diversity of supply allows NCWD, CLWA, and other purveyors the option of drawing on multiple sources of supply in response to changing conditions such as varying weather patterns (average/normal years, single dry years, multiple dry years), fluctuations in delivery amounts of

SWP water, natural disasters and contamination with substances such as perchlorate. It is the stated goal of NCWD, CLWA and the other retail water purveyors to deliver a reliable and high quality water supply to their customers, even during dry periods. Based on conservative water supply and demand assumptions over the next 40 years, in combination with conservation of non-essential demand during certain dry years, the water supply plan described in the 2010 UWMP successfully achieves this goal.

TABLE 5.12-3
POTABLE WATER DEMAND

Land Use	Development Summary				1992 Demand Coefficients				2006 Demand Coefficients			
	1992 NorthLake		2014 NorthLake				Average Day Demands				Average Day Demands	
	Acreage (acre)	Dwelling Units (DU)	Acreage (acre)	Dwelling Units (DU)	Demand Coefficient	Demand Units	1992 EIR (afy)	Proposed Project (afy)	Demand Coefficient	Demand Units	1992 EIR (afy)	Proposed Project (afy)
Single Family Residential												
Low Density		2,337		430	0.64	afy/DU	1,505	1,041	0.90	afy/DU	2,107	388
Low/Medium Density				1,187		afy/DU			0.63	afy/DU		745
Subtotal		2,337		1,617			1,505	1,041			2,107	1,133
Multi-Family Residential												
High Density		1,286		1,527	0.12	afy/DU	154	183	0.27	afy/DU	352	418
Non-Residential												
Commercial	3.9		9.2		4.55	afy/acre	18	41	3.99	afy/acre	16	37
Industrial	12.5		13.9		2.58	afy/acre	32	36	3.99	afy/acre	50	55
Institutional	23.1		10.7		4.37	afy/acre	101	47	2.51	afy/acre	58	27
Pro/Shop	1.4		0.0		0.27	afy/ 1,000 ft	16	0	3.99	afy/acre	6	0
Landscape Areas/Recreation and Manufactured Slopes	314.0		322.4		2.00	afy/acre	628	645	2.51	afy/acre	789	810
			40.0					80	2.51	afy/acre	0	100
Recreation Areas not Irrigated	0.0		126.9		0.00	afy/acre	0	0	0.00	afy/acre	0	0
Golf Course	166.9		0.0		2.40	afy/acre	400	0	2.51	afy/acre	419	0
Subtotal	521.8		521.9				1,195	849			1,337	1,029
Total		**3,623**		**3,144**			**2,855**	**2,073**			**3,796**	**2,580**

Source: AKEL Engineering Group, Inc. 2015

1 Source: Excerpt of 1992 NorthLake EIR
2 Unless noted otherwise, acreages and dwelling units are taken from NorthLake Conceptual Plan. It is noted that the water demand is based on slightly larger acreages of industrial and commercial lands, however, this analysis scenario for water demand represents a more conservative analysis of water supply.
3 Source: 2006 Castaic Water System Master Plan, Table 3-1 (Average Water Demand Unit Use Factors by Land Use Type)
4 Acreage calculated from square feet floor area given in Excerpt of 1992 NorthLake EIR
5 Landscape Areas/Recreation and Manufactured Slopes includes 322.4 acres of Irrigated Manufactured Slopes and approximately 40 acres of Park
6 Source: Open Space Exhibit
7 Demand (afy) = Demand (gpm) x 1.61
8 Recreation land use includes Park and Open Space land use types
9 Approximately 126.9 acres of Recreation land uses are intended as passive park systems and are not irrigated

TABLE 5.12-4
SUMMARY OF CURRENT AND PLANNED WATER SUPPLIES AND BANKING PROGRAMS[a]

	2010	2015	2020	2025	2030	2035	2040	2045	2050
Existing Supplies									
Existing Groundwater[b]									
Alluvial Aquifer	24,385	24,000	24,000	24,000	25,000	25,000	25,000	25,000	25,000
Saugus Formation[c]	6,725	9,225	10,225	10,225	10,225	10,225	10,225	10,225	10,225
Total Groundwater	**31,110**	**33,225**	**34,225**	**34,225**	**35,225**	**35,225**	**35,225**	**35,225**	**35,225**
Recycled Water[d]									
Total Recycled	**325**	**325**	**325**	**325**	**325**	**325**	**325**	**325**	**325**
Imported Water									
State Water Project[e]	58,300	58,100	57,900	57,600	57,400	57,400	57,400	57,400	57,400
Flexible Storage Accounts[f]	6,060	6,060	4,680	4,680	4,680	4,680	4,680	4,680	4,680
Buena Vista-Rosedale	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000
Nickel Water – Newhall Land	1,607	1,607	1,607	1,607	1,607	1,607	1,607	1,607	1,607
Total Imported	**76,967**	**76,767**	**75,187**	**74,887**	**74,687**	**74,687**	**74,687**	**74,687**	**74,687**
Existing Banking Programs[g]									
Rosedale Rio-Bravo	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Semitropic	15,000	15,000	15,000	–	–	–	–	–	–
Semitropic – Newhall Land	4,950	4,950	4,950	4,950	4,950	4,950	4,950	4,950	4,950
Total Banking	**39,950**	**39,950**	**39,950**	**24,950**	**24,950**	**24,950**	**24,950**	**24,950**	**24,950**
Planned Supplies									
Future Groundwater[h]									
Alluvial Aquifer	–	–	1,000	2,000	3,000	4,000	5,000	6,000	7,000
Saugus Formation	–	1,375	1,375	1,375	1,375	1,375	1,375	1,375	1,375
Total Groundwater	–	**1,375**	**2,375**	**3,375**	**4,375**	**5,375**	**6,375**	**7,375**	**8,375**

TABLE 5.12-4
SUMMARY OF CURRENT AND PLANNED WATER SUPPLIES AND BANKING PROGRAMS[a]

	2010	2015	2020	2025	2030	2035	2040	2045	2050
Recycled Water[i]	–	975	2,725	5,225	7,775	10,275	13,775	17,275	20,975
Planned Banking Programs	–	–	–	10,000	10,000	20,000	20,000	20,000	20,000

[a] The values shown under "Existing Supplies" and "Planned Supplies" are projected to be available in average/normal years. The values shown under "Existing Banking Programs" and "Planned Banking Programs" are the maximum capacity of program withdrawals.
[b] Existing groundwater supplies represent the quantity of groundwater anticipated to be pumped with existing wells. As indicated in Tables 3-8 and 3-9, and Tables 3-4 and 3-5 of the 2009 Groundwater Basin Yield Analysis, individual purveyors may have well capacity in excess of quantities shown in this table. As indicted in Table 3-10, existing and planned ground water pumping remain within the groundwater operating plan shown on Table 3-5.
[c] SCWD's existing Saugus 1 and Saugus 2 wells resumed production in 2011 with the completion of the perchlorate treatment facility.
[d] Represents recycled water being delivered in 2010 with existing facilities. CLWA currently has 1,700 AFY under contract.
[e] SWP supplies are based on the Department of Water Resources *"2009 State Water Project Delivery Reliability Report".*
[f] Includes both CLWA and Ventura County entities flexible storage accounts. Initial term of agreement with Ventura County entities expires after 2015.
[g] Supplies shown are annual amounts that can be withdrawn and would typically be used only during dry years.
[h] Planned groundwater supplies represent new groundwater well capacity that may be required by an individual purveyor's production objectives in the Alluvial Aquifer and the Saugus Formation. When combined with existing purveyor and non-purveyor groundwater supplies, total groundwater production remains within the sustainable ranges identified in Table 3-8 of 2009 Groundwater Basin Yield Analysis. As indicated in Table 3-10, existing and planned groundwater pumping remain within the basin operating plan shown on Table 3-5 of the 2010 UWMP.
[i] See 2010 UWMP Table 4-3. Total Purveyor and Non-Purveyor Recycled Water less Existing Supply.

Source: NCWD 2015.

TABLE 5.12-5
PROJECTED AVERAGE/NORMAL YEAR SUPPLIES AND DEMANDS

	2015	2020	2025	2030	2035	2040	2045	2050
Existing Supplies								
Existing Groundwater[a]								
Alluvial Aquifer	24,000	24,000	24,000	25,000	25,000	25,000	25,000	25,000
Saugus Formation[b]	9,225	10,225	10,225	10,225	10,225	10,225	10,225	10,225
Total Groundwater	**33,225**	**34,225**	**34,225**	**35,225**	**35,225**	**35,225**	**35,225**	**35,225**
Recycled Water[c]	325	325	325	325	325	325	325	325
Imported Water								
State Water Project[d]	58,100	57,900	57,600	57,400	57,400	57,400	57,400	57,400
Flexible Storage Accounts	–	–	–	–	–	–	–	–
Buena Vista-Rosedale	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000
Nickel Water – Newhall Land	1,607	1,607	1,607	1,607	1,607	1,607	1,607	1,607
Total Imported	**70,707**	**70,507**	**70,207**	**70,007**	**70,007**	**70,007**	**70,007**	**70,007**
Banking Programs[e]								
Rosedale Rio-Bravo	–	–	–	–	–	–	–	–
Semitropic	–	–	–	–	–	–	–	–
Semitropic – Newhall Land	–	–	–	–	–	–	–	–
Total Banking	–	–	–	–	–	–	–	–
Total Existing Supplies	**104,257**	**105,057**	**104,757**	**105,557**	**105,557**	**105,557**	**105,557**	**105,557**
Planned Supplies								
Future Groundwater[f]								
Alluvial Aquifer	–	1,000	2,000	3,000	4,000	5,000	6,000	7,000
Saugus Formation	1,375	1,375	1,375	1,375	1,375	1,375	1,375	1,375
Total Groundwater	**1,375**	**2,375**	**3,375**	**4,375**	**5,375**	**6,375**	**7,375**	**8,375**
Recycled Water[c]	975	2,725	5,225	7,775	10,275	13,775	17,275	20,975
Banking Programs[e]	–	–	–	–	–	–	–	–
Total Planned Supplies	**2,350**	**5,100**	**8,600**	**12,150**	**15,650**	**20,150**	**24,650**	**29,350**
Total Existing and Planned Supplies	**106,607**	**110,157**	**113,357**	**117,707**	**121,207**	**125,707**	**130,207**	**134,907**

TABLE 5.12-5
PROJECTED AVERAGE/NORMAL YEAR SUPPLIES AND DEMANDS

	2015	2020	2025	2030	2035	2040	2045	2050
Demand Without Conservation[g]	80,070	88,484	96,898	105,312	113,726	122,140	130,554	138,968
20X2020 Reduction[h]	9,027	19,626	21,166	22,770	24,342	25,914	27,486	29,058
Reduction from Recycled Water[i]	1,300	3,050	5,550	8,100	10,600	14,100	17,600	21,300
Reduction from Water Conservation[j]	7,727	16,576	16,662	16,748	16,833	16,919	17,005	17,091
Demand With Conservation[k]	72,343	71,908	80,236	88,564	96,892	105,220	113,549	121,877

[a] Existing groundwater supplies represent the quantity of groundwater anticipated to be pumped with existing wells. As indicated in Tables 3-8 and 3-9, and Tables 3-4 and 3-5 of the 2009 Groundwater Basin Yield Analysis, individual purveyors may have well capacity in excess of quantities shown in this table. As indicted in 2010 UWMP Table 3-10, existing and planned ground water pumping remain within the groundwater operating plan shown on Table 3-5.
[b] SCWD's existing Saugus 1 and Saugus 2 wells resumed production in 2011 with the completion of the perchlorate treatment facility.
[c] Recycled water projections from 2010 UWMP Table 4-3.
[d] SWP supplies are based on the Department of Water Resources *"2009 State Water Project Delivery Reliability Report"*.
[e] Not needed in average/normal years.
[f] Planned groundwater supplies represent new ground water well capacity that may be required by an individual purveyor's production objectives in the Alluvial Aquifer and the Saugus Formation. As indicated in Table 3-10, existing and planned groundwater pumping remain within the groundwater operating plan shown on Table 3-5 of the 2010 UWMP.
[g] Demand w/o Conservation data from 2010 UWMP Table 2-2.
[h] 20x2020 Reduction for the Region from 2010 UWMP Table 2-22.
[i] Recycled Water Reduction for the Region from 2010 UWMP Table 2-22; does not include dements from Honor Rancho.
[j] Reduction from Water Conservation calculation for Region from 2010 UWMP Table 2-22.
[k] Demand w/ Conservation is Demand w/o Conservation minus Reduction from Water Conservation.

Source: NCWD 2015.

TABLE 5.12-6
PROJECTED SINGLE-DRY YEAR SUPPLIES AND DEMANDS

	2015	2020	2025	2030	2035	2040	2045	2050
Existing Supplies								
Existing Groundwater[a]								
Alluvial Aquifer	20,300	20,250	20,200	21,050	21,050	21,025	21,000	20,650
Saugus Formation	20,400	20,400	20,400	20,400	20,400	20,400	20,400	20,400
Total Groundwater	**40,700**	**40,650**	**40,600**	**41,450**	**41,450**	**41,425**	**41,400**	**41,050**
Recycled Water[b]	325	325	325	325	325	325	325	325
Imported Water								
State Water Project[c]	11,900	11,000	10,000	9,100	9,100	9,100	9,100	9,100
Flexible Storage Accounts[d]	6,060	4,680	4,680	4,680	4,680	4,680	4,680	4,680
Buena Vista-Rosedale	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000
Nickel Water – Newhall Land	1,607	1,607	1,607	1,607	1,607	1,607	1,607	1,607
Total Imported	**30,567**	**28,287**	**27,287**	**26,387**	**26,387**	**26,387**	**26,387**	**26,387**
Banking Programs								
Rosedale Rio-Bravo[e]	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Semitropic[f]	15,000	15,000	–	–	–	–	–	–
Semitropic – Newhall Land[g]	4,950	4,950	4,950	4,950	4,950	4,950	4,950	4,950
Total Banking	**39,950**	**39,950**	**24,950**	**24,950**	**24,950**	**24,950**	**24,950**	**24,950**
Total Existing Supplies	**111,542**	**109,212**	**93,162**	**93,112**	**93,112**	**93,087**	**93,062**	**92,712**
Planned Supplies								
Future Groundwater[h]								
Alluvial Aquifer	200	1,250	2,300	3,850	4,850	5,875	6,900	7,750
Saugus Formation (Restored Well)	825	3,777	3,777	3,777	3,777	3,777	3,777	3,750
Saugus Formation(New Wells)	2,875	9,923	9,923	9,923	9,923	9,923	9,923	9,950
Total Groundwater	**3,900**	**14,950**	**16,000**	**17,550**	**18,550**	**19,575**	**20,600**	**21,450**
Recycled Water[b]	975	2,725	5,225	7,775	10,275	13,775	17,275	20,975
Banking Programs[i]	–	–	10,000	10,000	20,000	20,000	20,000	20,000
Total Planned Supplies	**4,875**	**17,675**	**31,225**	**35,325**	**48,825**	**53,350**	**57,875**	**62,425**
Total Existing and Planned Supplies	**116,417**	**126,887**	**124,387**	**128,437**	**141,937**	**146,437**	**150,937**	**155,137**

TABLE 5.12-6
PROJECTED SINGLE-DRY YEAR SUPPLIES AND DEMANDS

	2015	2020	2025	2030	2035	2040	2045	2050
Demand Without Conservation[j]	88,077	97,332	106,588	115,843	125,099	134,354	143,609	152,865
20X2020 Reduction[k]	9,027	19,626	21,166	22,770	24,342	25,914	27,486	29,058
Reduction from Recycled Water[l]	1,300	3,050	5,550	8,100	10,600	14,100	17,600	21,300
Reduction from Water Conservation[m]	7,727	16,576	16,662	16,748	16,833	16,919	17,005	17,091
Demand With Conservation[n]	80,350	80,757	89,926	99,096	108,265	117,434	126,604	135,773

[a] Existing groundwater supplies represent the quantity of groundwater anticipated to be pumped with existing wells. As indicated in 2010 UWMP Tables 3-8 and 3-9, and Tables 3-4 and 3-5 of the 2009 Groundwater Basin Yield Analysis, individual purveyors may have well capacity in excess of quantities shown in this table. As indicted in 2010 UWMP Table 3-11, existing and planned ground water pumping remain within the groundwater operating plan shown on Table 3-5. SCWD's existing Saugus 1 and Saugus 2 wells resumed production in 2011 with the completion of the perchlorate treatment facility.

[b] Recycled water projections from 2010 UWMP Table 4-3.

[c] SWP supplies are based on the Department of Water Resources *"2009 State Water Project Delivery Reliability Report"*.

[d] Includes both CLWA and Ventura County entities flexible storage accounts. Initial Term of agreement with Ventura County entities expires after 2015.

[e] CLWA has a maximum withdrawal capacity of 20,000 AFY and a storage capacity of 100,000 AF. As of 6/1/2011, there is 100,000 AF of recoverable water.

[f] CLWA has 45,920 AF of recoverable water as of 6/1/2011.

[g] Newhall Land has a maximum withdrawal capacity of 4,950 AFY and a storage capacity of 55,000 AF. As of 6/1/2011 there is 18,892 AF of recoverable water. Delivery of stored water from the Newhall Land's Semitropic Water Banking and Exchange Program is assumed available to VWC.

[h] Planned groundwater supplies represent new groundwater well capacity that may be required by an individual purveyor's production objectives in the Alluvial Aquifer and the Saugus Formation, including 3,777 AFY of restored capacity from VWC Well 201 and approximately 10,000 AFY of new Saugus Formation well capacity. When combined with existing purveyor and non-purveyor groundwater supplies, total groundwater production is consistent with the 1977 single dry-year levels identified in Table 3-8 of the 2009 Groundwater Basin Yield Analysis. As indicated in 2010 UWMP Table 3-11, existing and planned groundwater pumping remain with the groundwater operating plan shown on Table 3-5 of the 2010 UWMP.

[i] Includes banking programs with 10,000 AF of additional pumpback capacity by 2025 and a second additional 10,000 AF by 2035.

[j] Demand w/o Conservation data from 2010 UWMP Table 2-2. Includes a 10 percent increase in demand during dry years.

[k] 20x2020 Reduction for the Region from 2010 UWMP Table 2-22.

[l] Recycled Water Reduction for the Region from 2010 UWMP Table 2-22; does not include demands from Honor Rancho.

[m] Reduction from Water Conservation calculation for Region from 2010 UWMP Table 2-22.

[n] Demand w/ Conservation is Demand w/o Conservation minus Reduction from Water Conservation.

Source: NCWD 2015.

TABLE 5.12-7
PROJECTED MULTI-DRY YEAR SUPPLIES AND DEMANDS

	2015	2020	2025	2030	2035	2040	2045	2050
Existing Supplies								
Existing Groundwater[a]								
Alluvial Aquifer	20,425	20,425	20,425	21,825	21,825	21,825	21,825	21,325
Saugus Formation	19,700	19,700	19,700	19,700	19,700	19,700	19,700	19,700
Total Groundwater	**40,125**	**40,125**	**40,125**	**41,525**	**41,525**	**41,525**	**41,525**	**41,025**
Recycled Water[b]	325	325	325	325	325	325	325	325
Imported Water								
State Water Project[c]	32,900	32,900	33,000	33,000	33,000	33,000	33,000	33,000
Flexible Storage Accounts[d]	1,510	1,170	1,170	1,170	1,170	1,170	1,170	1,170
Buena Vista-Rosedale	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000
Nickel Water – Newhall Land	1,607	1,607	1,607	1,607	1,607	1,607	1,607	1,607
Total Imported	**47,017**	**46,677**	**46,777**	**46,777**	**46,777**	**46,777**	**46,777**	**46,777**
Banking Programs								
Rosedale Rio-Bravo[e]	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
Semitropic[f]	11,500	11,500	–	–	–	–	–	–
Semitropic – Newhall Land[g]	4,950	4,950	4,950	4,950	4,950	4,950	4,950	4,950
Total Banking	**31,450**	**31,450**	**19,950**	**19,950**	**19,950**	**19,950**	**19,950**	**19,950**
Total Existing Supplies	**118,917**	**118,577**	**107,177**	**108,577**	**108,577**	**108,577**	**108,577**	**108,577**
Planned Supplies								
Future Groundwater[h]								
Alluvial Aquifer	–	1,000	2,000	3,000	4,000	5,000	6,000	7,000
Saugus Formation (Restored Well)	2,375	1,625	1,500	1,400	1,275	1,125	1,000	875
Saugus Formation(New Wells)	2,250	10,325	10,450	10,550	10,675	10,825	10,950	11,075
Total Groundwater	**4,625**	**12,950**	**13,950**	**14,950**	**15,950**	**16,950**	**17,950**	**18,950**
Recycled Water[b]	975	2,725	5,225	7,775	10,275	13,775	17,275	20,975
Banking Programs[i]	–	–	7,500	7,500	15,000	15,000	15,000	15,000
Total Planned Supplies	**5,600**	**15,675**	**26,675**	**30,225**	**41,225**	**45,725**	**50,225**	**54,925**
Total Existing and Planned Supplies	**124,517**	**134,252**	**133,852**	**138,802**	**149,802**	**154,302**	**158,802**	**163,002**

TABLE 5.12-7
PROJECTED MULTI-DRY YEAR SUPPLIES AND DEMANDS

	2015	2020	2025	2030	2035	2040	2045	2050
Demand Without Conservation[j]	88,068	97,325	106,582	115,838	125,095	134,352	143,608	152,865
20X2020 Reduction[k]	9,027	19,626	21,166	22,770	24,342	25,914	27,486	29,058
Reduction from Recycled Water[l]	1,300	3,050	5,550	8,100	10,600	14,100	17,600	21,300
Reduction from Water Conservation[m]	7,727	16,576	16,662	16,748	16,833	16,919	17,005	17,091
Demand With Conservation[n]	80,342	80,749	89,920	99,091	108,261	117,432	126,603	135,773

[a] Existing groundwater supplies represent the quantity of groundwater anticipated to be pumped with existing wells. As indicated in 2010 UWMP Tables 3-8 and 3-9, and Tables 3-4 and 3-5 of the 2009 Groundwater Basin Yield Analysis, individual purveyors may have well capacity in excess of quantities shown in this table. As indicted in 2010 UWMP Table 3-12, existing and planned ground water pumping remain within the groundwater operating plan shown on Table 3-5. SCWD's existing Saugus 1 and Saugus 2 wells resumed production in 2011 with the completion of the perchlorate treatment facility.

[b] Recycled water projections from 2010 UWMP Table 4-3.

[c] SWP supplies are based on the Department of Water Resources *"2009 State Water Project Delivery Reliability Report"*.

[d] Includes both CLWA and Ventura County entities flexible storage accounts. Initial Term of agreement with Ventura County entities expires after 2015.

[e] CLWA has a maximum withdrawal capacity of 20,000 AFY and a storage capacity of 100,000 AF. As of 6/1/2011, there is 100,000 AF of recoverable water.

[f] CLWA has 45,920 AF of recoverable water as of 6/1/2011.

[g] Newhall Land has a maximum withdrawal capacity of 4,950 AFY and a storage capacity of 55,000 AF. As of 6/1/2011 there is 18,892 AF of recoverable water. Delivery of stored water from the Newhall Land's Semitropic Water Banking and Exchange Program is assumed available to VWC.

[h] Planned groundwater supplies represent new groundwater well capacity that may be required by an individual purveyor's production objectives in the Alluvial Aquifer and the Saugus Formation, including 3,777 AFY of restored capacity from VWC Well 201 and approximately 10,000 AFY of new Saugus Formation well capacity. When combined with existing purveyor and non-purveyor groundwater supplies, total groundwater production is consistent with the 1931–1934 multiple dry-year levels identified in Table 3-8 of the 2009 Groundwater Basin Yield Analysis. As indicated in 2010 UWMP Table 3-12, existing and planned groundwater pumping remain with the groundwater operating plan shown on Table 3-5 of the 2010 UWMP.

[i] Includes banking programs with 10,000 AF of additional pumpback capacity by 2025 and a second additional 10,000 AF by 2035.

[j] Demand w/o Conservation data from 2010 UWMP Table 2-2. Includes a 10 percent increase in demand during dry years.

[k] 20x2020 Reduction for the Region from 2010 UWMP Table 2-22.

[l] Recycled Water Reduction for the Region from 2010 UWMP Table 2-22; does not include demands from Honor Rancho.

[m] Reduction from Water Conservation calculation for Region from 2010 UWMP Table 2-22.

[n] Demand w/ Conservation is Demand w/o Conservation minus Reduction from Water Conservation.

Source: NCWD 2015.

According to the WSA, NCWD's total projected water supplies available during the ensuing 20 years would meet the projected water demands associated with the proposed Project and existing and other planned uses within NCWD's service. This analysis assumes that water demand during construction activities would be trucked in at the cost of the Project Applicant and/or Construction Contractor. This finding is consistent with current information and NCWD's 2010 UWMP.

It should be noted that, according to the WSA, the Proposed Project would use future as well as current water supplies; therefore, an SB 221 water supply verification would be required in accordance with Government Code Section 66473.7(b). It is also noted that a variety of additional water conservation techniques would be implemented as part of the project, as described in Section 4.0, Project Description; therefore, MMs 3.13.1, 3.13.2, and 3.13.19 of the SCVAP EIR would not be required for this Project.

Level of Significance without Mitigation:

Recommended SCVAP 2012 EIR Mitigation Measures:

MM 5.12-9 Monitor growth, and coordinate with water districts as needed to ensure that long-range needs for potable and reclaimed water will be met. (SCVAP 2012 EIR MM 3.13.3)

MM 5.12-10 If water supplies are reduced from projected levels due to drought, emergency, or other unanticipated events, take appropriate steps to limit, reduce, or otherwise modify growth permitted by the Area Plan in consultation with water districts to ensure adequate long-term supply for existing businesses and residents. (SCVAP 2012 EIR MM 3.13.4)

MM 5.12-11 Require that all new development proposals demonstrate a sufficient and sustainable water supply prior to approval. (SCVAP 2012 EIR MM 3.13.5)

MM 5.12-12 Require the use of drought tolerant landscaping, native California plant materials, and evapotranspiration (smart) irrigation systems. (SCVAP 2012 EIR MM 3.13.6)

MM 5.12-13 In making land use decisions, consider the complex, dynamic, and interrelated ways that natural and human systems interact, such as the interactions between energy demand, water demand, air and water quality, and waste management. (SCVAP 2012 EIR MM 3.13.8)

MM 5.12-14 In coordination with applicable water suppliers, adopt and implement a water conservation strategy for public and private development. (SCVAP 2012 EIR MM 3.13.9)

MM 5.12-15 Provide examples of water conservation in landscaping through use of low water use landscaping in public spaces such as parks, landscaped medians and parkways, plazas, and around public buildings. (SCVAP 2012 EIR MM 3.13.10)

MM 5.12-16 Require low water use landscaping in new residential subdivisions and other private development projects, including a reduction in the amount of turf-grass. (SCVAP 2012 EIR MM 3.13.11)

MM 5.12-17 Provide informational materials to applicants and contractors on the Castaic Lake Water Agency's Landscape Education Program, and/or other information on

xeriscape, native California plants, and water conserving irrigation techniques as materials become available. (SCVAP 2012 EIR MM 3.13.12)

MM 5.12-18 Promote the use of low-flow and/or waterless plumbing fixtures and appliances in all new non-residential development and residential development of five or more dwelling units. (SCVAP 2012 EIR MM 3.13.13)

MM 5.12-19 Support amendments to the County Building Code that would promote upgrades to water and energy efficiency when issuing permits for renovations or additions to existing buildings. (SCVAP 2012 EIR MM 3.13.14)

MM 5.12-20 Apply water conservation policies to all pending development projects, including approved tentative subdivision maps to the extent permitted by law. Where precluded from adding requirements by vested entitlements, encourage water conservation in construction and landscape design. (SCVAP 2012 EIR MM 3.13.15)

MM 5.12-21 Upon the availability of non-potable water services, discourage and consider restrictions on the use of potable water for washing outdoor surfaces. (SCVAP 2012 EIR MM 3.13.16)

MM 5.12-22 In cooperation with the Sanitation District and other affected agencies, expand opportunities for use of recycled water for the purposes of landscape maintenance, construction, water recharge, and other uses as appropriate. (SCVAP 2012 EIR MM 3.13.17)

MM 5.12-23 Require new development to provide the infrastructure needed for delivery of recycled water to the property for use in irrigation, even if the recycled water main delivery lines have not yet reached the site. (SCVAP 2012 EIR MM 3.13.18)

MM 5.12-24 Participate and cooperate with other agencies to complete, adopt, and implement an Integrated Regional Water Management Plan to build a diversified portfolio of water supply, water quality, and resource stewardship priorities for the Santa Clarita Valley. (SCVAP 2012 EIR MM 3.13.20)

MM 5.12-25 Require that all new development proposals demonstrate a sufficient and sustainable water supply prior to approval. (SCVAP 2012 EIR MM 3.13.21)

MM 5.12-26 Promote energy efficiency and water conservation upgrades to existing non-residential buildings at the time of major remodel or additions. (SCVAP 2012 EIR MM 3.13.22)

Level of Significance With SCVAP 2012 Mitigation: Less Than Significant

Recommended 1992 SP EIR Mitigation Measures: No additional mitigation is required; however, the following mitigation measures shall be implemented to further reduce the potential for an impact.

MM 5.12-27 Landscaping shall emphasize drought-tolerant vegetation (xeriscaping) where not watered with reclaimed water. Plants of similar water use shall be grouped to reduce over-irrigation of low-water-using plants. Those areas not designed in xeriscape shall be gauged to receive irrigation using the minimal requirements. (1992 SP EIR MM 4.12.6)

MM 5.12-28 Residential occupants shall be informed as to the benefits of low-water-using landscaping and sources of additional assistance in xeriscaping. (1992 SP EIR MM 4.12.7)

Level of Significance With 1992 SP EIR Mitigation: Less Than Significant

Recommended Project Specific Mitigation Measures: No additional mitigation is required.

Net Level of Significance: Less Than Significant.

Threshold 5.12-3 Would the project be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs?

Project Construction

Construction activities associated with the proposed Project would generate a limited amount of solid waste due to the lack of on-site structures that would require disposal; the majority of the limited solid waste generated by Project construction is expected to include vegetative waste and small amounts of wood, plastic, and metal. Construction-related solid waste is considered to be less than significant in that it is short-term and intermittent and much of the waste can be recycled. Construction-related solid waste would also cease upon completion of the proposed Project. In addition, the Project would recycle and/or salvage a minimum of 65 percent of the non-hazardous construction and demolition debris or meet a local construction and demolition waste management ordinance. Additionally, in response to California's 75 Percent Initiative, at least 75 percent of all solid waste would be recycled or reused by 2020.. Therefore, solid waste impacts associated with construction are considered less than significant.

Project Operation

In estimating the amount of waste generated by the proposed Project, the California Integrated Waste Management Board (CIWMB) was consulted to determine what generation rate should be applied for the various land uses.[2] Solid waste would be generated at a rate of 4 pounds per dwelling unit per day (lbs/du/day) for residential uses and 5 lbs per 1,000 square feet (sf) per day for commercial and industrial uses, and The proposed Project would generate approximately 14,460 lbs of solid waste per day (7.23 tons/day) or 2,639 tons/ year.[3] According to the CIWMB, "waste generation includes all material discarded, whether or not they are later recycled or disposed in a landfill".

The proposed Project's 3,150 residential units would generate approximately 12,600 pounds of solid waste per day (6.3 tons/day), or 2,299.5 tons/year. The 23.1 acres (372,000 square feet) of proposed commercial and industrial land uses at Specific Plan buildout would generate approximately 1,860 pounds (lbs) of solid waste per day (0.93 tons/day), or 339.5 tons per year, assuming 365 days of operation as a conservative estimate.[4] In reality, the commercial and light industrial enterprises would be on varying schedules and would be closed for selected holidays, which would reduce the annual generation of solid waste. Therefore, the estimate is conservative.

2 The CIWMB website lists several generation rates that were extracted from various sources and development projects within the County. The CIWMB notes that it does not endorse any of the rates, but that use of the information is encouraged for general planning purposes.

3 The generation rate of 12.23 pounds per dwelling unit per day was utilized (CIWMB 2001d).

4 The generation rate of 5 lbs/1,000 square feet/day was utilized with a floor area ratio (FAR) of 0.42 for commercial and 0.35 for industrial land uses (CIWMB 2007a, 2007b).

Assuming waste would be disposed of at more than one landfill in the vicinity (see Table 5.12-2, Overview Landfill Facilities), solid waste disposal estimates generated by the proposed Project would represent less than 0.01 percent of the combined daily permitted waste disposal amounts for nearby landfills.[5] In the absence of any coordinated recycling program, this increase in solid waste would incrementally reduce the capacity of existing landfills in the area, particularly those with a shorter estimated remaining life of less than ten years. However, local regulations (e.g., AB 939 and the County of Los Angeles ordinance described above) are in place to ensure that the amount of future solid waste generated would be reduced to the maximum extent feasible. The successful implementation of such regulations and ordinances would extend the life of these facilities in the foreseeable future. Finally, State law requires each jurisdiction to have a five-year landfill capacity available. Overall, the amount of solid waste generated by the proposed Project is not considered less than significant. However, implementation of MM 5.12-29 through 5.12-37 would serve to reduce the proposed Project's solid waste impacts.

Level of Significance without Mitigation: Less than significant.

Recommended SCVAP EIR 2012 Mitigation Measures: No mitigation is required; however, the following mitigation measures shall be implemented to further reduce the potential for an impact.

MM 5.12-29 The County of Los Angeles shall follow state regulations in implementing the goals, policies, and programs identified in the Los Angeles County Integrated Waste Management Plan in order to achieve and maintain a minimum of 50 percent reduction in solid waste disposal through source reduction, reuse, recycling, and composting. In response to California's 75 Percent Initiative, at least 75 percent of all solid waste will be recycled or reused by 2020.Additionally, the Project Applicant or Construction Manager shall ensure that a minimum of 65 percent of the non-hazardous construction and demolition debris will be recycled and/or salvaged or meet a local construction and demolition waste management ordinance. (SCVAP 2012 EIR MM 3.17.1)

MM 5.12-30 The County shall require all future commercial, industrial and multifamily residential development to provide adequate areas for the collection and loading of recyclable materials (i.e., paper products, glass, and other recyclables) in compliance with the State Model Ordinance, implemented on September 1, 1994, in accordance with AB 1327, Chapter 18, California Solid Waste Reuse and Recycling Access Act of 1991. (SCVAP 2012 EIR MM 3.17.2)

MM 5.12-31 The County shall require all development projects to coordinate with appropriate County agencies to ensure that there is adequate waste disposal capacity to meet the waste disposal requirements of the County's Planning Area, and the County shall recommend that all development projects incorporate measures to promote waste reduction, reuse, recycling, and composting. (SCVAP 2012 EIR MM 3.17.3)

MM 5.12-32 All new development in the County's Planning Area will be required to implement existing and future waste reduction programs in conformance with the County's Planning Area SRRE program. (SCVAP 2012 EIR MM 3.17.4)

MM 5.12-33 Any hazardous waste that is generated on site, or is found on site during demolition, rehabilitation, or new construction activities shall be remediated,

5 6.3 tons/day (Solid waste disposal) divided by 17,500 tons/day (combined Maximum Daily Capacity of landfill sites within vicinity as listed in Table 5.14-3).

stored, handled, and transported in compliance per appropriate local, state, and federal laws, as well as with the County's SRRE. (SCVAP 2012 EIR MM 3.17.5)

Level of Significance with SCVAP 2012 EIR Mitigation Measures: Less Than Significant.

Recommended 1992 SP EIR Mitigation Measures: No mitigation is required; however, the following mitigation measures shall be implemented to further reduce the potential for an impact.

MM 5.12-34 Collection/storage facilities for recyclables shall be incorporated into all building designs and/or a conveniently located recycling area shall be developed on the project site for use by all occupants/users of the commercial/industrial uses. (1992 SP EIR MM 4.13.1)

MM 5.12-35 The owner and/or tenants of all onsite commercial and industrial uses shall comply with all applicable federal, state and local requirements for handling hazardous materials. Onsite businesses handling hazardous materials shall submit a Business Plan which will include information or inventories, employee training and emergency response plans and procedures. (1992 SP EIR MM 4.13.2)

MM 5.12-36 Removal of hazardous materials, waste from the project site shall be conducted by registered waste hauler in accordance with all applicable rules and regulations. (1992 SP EIR MM 4.13.3)

MM 5.12-37 All hazardous materials used in association with future onsite businesses shall be stored in specific locations and clearly marked as to contents. (1992 SP EIR MM 4.13.4)

Level of Significance with 1992 SP EIR Mitigation: Less Than Significant.

Recommended Project Specific Mitigation Measures: None.

Net Level of Significance: Less than significant.

Threshold 5.12-4 Would the project not comply with federal, state, and local statutes and regulations related to solid waste?

Short-Term Construction Impacts

Construction of the proposed Project would comply with all applicable construction waste regulations, including the County's Green Building Standards Code and Construction and Demolition Debris Recycling and Reuse Ordinance to reduce construction waste volumes by at least 65 percent. Therefore, there would be a less than significant impact related to solid waste regulations and no mitigation is required.

Long-Term Operational Impacts

The proposed Project would implement recycling programs in compliance with County policies, the County's Green Building Standards Code, and Construction and Demolition Debris Recycling and Reuse Ordinance, which have been adopted to comply with solid waste regulations such as AB 939 and the County's SRRE and HHWE under its IRUWMP. The Project would comply with the State Model Ordinance implemented in accordance with AB 1327 and require all commercial, industrial, and multifamily residential development to provide for collection of recyclable materials. Additionally, the independent waste hauler serving the proposed Project would provide recycling

receptacles and pick-up service for single-family residential units. Therefore, there would be a less than significant impact related to solid waste regulations and no mitigation is required.

Level of Significance without Mitigation: Less than significant.

Recommended SCVAP 2012 EIR Mitigation Measures: None required.

Level of Significance with SCVAP 2012 EIR Mitigation: Less than significant.

Recommended 1992 SP EIR Mitigation Measures: None required.

Level of Significance with 1992 SP EIR Mitigation: Less than significant.

Recommended Mitigation Measure: None required.

Net Level of Significance: Less than significant.

5.12.8 CUMULATIVE IMPACTS

Water Supply and Infrastructure

As growth in the Castaic area continues to occur, the demand on water resources and facilities would increase. As stated in the WSA prepared for the proposed Project, the purpose of a water supply assessment Is to determine if the water supplier's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection meet the projected water demand of the proposed Project, in addition to the water supplier's existing and planned future uses. Therefore, the analysis contained in the WSA and which is summarized above accounts for the anticipated water needs of cumulative projects within the NCWD service area. Further, the WSA evaluates future water supply from its suppliers, including imported water sources. However, as discussed above, the proposed Project can be served by the existing and future water supplies recognized as adequate in the NCWD Water Supply Assessment. The Water Supply Assessment for the proposed Project states that, because the Project's water supply requirements have been included in the projected water demand, current and future water supplies would be adequate. Therefore, there would be no significant cumulative impacts from the Project.

Wastewater

Future development projects would generate additional sewage volume requiring treatment and disposal. In accordance with MM 5.12-3, the Santa Clarita Valley Sanitation District's Connection Fee Program requires that, prior to being connected to the system, a new user must pay for their fair share of the County Sanitation District's sewerage system expansion. When required, the fees would be used to fund operation, maintenance, and expansion of the LACSD facilities. These LACSD facilities include collection and conveyance pipelines as well as off-site water treatment facilities. According to LACSD, availability of sewer capacity, including wastewater treatment, is dependent on the size of the proposed project and timing of connection to the sewerage system. Because there are other proposed developments in the area, the availability of trunk sewer capacity will be verified by LACSD as the project advances. As part of the planning process, the project Applicant will continue to coordinate with LACSD to ensure that the Project is considered as future sewerage system relief and replacement projects are planned (LACSD 2015). Further, because all future development would be subject to payment of fees and because the proposed Project would include development of an on-site wastewater collection system to accommodate

the proposed Project, no long-term impacts to sewer service and facilities would occur; thus, no significant adverse cumulative impacts are anticipated from the Project or cumulative projects.

Solid Waste

The proposed Project would result in an incremental increase in solid waste generation and disposal when considering its contribution to the existing waste stream at nearby facilities. Although the proposed Project alone would not exceed the combined daily permitted capacity of local area landfill facilities, the increase in solid waste disposal needs associated with other related and future projects in the area could have a significant cumulative impact on existing landfill sites such that the demand or combined solid waste load could exceed the facilities service capacity. This is particularly so if development and build out of these projects would be accelerated and/or completed well within the remaining life of the landfill facilities identified. Additionally, due to the environmental, regulatory, and political constraints associated with landfill expansion and new landfill siting efforts, the service capacity of existing permitted facilities would remain finite and limited.

However, it is assumed that the nature of the solid waste industry (in conjunction with governmental planning obligations to accommodate population growth and to provide the necessary public services) would ensure that solid waste disposal needs are met. Such trends for accommodating the ever increasing need for solid waste disposal includes expansion of existing facilities, increased recycling efforts, regulatory design requirements, and diversion of solid waste outside the county and/or state. Nevertheless, the success of these planning efforts is speculative and therefore, the cumulative impact of similar development projects related to solid waste is considered to be potentially significant. Therefore, MMs 5.12-29 through 5.12-37 are provided as a means of reducing the proposed Project's contribution to cumulative solid waste impacts.

5.12.9 IMPACT CONCLUSION

Water Supply and Infrastructure

The potential for adverse impacts of the proposed Project on water supplies and water infrastructure was evaluated in the previously certified 1992 SP EIR and mitigation measures were required to reduce impacts to a less than significant level. Based on the analysis, impacts are also considered less than significant. Impacts were analyzed specifically for the proposed Project and under present-day condition and it was determined that the incorporation of relevant Project characteristics as outlined in this SEIR and the implementation of mitigation measures contained in the previously approved and certified 1992 SP EIR and the SCVAP 2012 EIR reduce potential water service related impacts to less than significant levels. Mitigation measures related to water supply outlined in the previous EIR and that apply to the proposed Project are identified above. Additionally, as required by mitigation measure MM 5.12-27, a Landscape Plan shall be prepared and submitted to the County for approval, and would include requirements for irrigation system design, installation, and maintenance and would emphasize drought-tolerant vegetation, which would further reduce impacts.

Wastewater

The proposed Project would generate an increase in wastewater. However, development of the on-site wastewater collection system as well as implementation of the identified mitigation measure requiring payment of fees would reduce impacts to less than significant levels.

Solid Waste

The proposed Project would generate an increase in solid waste, but not to the extent that it would significantly impact existing facilities. When considering the combined solid waste generation associated with future related projects in the vicinity, the solid waste demand on these same facilities could be considered cumulatively considerable. However, use of the Mesquite Regional Landfill would provide an alternative long-term disposal option. With the implementation of the recommended mitigation measures, cumulative solid waste impacts would be reduced to a level considered less than significant.

5.12.10 REFERENCES

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SECTION 6.0 ALTERNATIVES TO THE PROPOSED PROJECT

6.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that an EIR include a discussion of reasonable project alternatives that would "feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any significant effects of the project, and evaluate the comparative merits of the alternatives" (CEQA Guidelines Section 15126.6). This chapter identifies potential alternatives to the proposed Project and evaluates them, as required by CEQA.

Key provisions of the CEQA Guidelines on alternatives (Section 15126.6[b] through [f]) are summarized below to explain the foundation and legal requirements for the alternatives analysis in the EIR.

- *"The discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objective, or would be more costly" (15126.6[b]).*
- *"The specific alternative of 'no project' shall also be evaluated along with its impact" (15126.6[e][1]). "The 'no project' analysis shall discuss the existing conditions at the time the Notice of Preparation is published, and at the time the environmental analysis is commenced, as well as what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives" (15126.6[e] [2]).*
- *"The range of alternatives required in an EIR is governed by the 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making. Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent)" (15126.6[f]).*
- *For alternative locations, "only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR" (15126.6[f][2][A]).*
- *"If the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion, and should include the reasons in the EIR. For example, in some cases there may be no feasible alternative locations for a geothermal plant or mining project which must be in close proximity to natural resources at a given locations" (15126.6[f][2][B]).*
- *"An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative" (15126.6[f][3]).*

Pursuant to the guidelines stated above, a range of alternatives to the proposed project is considered and evaluated in this Draft SEIR. These alternatives were developed in the course of project planning and environmental review. The discussion in this section provides:

- A description of the alternative.
- An analysis of environmental impacts and a comparison to the possible impacts of the proposed Project. Pursuant to the CEQA Guidelines, if an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.
- An analysis of whether the alternatives meet most of the objectives of the Project (as presented in Section 4.3 of this Draft SEIR and restated below).

The focus of this analysis is to determine if alternatives are capable of eliminating or reducing the significant environmental effects of the project to a less than significant level.

6.2 PROJECT DESCRIPTION

The proposed Project is detailed in Section 4, Project Description, of this Draft SEIR. The Project site comprises approximately 1,330 acres of undeveloped land in unincorporated Los Angeles County. The proposed Project involves implementation of the previously approved Specific Plan; specifically, the proposed Project would involve development of up to 3,150 residential units, 9.2 acres of commercial uses, 13.9 acres of industrial uses, 791.6 acres of parks and open space, school uses, and a 1.4-acre pad for a future fire station.

As part of the project, External Map Improvements, including connection to existing utilities and relocation of existing utility lines, drainage facilities, and other infrastructure would occur outside of area specified as the proposed Project site.

To implement the project, the project Applicant has requested approval of: (1) VTTM No. TR073336 to subdivide 737 acres into a total of 407 lots; and (2) Conditional Use Permit No. 201500019 to authorize: (a) Northlake Specific Plan site plan review: (b) grading exceeding 100,000 cubic yards; and (c) construction of water tanks and water supply infrastructure.

Collectively, the Project is defined as the entire 1,330-acre Specific Plan site including the 737-acre VTTM No. TR073336 area and associated External Map Improvements (Phase 1), and the remaining property for Phase 2 to be developed at a future time.

The proposed Project has been designed to remediate potential geologic and flood hazards, and the residential and non-residential uses are separated from each other in order to protect the residential nature of each neighborhood. The proposed development provides for the establishment of an interconnecting internal roadway system. The Project will involve the establishment of the necessary trunk lines and connections to provide water, sewer, gas, electric, cable, and telephone service to the proposed development. Consistent with prior approval, project implementation would involve site grading that would fill in a portion of Grasshopper Creek Canyon to enable development in this area.

Project grading would require the relocation of some existing on-site easements, pipelines, and utilities to accommodate the proposed cut depths and site plan configuration. Extension of all utilities and some services to the project site will also be necessary to accommodate project implementation. To facilitate the provision of utilities and services, annexation to the Santa Clarita Valley Sanitation District, the Consolidated Sewer Maintenance District, and Newhall County

Water District will be required. Other incidental approvals have been issued (i.e., 404 Permit, 1602 Streambed Alteration Agreement, and 401 Certification) to authorize development that will affect resources under regulatory agency control; however, these approvals have expired and would need to be reissued based on updated analysis.

6.3 PROJECT OBJECTIVES

CEQA Guidelines Section 15124(b) indicates that an EIR should include "a statement of objectives sought by the proposed Project." The following goals, policies, and objectives have been established for the proposed Project to aid decision makers in their review of the project and its associated impacts.

TABLE 6-1
ADOPTED SPECIFIC PLAN GOALS AND POLICIES

I. LAND USE	
Goal i:	**To encourage high quality design in all development projects compatible with and sensitive to the natural and man-made environment.**
Policy ia:	Assure that new development is compatible with the natural and man-made environment by implementing appropriate locational controls and high quality design standards.
Policy ib:	Protect the character of residential neighborhoods by preventing the intrusion of incompatible uses that would cause environmental degradation such as excessive noise, noxious fumes, glare, shadowing and traffic.
Policy ic:	Promote planned industrial development in order to avoid land use conflicts with neighboring activities.
Policy id:	Establish and implement regulatory controls that ensure compatibility of development adjacent to major public open space and recreation areas including the Angeles National Forest and Castaic Lake.
Goal ii:	**To provide commercial and industrial lands to accommodate a portion of the projected labor force.**
Policy ii:	Provision of light industrial uses and both neighborhood and highway commercial uses within the Specific Plan area.
Goal iii:	**To foster compatible land use arrangements that contribute to reduced energy consumption and improved air quality.**
Policy iii:	To design land use arrangements that will maximize energy conservation, i.e., provide a balance of land use types within the Specific Plan area which would reduce dependence on the private automobile.
Goal iv:	**To encourage conservation, protection and enhancement of natural ecological, scenic, cultural and open space resources for the benefit and enjoyment of the current and future residential population in the region.**
Policy iva:	Prevent inappropriate development in areas that are environmentally sensitive or subject to severe natural hazards.
Policy ivb:	To achieve consistency with the SCVAP by maintaining steep ridges and hillsides as hillside management areas where feasible and provide building pads that are compatible with basic landforms.
Goal v:	**To coordinate land use with existing and proposed transportation networks.**
Policy v:	Well-designed, highway-oriented commercial facilities in appropriate and conveniently spaced locations.

TABLE 6-1
ADOPTED SPECIFIC PLAN GOALS AND POLICIES

II. CIRCULATION	
Goal i:	**To achieve a local transportation system that is consistent with the comprehensive objectives of the General Plan and the needs of the Castaic area residents.**
Policy i:	Provide transportation planning services and facilities that are coordinated with and which support the circulation element of the County of Los Angeles General Plan.
Goal ii:	**To achieve a transportation system that is responsive to economic, environmental, energy conservation and social needs at the local community and areawide level.**
Policy iia:	Coordinate land use with a circulation system that conforms to the County's standards and serves both through and local traffic.
Policy iib:	Provide a roadway network that provides for the needs of future residents and that avoids traffic conflicts in existing and future residential neighborhoods.
Policy iic:	Plan and develop a network of bicycle routes and facilities (including racks and lockers at parks) as well as pedestrian walkways within the Specific Plan area and, where possible, that interconnect with other bicycle routes and transportation modes.
Policy iid:	Provide transportation facilities that will improve the safety, security and dependability of all transportation modes and provide for seismic safety and effectiveness in emergency situations.
Policy iie:	Encourage alternative transportation systems and procedures which will effectively reduce vehicle miles traveled by automobiles.
Policy iif:	Provide road improvements in a timely manner as required to service development. All required roads and road improvements will be open and available for public use at the time of occupancy of each phase of development. Roads shall be provided in accordance with requirements and scheduling of the County Department of Public Works.
Goal iii:	**Preservation and enhancement of aesthetic resources within [the] Interstate Route 5 (I-5) scenic corridor.**
Policy iii:	The Specific Plan site will be situated so as to be behind a major ridgeline and will not be visible from the I-5 second priority scenic highway corridor to the west.
III. HOUSING	
Goal i:	**To develop housing that satisfies the needs of the present and future residents of the NorthLake community.**
Policy ia:	To provide a variety of housing types, prices, ownership possibilities and locations.
Policy ib:	To base development regulations on various dwelling types by planning areas.
Goal ii:	**New construction that reflects concern for durability, resource conservation and prevention of premature deterioration.**
Policy ii:	To maintain quality project standards for residential land development, thus insuring the establishment of neighborhoods with lasting value.
IV. OPEN SPACE/RECREATION	
Goal i:	**To improve opportunities for a variety of outdoor recreational experiences.**
Policy ia:	Develop local parks easily accessible to local residents and workers.
Policy ib:	Develop a system of bikeways and riding and hiking trails; link recreational facilities where possible.
Goal ii:	**To preserve and protect sites with scenic and/or recreational value.**
Policy ii:	Designate substantial open space within the Specific Plan area to meet the public's active and passive, scenic, recreational and conservation needs while achieving a balanced distribution of developable area to open space.

TABLE 6-1
ADOPTED SPECIFIC PLAN GOALS AND POLICIES

IV. OPEN SPACE/RECREATION (cont.)	
Goal iii:	**To reduce the risk to life and property from seismic occurrences, flooding, erosion, wildland fires and landslides.**
Policy iiia:	Restrict development in areas subject to seismic and geologic hazards.
Policy iiib:	Restrict urban-type development in floodprone areas, thus avoiding major new floodcontrol works.
Policy iiic:	Design to encourage the multiple use of floodprone areas for recreation and wildlife habitat.
Policy iiid:	Manage development in hillside area to protect their natural and scenic character and to reduce risks from fire, flood, mudslides, erosion and landslides.
Goal iv:	**To promote a fire management system to assist project developers and residents in constructing and maintaining a fire-safe environment.**
Policy iv:	Protection of property and services through a concerted fire management program.
V. COMMUNITY DESIGN AND SCENIC HIGHWAYS	
Goal i:	**To develop an environment that is visually attractive while being efficiently and effectively organized and maintained.**
Policy ia:	Provide and implement design guidelines for architecture, signage, [and] landscaping to enhance project identity and develop a sense of community.
Policy ib:	To apply design guidelines to major entry points, major street intersections and parkways.
Policy ic:	To provide design and maintenance standards for transition areas between urban development and open space.
Goal ii:	**To preserve and enhance the visual aspects of the County's circulation system for aesthetic purposes.**
Policy ii:	To apply special design considerations regarding the views along important corridors within the planning area, including key intersections and vista points.
VI. NOISE	
Goal i:	**To maintain consistency with the County's Noise Element by establishing compatible land use[s] adjacent to transportation facilities and other significant sources of noise and by properly mitigating noise-generating uses that cause exceedance of maximum suggested noise levels.**
Policy i:	To avoid locating noise sensitive facilities, including schools, parks and the library site within areas designated in excess of 65 dBA (dBA is an " A-weighted" system of measuring decibels that is adjusted to match frequencies audible to humans).
Policy ii:	The placement of commercial uses on major intersections and adjacent to the arterial highways.
Policy iii:	The separation of low-density residential uses from arterial highways.
Policy iv:	To provide adequate noise mitigation measures for those uses located within areas designated in excess of 65 dBA on the County's Noise Level Map.
VII. SAFETY	
Goal i:	**Protection of life and property.**
Policy ia:	To require all future development within the Specific Plan area to comply with standards and criteria to reduce or eliminate unacceptable levels of fire and geologic risk.
Policy ib:	To work closely with the County Forester and Fire Warden to ensure that state-of-the-art fire safety procedures and precautions are implemented in all developments within the planning area.
Policy ic:	To stress only low-fuel volume plants in landscaping within the NorthLake Specific Plan area.
Goal ii:	**Reduction of adverse economic, environmental and social conditions resulting from fires and geologic hazards.**
Policy iia:	Revegetate all artificial slopes at the earliest feasible opportunity subsequent to grading in order to reduce erosion potential.
Policy iib:	Provide adequate emergency access to all areas within the Specific Plan site.

In addition to the goals and policies noted above for the overall Specific Plan, implementation the NorthLake Specific Plan includes the following additional objectives of the Project:

- **Create a healthy "Community".** Create an innovative, dynamic community focused on active outdoor recreation. Evoke a sense of "pride of place" where people love to live by encouraging social, civic, and leisurely interaction.
- **Celebrate uniqueness of place.** Reinforce and capitalize on the unique qualities of each neighborhood and the surrounding environment through land planning, architecture, and landscape architecture. Integrate the natural beauty and setting of the site into all land uses.
- **Create connectivity.** Encourage community participation and interaction by providing enhanced connections to recreational amenities, open spaces, and regional destinations.
- **Optimize open space relationships.** Provide a comprehensive public and private park system offering a wide variety of passive and active recreational opportunities. Enrich and support the overall walking and bicycling experience by providing significant destinations.
- **Encourage diversity.** Encourage physical, social, and economic diversity through the inclusion of a wide range of home sizes and prices, resulting in a richness of experience for all residents.
- **Integrate environmentally responsible practices.** Conservation of land, energy, materials, and natural resources is of critical importance to our continued well-being. Practices minimizing impact and use of natural resources shall be adopted, resulting in healthy, safe, and responsible environments.
- **Enhance local economic well-being.** Offer commercial and industrial land uses that will create jobs. Provide a larger population near Castaic Lake that will stabilize and support local businesses.

6.4 SIGNIFICANT AND UNAVOIDABLE IMPACTS

As previously mentioned, an EIR should consider a range of feasible alternatives that would attain most of the project objectives, listed above, while reducing one or more of the significant and unavoidable impacts of the project. The significant and unavoidable impacts associated with implementation of *The NorthLake Specific Plan* include:

- ***Operational Air Quality Impacts.*** Long-term emissions would remain significant and unavoidable for CO, VOC, NO_X, PM10, and PM2.5 on a regional level, after implementation of mitigation measures.
- ***Construction Air Quality Impacts.*** Construction NOx emissions, both regional and local, would be significant and unavoidable with implementation of mitigation measures.
- ***Cumulative Air Quality Impacts.*** The project's contribution toward long-term cumulative impacts to regional O_3, NO_2, PM10, and PM2.5 concentrations would be cumulatively significant and unavoidable.
- ***Operational Noise Impacts.*** Off-site residential uses and the NorthLake Elementary School would experience a significant and unavoidable impact related to noise from Project-generated traffic on Ridge Route Road north of Castaic Lake Road and off-site residential uses would experience a significant and unavoidable cumulative impact related to noise from Project-generated traffic on Ridge Route Road north of Lake Hughes Road.
- ***Cumulative Noise Impacts.*** The project's contribution toward long-term cumulative off-site residential uses would experience a significant and unavoidable cumulative impact

related to noise from Project-generated traffic on Ridge Route Road north of Castaic Lake Road and Ridge Route Road north of Lake Hughes Road.

- ***Project and Cumulative Traffic Impacts.*** The proposed Project would result in significant and unavoidable cumulative impacts at the following intersections:
    - **The Old Road and I-5 Southbound Ramps.** Horizon Year 2028 (The intersection is partially under Caltrans' jurisdiction).
    - **I-5 Northbound Ramps and Lake Hughes Road.** Horizon Year 2028 (The intersection is partially under Caltrans' jurisdiction).
    - **I-5 Southbound On-Ramp and Parker Road.** Existing Plus Project and Horizon Year 2028 (This intersection is partially under Caltrans' jurisdiction).
    - **I-5 Northbound Off-Ramp and Ridge Route Road.** Existing Plus Project and Horizon Year 2028 (This intersection is partially under Caltrans' jurisdiction).
    - **Ridge Route Road at Lake Hughes.** Existing Plus Project and Horizon Year 2028. This intersection would be mitigated to LOS C (0.78), better than the LOS D threshold established in the Los Angeles County General Plan and the Santa Clarita Valley Area Plan, One Valley One Vision. However, the intersection would not be fully mitigated to the LOS C (0.74) threshold utilized in the County's Traffic Impact Analysis Guidelines. Improvements to fully mitigate the intersection to the LOS C threshold were considered, such as a southbound free-right turn lane; however, this was determined to not be geometrically feasible. Therefore, this impact would remain significant and unavoidable.

6.5 ALTERNATIVES DETERMINED TO NOT BE FEASIBLE

6.5.1 CREEK AVOIDANCE ALTERNATIVE

As the current applicant was re-initiating the Specific Plan a land plan was laid out that avoided the creek bottom that runs through the middle of the project. This land plan placed development on one side of the creek with development terraced up the slope to minimize grading. This plan was attempted to avoid impacting the creek habitat, avoid jurisdictional wetlands (waters under the authority of the U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and Regional Water Quality Control Board).

Although this alternative would be less impactful, it would also eliminate more than half of the residential units and the other uses. However, the infrastructure requirements would be largely the same. The road ways would still be needed as well as the need for all of the services to be engineered in place: water, sewer, street lights, curbs and gutters, and other utility lines would be required to be brought to the site. The development would also require schools, parks. The amount of development would be reduced to the point of not making the development feasible.

This issue was discussed with Army Corps and they have eliminated the need to process this as a viable alternative to the project as it is clearly not a feasible project. This alternative has been eliminated from further consideration.

6.5.2 ALTERNATIVE SITE

The proposed Project would implement NorthLake Specific Plan, which is a previously approved Specific Plan identified specifically for the 1,330-acre Project site. Because the specific plan is tied to the Project site, and the Project Applicant is the current owner of the entire project site, development of the Project on an alternative site is not a feasible alternative and has been eliminated from further consideration.

6.6 ALTERNATIVES CARRIED FORWARD FOR DETAILED CONSIDERATION

Based on the criteria listed previously, two alternatives described below have been determined to represent a reasonable range of alternatives. As described in Sections 5.1 through 5.12 of this Draft SEIR, the potentially significant impacts of the proposed Project can be mitigated to a less than significant level with the exception of: direct and cumulative traffic impacts. The comparison of impacts between each alternative and implementation of the *NorthLake Specific Plan* assumes that the general nature and types of regulatory requirements (RRs), as well as mitigation measures (MMs) identified in Section 5 for the *NorthLake Specific Plan* would be incorporated into each of the build alternatives, where appropriate, and as such would serve to reduce or avoid potential significant impacts. No RRs or MMs are applied to the No Project/No Development Alternative, which assumes that the existing conditions at the project site remain.

The alternatives considered in this Draft SEIR include the following:

- Alternative 1 – No Project/No Development
- Alternative 2 – No Project/Development pursuant to the Specific Plan
- Alternative 3 – No Industrial Development
- Alternative 4 – Phase 1 Development Alternative

6.6.1 NO PROJECT/NO DEVELOPMENT ALTERNATIVE

The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of proposed Project development with the potential impacts of not approving the proposed Project. Consistent with CEQA Guidelines Section 15126.6(e)(3)(B), the No Project/No Development Alternative is the circumstance under which the project does not proceed.

Description of the Alternative

The No Project/No Development Alternative assumes the retention of the site in its existing undeveloped condition. As described in Section 3, Environmental Setting, the project site exists as undeveloped, naturally vegetated land with limited ranch roads throughout the site. On-site vegetation is predominately characterized by limited riparian vegetation, sage scrub, and grassland areas that have been used for cattle grazing. The site is dominated by Grasshopper Canyon, which is a north-south-trending valley located between the two prominent ridgelines to the east and west. Between the two ridgelines, one of which is located to the northwest and designated a Primary Ridgeline, Grasshopper Canyon varies from a heavily incised drainage to areas of more gentle, rolling terrain.

Comparative Analysis of Environmental Impacts

Aesthetics

The No Project/No Development Alternative would not involve any development or change in the current condition of the project site. There would be no change to the visual quality or character of the project site or surrounding areas. Aesthetic changes associated with development of the project site would not occur with this alternative. No significant, unavoidable aesthetic impacts related to visual change were identified for the proposed Project and no significant, unavoidable aesthetic impacts would occur under this alternative.

Air Quality

The No Project/No Development Alternative would not involve any construction activities (including grading and excavation); therefore, significant and unavoidable regional and local construction-related nitrogen oxides (NOx) emissions impacts resulting from the proposed Project would not occur. Because there would be no development on the project site, operational activities and new traffic generation resulting from the proposed Project would not occur. SCAQMD thresholds for long-term operational emissions would not be exceeded. Therefore, this alternative would avoid significant long-term direct and cumulative unavoidable operational air quality impacts that would occur with implementation of the proposed Project. As such, this alternative would avoid the air quality impacts associated with implementation of the proposed Project.

Biological Resources

The No Project/No Development Alternative would not involve any development of the project site, which would be retained in its current undeveloped condition. There would be no potential impact to biological resources as with the proposed Project, including burrowing owls, birds subject to the Migratory Bird Treaty Act (MBTA), or U.S. Army Corps of Engineers (USACE) and California Department of Fish and Game (CDFG) jurisdictional areas. However, with implementation of the identified mitigation measures, these impacts are considered less than significant with the proposed Project. Although these impacts would be mitigated to a level considered less than significant with the proposed Project, they would be avoided by this alternative.

Cultural Resources

No development of the project site would occur under this alternative; therefore, no earthwork or grading would be required. Development of the proposed Project requires subsurface excavation; as such, there is a potential for discovery of subsurface cultural deposits (archaeological and paleontological) during grading activities. With mitigation, potential impacts to cultural resources resulting from proposed Project would be reduced to a level considered less than significant. The No Project/No Development Alternative would avoid the possible encounter of known or unknown archaeological and/or paleontological resources.

Geology and Soils

The No Project/No Development Alternative would not involve grading or excavation activities that would be required to develop land uses allowed under the proposed Project. The No Project/No Development Alternative would avoid potential impacts associated with the proposed Project. Because no development would occur under this alternative, fewer people would be exposed to seismic activity at tie project location compared to the proposed Project; however, as California is a highly seismic area, people could be just as exposed at alternate locations. Geology

and soils impacts related to the proposed Project were determined to be less than significant with incorporation of the identified RRs and MMs. Although impacts would be mitigated to a level considered less than significant with the proposed Project, they would be avoided altogether by this alternative.

Hydrology and Water Quality

Under this alternative, the existing hydrology patterns and hydrologic characteristics of the project site would remain unchanged. No improvements to the existing storm drain systems in and around the project site would occur; however, compared to conditions with the proposed Project, there would be no increase in the amount and velocity of surface runoff because there would be no increase in impervious surfaces. Also, this alternative does not have the same potential as the proposed Project to increase the amount of pollutants in storm water runoff. The less than significant impacts from the proposed Project related to hydrology and water quality would be avoided with the No Project/No Development Alternative.

Land Use and Planning

Under this alternative, the project site would remain undeveloped and the *NorthLake Specific Plan* would not be implemented. The policies associated with the Plan and the SCVAP 2012 associated with development would not be realized.

Noise

The No Project/No Development Alternative would not involve any construction activities; therefore, noise effects associated with project construction and operation would not occur. Additionally, the increase in long-term, roadway noise levels as well as operational noise generated by on-site mechanical equipment and other onsite activities associated with implementation of the *NorthLake Specific Plan* would not occur. Significant and unavoidable direct and cumulative traffic noise impacts that would result from the proposed Project generated traffic on Ridge Route Road north of Castaic Lake Road and Ridge Route Road north of Lake Hughes Road would be avoided. As such, this alternative would avoid the noise impacts associated with implementation of the proposed Project.

Public Services and Utilities

The No Project/No Development Alternative would not place new demands on public services (fire protection services and police services) or utilities (water, sewer, solid waste, electricity, and natural gas) because no new development would occur. Under this alternative, no utility upgrades would occur and no physical impacts related to utility construction would result. Less than significant impacts resulting from the proposed Project related to public services and utilities would be avoided.

Traffic, Access and Circulation

The No Project/No Development Alternative would not change the existing traffic conditions because no new development would occur, and no short-term (construction) or long-term (operational) traffic trips would be generated. Because no new development would occur with this alternative, the significant and unavoidable traffic impacts to intersections resulting from the proposed Project would not occur.

Greenhouse Gas Emissions

The No Project/No Development Alternative would not involve any construction activities (including grading and excavation) or new development within the project site. In the absence of construction activities, and operation of proposed uses (including new traffic generation), this alternative would not generate GHG emissions. Thus, the No Project/No Development Alternative would have less GHG emissions compared to the proposed Project. GHG emissions associated with the proposed Project were determined to be less than significant with incorporation of the identified MMs. This alternative would avoid the less than significant impact of the proposed Project related to GHG emissions.

Conclusion

Ability to Avoid or Substantially Lessen the Significant Impacts of the Project

The No Project/No Development Alternative would avoid the significant unavoidable impacts that would occur with implementation of the proposed Project, including direct and cumulative traffic impacts at study intersections, direct short term NOx impacts, direct and cumulative long-term regional air quality impacts and direct and cumulative off-site traffic noise impacts. For the remaining topical issues, the proposed Project would result in less than significant impacts or potentially significant impacts that can be mitigated to a less than significant level.

Attainment of Project Objectives

The No Project/No Development Alternative would not meet any of the project objectives identified in Section 6.3. Retention of the site as a vacant area that has been subject to historic cattle ranching activities and utility construction and maintenance would not fulfill the objective related to developing housing that satisfies the needs of the present and future residents of the NorthLake community and would not help to meet the new housing demands in the County. Additionally, this alternative would not create new jobs, economic growth, or stability for the County through the creation of a permanent employment center within the local community, and would not increase the tax revenue for the County.

6.6.2 NO PROJECT/DEVELOPMENT PURSUANT TO THE APPROVED NORTHLAKE SPECIFIC PLAN

Description of the Alternative

The purpose of the No Project/Development Pursuant To The Approved Northlake Specific Plan is to evaluate the short-term construction and long-term operational impacts related to build-out of the previously approved Specific Plan in comparison to the proposed Project. Under this alternative, future include a greater number of residential units, additional commercial and industrial acreage, and a golf course as the primary recreational use. The maximum allowed development for each land use under this alternative scenario is shown in Table 6-2 below compared to the currently proposed Project.

TABLE 6-2
LAND USE AREA COMPARISON

	Existing *NorthLake Specific Plan*		Proposed Plan		Difference	
	(ac)	(du)	(ac)	(du)	(ac)	(du)
Residential	600.3	3,623	341.9	3,150	(258.4)	473
Commercial	13.2		9.2		(4.0)	
Industrial	50.1		13.9		(36.2)	
Open Space	476		624.6		148.6	
Recreation- Golf	167		0		(167)	
Recreation- Trails/Parks	0		167		167	
School/Park Facilities	23.1		43.7[a]		20.6	
Utilities[b]			7.3		7.3	
Right of Way[b]			120.5		120.5	
Public Services (Fire Station Pad) [b]			1.4		1.4	
Total	**1,330.0**		**1,330.0[c]**			

ac: acres; du: dwelling units; (): negative

[a] Northlake Hills Elementary School was previously constructed on a 20.6-acre site.
[b] The *NorthLake Specific Plan* did not provide a breakdown of acreages for utilities, right of way, or public service facilities. Roadways were included in Residential.
[c] Totals may not add due to rounding and mapping.

Source: Sikand 2015.

It is also assumed that off-site project features related to utilities and infrastructure, as described in Section 4.0, Project Description, would occur with this alternative.

Comparative Analysis of Environmental Impacts

Aesthetics

Similar to the proposed project, development of the No Project/Development Pursuant To The Approved Northlake Specific Plan would alter the existing visual condition of the project site through introduction of development in a previously disturbed, undeveloped site. The No Project/Development Pursuant To The Approved Northlake Specific Plan would comply with the design guidelines set forth in the *NorthLake Specific Plan* as described in Section 4.0, Project Description, including requirements for grading, circulation, landscape, architecture, and signage. It is expected that the overall visual appearance under this alternative would be similar to the proposed Project and would not represent a significant change or a significant impact. Further, implementation of the proposed Project would not affect scenic resources along a State scenic highway. Similar to the proposed Project, development under the No Project/Development Pursuant To The Approved Northlake Specific Plan would conform to the lighting design guidelines set forth in the *NorthLake Specific Plan*; therefore, potential impacts would be less than significant. No significant impacts would occur with either the proposed Project or the No Project/Development Pursuant To The Approved Northlake Specific Plan.

Air Quality

It is assumed that development of the No Project/Development Pursuant To The Approved Northlake Specific Plan would require grading and earth movement similar to the grading that would occur with implementation of the *NorthLake Specific Plan*. Maximum daily construction emissions and local construction impacts would be expected to be similar with the *NorthLake Specific Plan* to those of the proposed Project. However, the *NorthLake Specific Plan* duration of emissions would be longer due to an increased development footprint required to accommodate the additional development acreage, as shown in Table 6-2. As with the proposed Project, short-term regional and local impacts related to NOx emissions would be significant and unavoidable. Similar to the proposed Project, long-term operational air quality impacts would remain significant and unavoidable due to the number of vehicles generated by this alternative. Although the impact conclusions would be the same as with the proposed Project, the volume of emissions on both a short- and long-term basis would be greater than with the proposed Project.

Biological Resources

The No Project/Development Pursuant To The Approved Northlake Specific Plan would involve disturbance of on- and off-site areas that would occur with implementation of the proposed project. However, this alternative would result in greater impacts to biological resources than the proposed Project due to an increase in proposed development and a larger project footprint. As with the proposed Project, the No Project/Development Pursuant To The Approved Northlake Specific Plan would have the potential to significantly impact multiple special status plant and wildlife species and would create impacts to jurisdictional resources. Consistent with the proposed Project, these impacts would be potentially greater even though considered less than significant with implementation of mitigation measures identified in Section 5.2.

Cultural Resources

The No Project/Development Pursuant To The Approved Northlake Specific Plan would involve disturbance of on- and off-site areas that would occur with implementation of the *NorthLake Specific Plan*; however, this alternative would involve a larger development footprint and areas designated for natural, undisturbed open space would be reduced in acreage. Development of the No Project/Development Pursuant To The Approved Northlake Specific Plan would have the potential to impact unknown archaeological and paleontological resources during ground-disturbing activities as with the proposed Project. Consistent with the proposed Project, these impacts would be reduced to less than significant levels with implementation of identified mitigation measures.

Geology and Soils

The No Project/Development Pursuant To The Approved Northlake Specific Plan would involve development of the site including off-site areas that would occur with implementation of the *NorthLake Specific Plan*; however, this alternative would result in greater impacts to geology and soils as the proposed Project due to an anticipated increase in the development footprint. As with the proposed Project, development of the No Project/Development Pursuant To The Approved Northlake Specific Plan would expose people and structures to seismic ground shaking and the project site would be subject to soil erosion and loss of topsoil. Further, the presence of unsuitable soils and potentially expansive soils within the area identified for development under this alternative would result in a potentially significant impact. As with the proposed Project and despite the increase in the development footprint, all impacts under this alternative would be mitigated to a less than significant level.

Hydrology and Water Quality

The No Project/Development Pursuant To The Approved Northlake Specific Plan would involve development of the site including off-site areas that would occur with implementation of the proposed Project. This alternative would result in similar to greater impacts related to hydrology as the proposed Project due to an expanded development footprint and a golf course. Similar to the proposed Project, development under this alternative would increase the amount of storm water runoff and alter existing drainage patterns due to the increase in the amount of impervious surfaces. As with the proposed Project, it is assumed that application of BMPs identified through existing RRs or formulated as PDFs would ensure that impacts to storm drain infrastructure are less than significant. An on-site storm drain system would be constructed to detain flows such that they are released from the site at pre-development levels and would not result in impacts to existing storm drain facilities or flooding. As with the proposed Project, hydrology impacts resulting from this alternative would be less than significant.

As with the proposed Project, there is a potential for construction-related surface erosion with the No Project/Development Pursuant To The Approved Northlake Specific Plan. Potential impacts from this alternative would be similar to greater than the proposed Project because of an increased development footprint and inclusion of a golf course. Additionally, the proposed Project and this alternative would result in surface runoff after buildout. Surface runoff from a developed condition (with either this alternative or the proposed Project) would have a different composition in comparison to the existing condition, which is undeveloped. This runoff is likely to include a similar type of pollutants commonly found in urban runoff. The proposed Project and this alternative would be required to comply with applicable regulations related to water quality, including the Low Impact Development (LID) Ordinance and National Pollutant Discharge Elimination System (NPDES) permit requirements which would minimize potential short-term, construction-related and long-term, operational water quality impacts. With implementation the identified PDFs and RRs, water quality impacts from this alternative would be reduced to a level considered less than significant.

Land Use and Planning

As with implementation of proposed Project, the No Project/Development Pursuant To The Approved Northlake Specific Plan would result in the development of a project with residential, commercial, industrial, parks and open space uses. Compliance with design guidelines outlined in the *NorthLake Specific Plan* would ensure compatibility of the proposed Project and this alternative with existing character of the area. Because the types of uses under this alternative would be the same as the proposed Project and would implement the *NorthLake Specific Plan*, this alternative would be consistent with relevant goals and policies of applicable local and regional planning programs. However, because the amount of commercial and industrial development would be greater than the proposed Project identified for the project site and because a golf course would be included with this alternative, the No Project/Development Pursuant To The Approved Northlake Specific Plan would result in a higher concentration of employment-generating uses while also meeting the Specific Plan (Land Use) Goal ii to provide commercial and industrial lands to accommodate a portion of the projected labor force to the same extent as the proposed Project. The increase in residential development would also effectively satisfy the goal “to develop housing that satisfies the needs of the present and future residents of the NorthLake community” as stated in Specific Plan (Housing) Goal i. The No Project/Development Pursuant To The Approved Northlake Specific Plan would be consistent with goals and policies of relevant local and regional planning programs and would meet the goals and policies of the *NorthLake Specific Plan* and 2012 SCVAP to a similar extent as the proposed Project. The *NorthLake Specific Plan* is also included as an approved development in the recent

SCVAP 2012. Therefore, this Alternative would not result in significant land use impacts related to consistency with planning programs as with implementation of the proposed Project.

Noise

Development of the No Project/Development Pursuant To The Approved Northlake Specific Plan would involve construction activities similar to proposed Project. Therefore, short-term noise and vibration effects related to construction of the approved *NorthLake Specific Plan* would be similar to the construction impacts associated with the proposed Project. As with the proposed Project, construction noise and vibration impacts would be less than significant; long-term off-site traffic noise impacts at off-site residential uses and the Northlake Hills Elementary School would be significant for direct project impacts and cumulative impacts.

Public Services and Utilities

The No Project/Development Pursuant To The Approved Northlake Specific Plan would create new demand for public services including fire protection services and police services, and the level of demand would be comparatively greater than with the proposed Project due to the increase in overall development. Despite the increase in demand, impacts to public services would be less than significant with this alternative and the proposed Project.

The increased demand on local utility providers (i.e., water, sewer, solid waste, electricity, natural gas, and telephone) would also be greater with the No Project/Development Pursuant To The Approved Northlake Specific Plan compared to the proposed Project. The No Project/Development Pursuant To The Approved Northlake Specific Plan would require the installation of onsite and offsite utilities to serve proposed uses and the impacts associated with installation of this infrastructure would be similar to the proposed Project. Consistent with the proposed *NorthLake Specific Plan* project, potential impacts resulting from the No Project/Development Pursuant To The Approved Northlake Specific Plan would be less than significant.

Traffic, Access and Circulation

The traffic analysis presented in Section 5.11, Traffic, Access and Circulation, assessed potential impacts at study area intersections and freeway segments. As shown on Table 5.11-12 in Section 5.11, with implementation of the proposed Project, 36,200 average daily trips would be generated (approximately 3,600 PM peak hour and 2,900 AM peak hour trips). Development of the No Project/Development Pursuant To The Approved Northlake Specific Plan would involve additional development than with the proposed Project; therefore, this Alternative would result more trips and greater impacts than the proposed Project.

The significant and unavoidable direct and cumulative impacts at the four study area intersections that occur with the proposed Project would occur with this Alternative. Additionally, the increase in trips associated with the No Project/Development Pursuant To The Approved Northlake Specific Plan Alternative may result in impacts to additional intersections.

Similar to the proposed Project, the No Project/Development Pursuant To The Approved Northlake Specific Plan would not conflict with the Los Angeles County Congestion Management Program, would provide or accommodate non-vehicular transportation facilities, and would not conflict with adopted policies supporting alternative transportation.

Greenhouse Gas Emissions

The No Project/Development Pursuant To The Approved Northlake Specific Plan would result in a greater rate of GHG emissions than the proposed Project generated by on-site uses and occupants due to the additional development associated with the alternative. As with the proposed Project, impacts would be less than significant with incorporation of the identified mitigation measures.

Conclusions

Ability to Avoid or Substantially Lessen the Significant Impacts of the Project

Development of the project site with the No Project/Development Pursuant To The Approved Northlake Specific Plan would increase development intensity compared to the proposed Project through an increase in residential units, and increase in commercial and industrial area. Similar or increased impact levels would occur with this alternative compared to the proposed Project for each topical issue.

Attainment of Project Objectives

Although the No Project/Development Pursuant To The Approved Northlake Specific Plan would have similar or increased impacts for each environmental topic when compared to the proposed Project, it would meet the project objectives,

As discussed previously under Land Use and Planning, because the overall development would be more intense than what is being considered for the proposed Project, the No Project/Development Pursuant To The Approved Northlake Specific Plan would maximize the development potential of the 1,330-acre project site allowed by the *NorthLake Specific Plan*. As a result, the project would provide commercial and industrial lands to accommodate the projected labor force and would develop housing that satisfies the needs of the present and future residents of the NorthLake community, as with the proposed Project.

The No Project/Development Pursuant To The Approved Northlake Specific Plan would meet all of the project objectives to the same extent as the proposed *NorthLake Specific Plan.*

6.6.3 NO INDUSTRIAL DEVELOPMENT

Description of the Alternative

The purpose of the No Industrial Development Alternative is to evaluate the short-term construction and long-term operational impacts related to build-out of the proposed Project without the 13.9-acre industrial component. Under this alternative, future development would be limited to the proposed Project site, similar to the proposed Project; however, the impact footprint would be 13.9 acres smaller than the proposed Project. The maximum allowed development for all other land uses under this alternative scenario would be the same as the proposed Project as shown previously in Table 6-2.

It is also assumed that off-site project features related to utilities and infrastructure, as described in Section 4.0, Project Description, would occur with this alternative.

Comparative Analysis of Environmental Impacts

Aesthetics

Similar to the proposed Project, development of the No Industrial Development Alternative would alter the existing visual condition of the project site through introduction of development on a previously disturbed, undeveloped site. The No Industrial Development Alternative would comply with the design guidelines set forth in the *NorthLake Specific Plan* and as described in Section 4.0, Project Description, including requirements for grading, circulation, landscape, architecture, and signage. It is expected that the overall visual appearance under this alternative would be similar to the currently proposed Project and would not represent a significant change or a significant impact. Further, implementation of the proposed Project would not affect scenic resources along a State scenic highway. Similar to the proposed Project, development under the No Industrial Development Alternative would conform to the lighting design guidelines set forth in the *NorthLake Specific Plan*; therefore, potential impacts would be less than significant. No significant impacts would occur with either the proposed Project or the No Industrial Development Alternative.

Impact conclusions would be consistent with the proposed Project.

Air Quality

It is assumed that development of the No Industrial Development Alternative would require grading and earth movement similar to what would occur with implementation of the proposed Project. Maximum daily construction emissions and local construction impacts would be expected to be similar with the No Industrial Development Alternative to those of the proposed Project. However, the No Industrial Development Alternative duration of emissions would potentially be less with this alternative rather than the proposed Project due to a reduced development footprint. As with the proposed Project, even with the implementation of mitigation, short-term impacts short-term regional and local impacts related to NOx emissions would be significant and unavoidable. Although trip generation would be slightly reduced due to the elimination of industrial uses, residents who would work in the on-site industrial businesses with the proposed Project would have to commute off site with the No Industrial Development Alternative, thereby increasing the average home-to-work trip distance. Similar to the proposed Project, operational emissions would remain significant and unavoidable on both project-direct and cumulative-levels.

Impact conclusions would be consistent with the proposed Project.

Biological Resources

The No Industrial Development Alternative would involve disturbance of on- and off-site areas that would occur with implementation of the proposed Project. However, the development footprint, and therefore, the impact area, would be reduced by approximately 13.9 acres when compared to the proposed Project due to the elimination of 13.9 acres of industrial development. The area identified for industrial development does contain some significant biological resources, therefore, development under this alternative would preserve a portion of the biological resources anticipated to be impacted by the proposed Project. However, as with the proposed Project, the No Industrial Development Alternative would continue to have the potential to significantly impact biological resources; the only impacts that would be reduced under this alternative would be loss of slender/club-haired mariposa lily and purple sage scrub. Consistent with the proposed Project, these impacts would be reduced to less than significant levels with implementation of mitigation measures identified in Section 5.2.

Impact conclusions would be consistent with the proposed Project.

Cultural Resources

The No Industrial Development Alternative would involve disturbance of on- and off-site areas that would occur with implementation of the *NorthLake Specific Plan*; however, this alternative would result in a reduced development footprint. However, because potential impacts would involve archaeological and paleontological resources that have not yet been discovered, there is no way to tell if the reduction in development area would reduce actual impacts. Therefore, as with the proposed Project, development of the No Industrial Development Alternative would have the potential to impact unknown archaeological and paleontological resources during ground-disturbing activities. Consistent with the proposed Project, these impacts would be reduced to less than significant levels with implementation of identified mitigation measures.

Impact conclusions would be consistent with the proposed Project.

Geology and Soils

The No Industrial Development Alternative would involve development of the Project site including off-site areas that would occur with implementation of the proposed Project; however, this alternative would result in a slightly smaller impact footprint when compared to the proposed Project due to the elimination of 13.9 acres of industrial development. There would be less earth disturbance with this alternative; however, as with the proposed Project, development of the No Industrial Development Alternative would expose people and structures to seismic ground shaking and the project site would be subject to soil erosion and loss of topsoil. Further, the presence of unsuitable soils and potentially expansive soils within the area identified for development under this alternative would result in a potentially significant impact. As with the proposed Project, the impacts under this alternative would be mitigated to a less than significant level.

Impact conclusions would be consistent with the proposed Project.

Hydrology and Water Quality

The No Industrial Development Alternative would involve development of the site including off-site areas that would occur with implementation of the proposed Project; however, this alternative would result in less impacts related to hydrology as the proposed Project due to a reduced development footprint. Similar to the proposed Project, development under this alternative would increase the amount of storm water runoff and alter existing drainage patterns due to the increase in the amount of impervious surfaces. As with the proposed Project, it is assumed that application of BMPs identified through existing RRs or formulated as PDFs would ensure that impacts to storm drain infrastructure are less than significant. An on-site storm drain system would be constructed to detain flows such that they are released from the site at pre-development levels and would not result in impacts to existing storm drain facilities or flooding. As with the proposed Project, hydrology impacts resulting from this alternative would be less than significant.

As with the proposed Project, there is a potential for construction-related surface erosion with the No Industrial Development Alternative. Potential impacts from this alternative would be less than the proposed Project because of a reduced development footprint. The proposed Project and the No Industrial Development Alternative would result in surface runoff after buildout. Surface runoff from a developed condition (with either this alternative or the proposed Project) would have a different composition in comparison to the existing condition, which is undeveloped. This runoff is likely to include a similar type of pollutants commonly found in urban runoff. The proposed Project and this alternative would be required to comply with applicable regulations related to water quality, including the LID Ordinance and National Pollutant Discharge Elimination System

(NPDES) permit requirements which would minimize potential short-term, construction-related and long-term, operational water quality impacts. Consistent with the proposed Project, with implementation the identified PDFs and RRs, water quality impacts from this alternative would be reduced to a level considered less than significant.

Impact conclusions would be consistent with the proposed Project.

Land Use and Planning

The No Industrial Development Alternative would result in the development of a primarily residential project, similar to the proposed Project except for the elimination of 13.9 acres of industrial uses. All other land uses, including residential, commercial, recreation, and open space would be consistent with what is proposed for the proposed Project. Consistent with the proposed Project, the No Industrial Development Alternative would comply with design guidelines outlined in the *NorthLake Specific Plan* to ensure compatibility of this alternative with existing character of the area. Because most areas and land uses use under this alternative would be the same as that allowed with the proposed Project, this alternative would be consistent with relevant goals and policies of applicable local and regional planning programs. However, because the industrial development would be eliminated, this alternative would not result in as high of a concentration of employment-generating uses and would not meet the Specific Plan (Land Use) Goal ii to provide commercial and industrial lands to accommodate a portion of the projected labor force to the same extent as the proposed Project. The elimination of industrial development would also not as effectively satisfy those policies of the SCVAP and County General Plan related to a reduction in vehicle miles traveled due to the elimination of on-site employment-generating uses. Therefore, the No Industrial Development Alternative would be consistent with goals and policies of relevant local and regional planning programs; however, would not meet the goals and policies of the *NorthLake Specific Plan,* County General Plan, and 2012 SCVAP to the same extent as the proposed Project.

Impact conclusions would be consistent with the proposed Project.

Noise

Development of the No Industrial Development Alternative would involve construction activities similar to proposed Project; however, construction noise would not occur as near to Northlake Elementary School as with the proposed Project due to the elimination of the industrial uses. As with the proposed Project, short-term noise and vibration effects related to construction of the proposed Project would be less than significant assuming implementation of MMs identified in Section 5.10 of this SEIR. Long-term, operational noise impacts in the area proposed for industrial uses would be lessened, including those that might impact NorthLake Elementary School; however, these impacts were found to be less than significant with implementation of mitigation measures. As with the proposed Project, the number of project-related vehicles traveling along Ridge Route Road for the No Industrial Development Alternative would increase ambient noise levels in the surrounding residential community to a level considered to be significant and unavoidable.

Impact conclusions would be consistent with the proposed Project.

Public Services and Utilities

The No Industrial Development Alternative would create new demand for public services including fire protection services and police services, but the level of demand for service calls and regular patrols may be slightly reduced when compared to the proposed Project due to the elimination of 13.9 acres of industrial development. Impacts to schools would be similar to the proposed Project. Overall, impacts to public services would be less than significant with this alternative and the proposed Project.

The increased demand on local utility providers (i.e., water, sewer, solid waste, electricity, natural gas, and telephone) would also be less with the No Industrial Development Alternative compared to the proposed Project due to the reduction in development requiring utility service. Consistent with the proposed Project, the No Industrial Development Alternative would continue to require the installation of onsite and offsite utilities to serve proposed uses and the impacts associated with installation of this infrastructure would be similar to the proposed Project. Consistent with the proposed Project, potential impacts resulting from the No Industrial Development Alternative would be less than significant.

Impact conclusions would be consistent with the proposed Project.

Traffic, Access and Circulation

The traffic analysis presented in Section 5.11, Traffic, Access and Circulation, assessed potential impacts at study area intersections and freeway segments. As shown on Table 5.11-12 in Section 5.11, with implementation of the proposed Project, 36,200 average daily trips would be generated (approximately 3,600 PM peak hour and 2,900 AM peak hour trips). Development of the No Industrial Development Alternative would involve less employment generating uses than with the proposed Project; therefore, this Alternative would not result in as great of a jobs/housing balance and would increase the vehicle miles traveled for the project as more residents would have to drive outside of the development for work.

The significant and unavoidable direct and cumulative impacts at the four study area intersections that occur with the proposed Project would also occur with this Alternative along with the potential for impacts to additional intersections.

Similar to the proposed Project, the No Industrial Development Alternative would not conflict with the Los Angeles County Congestion Management Program, would provide or accommodate non-vehicular transportation facilities, and would not conflict with adopted policies supporting alternative transportation.

Impact conclusions would be consistent with the proposed Project.

Greenhouse Gas Emissions

The No Industrial Development Alternative would result in a minor reduction in construction-related GHG emissions generated by on-site uses and occupants due to the elimination of 13.9 acres industrial uses associated with the proposed Project. Without the industrial uses, emissions associated with daily building operations would be less than with the proposed Project; however, some residents would need to travel farther for jobs, therefore, daily operational vehicle emissions may be greater. As with the proposed Project, GHG emissions impacts would be less than significant with implementation of the identified mitigation measures.

Impact conclusions would be consistent with the proposed Project.

Conclusions

Ability to Avoid or Substantially Lessen the Significant Impacts of the Project

Development of the Project site with the No Industrial Development Alternative would decrease development intensity compared to the proposed Project. Although the degree of impacts for some topics may be worsened with this alternative, the overall impact conclusions would be consistent with the proposed Project. Consistent with the proposed Project, the No Industrial Development Alternative would result in significant and unavoidable impacts related to air quality, noise, and traffic. No additional significant impacts would occur with this alternative.

Attainment of Project Objectives

Although the No Industrial Development Alternative would have similar impacts for each environmental topic when compared to the proposed Project, it would meet the project objectives.

As discussed previously under Land Use and Planning, because the overall development would eliminate 13.9 acres of industrial development that is part of the proposed Project, the No Industrial Development Alternative would not maximize the development potential of the 1,330-acre project site allowed by the *NorthLake Specific Plan*. Therefore, the No Industrial Development Alternative would not meet the Project objective related to the provision of industrial uses to accommodate the projected labor force. The No Industrial Development Alternative would meet the other project objectives to the same extent as the proposed Project.

6.6.4 PHASE 1 DEVELOPMENT ALTERNATIVE

Description of the Alternative

The purpose of the Phase 1 Development Alternative is to evaluate the long-term operational impacts related to build-out of only the Phase 1 area of the proposed Project. Under this alternative, no future development would occur beyond the 720-acre area defined by Vesting Tentative Tract Map 073336, as defined in Section 4.0, Project Description and shown Table 6-3.

TABLE 6-3
LAND USE STATISTICAL SUMMARY TABLE
FOR PHASE 1 (VTTM 073336)

Use	Phase 1 (VTTM 073336)	
	Number of Units	Area (Acres)
Residential: Single-Family	588	78.6
Residential: Multi-Family	1,041	69.2
Residential: Senior[a]	345	49.1
Commercial		6.7
Commercial Highway		2.5
Industrial		13.9
Park(s)		
Trails		10.5
Grasshopper Creek Park		10.6
Enhanced Parkway		38.3
Castaic Lagoon Park		17.2
Sports Park		25.8
Cody Dog Park		1.0
Open Space- Manufactured Slope		136.9
Open Space- Undisturbed		167
Utilities		
Water Tank		6.5
Pump Station		0.2
Roadways		84.3
Fire Station Pad		1.4

VTTM: Vesting Tentative Tract Map

[a] This overlay provides for a development option of attached single-family residences and age-restricted areas designated for homeowners that are 55 years of age and older. Lot sizes and configurations will be similar to those in the Single-Family area with the addition of the Attached Single-Family designation as an option. It should be noted that development within these areas may or may not be age-restricted.

Source: Sikand Engineering 2015.

Comparative Analysis of Environmental Impacts

Aesthetics

Similar to the proposed Project, development of the Phase 1 Development Alternative would alter the existing visual condition of the project site through introduction of development on a previously disturbed, undeveloped site. The Phase 1 Development Alternative would comply with the design guidelines set forth in the *NorthLake Specific Plan* and as described in Section 4.0, Project Description, including requirements for grading, circulation, landscape, architecture, and signage. The Phase 1 Development Alternative would limit the development area to the southern 720-acre portion of the NorthLake Specific Plan. It is expected that the overall visual appearance under this alternative would be similar to the currently proposed Project and would not represent a significant change or a significant impact; however, the area defined for development would be 46 percent smaller than the proposed Project. Therefore, the visual impacts would be reduced when compared to the proposed Project due to the smaller development area. As with the proposed Project, implementation of the Phase 1 Development Alternative would not affect scenic resources along a State scenic highway. Similar to the proposed Project, development under the

Phase 1 Development Alternative would conform to the lighting design guidelines set forth in the *NorthLake Specific Plan*; therefore, potential impacts would be less than significant. Again, however, the impacts of lighting would be further reduced when compared to the proposed Project due to the smaller development area. No significant impacts would occur with either the proposed Project or the Phase 1 Development Alternative.

Impact conclusions would be consistent with the proposed Project.

Air Quality

It is assumed that development of the Phase 1 Development Alternative would require grading and earth movement over the majority of the 720-acre site, which would be an area approximately 46 percent smaller than the proposed Project. Therefore, maximum daily construction and operational emissions would be less with this alternative rather than the proposed Project due to a reduced development footprint. Although emissions would be less with the Phase 1 Development Alternative, both construction and operational maximum daily emissions would exceed significance thresholds. Construction NOx emissions would be significant and unavoidable. Operational emissions would remain significant and unavoidable on both a project- and cumulative-level.

Impact conclusions would be consistent with the proposed Project.

Biological Resources

The Phase 1 Development Alternative would involve disturbance of on- and off-site areas that would occur with implementation of the proposed Project. However, the development footprint, and therefore, the impact area, would be reduced by approximately 46 percent when compared to the proposed Project. The area that would not be developed does contain some significant biological resources, therefore, development under this alternative would preserve a portion of the biological resources anticipated to be impacted by the proposed Project. However, as with the proposed Project, the Phase 1 Development Alternative would continue to have the potential to significantly impact biological resources; however, due to the reduced development footprint, impacts to Foothill needlegrass, black sage scrub, California annual grassland/Wildflower fields, California sagebrush – California buckwheat scrub, California sagebrush – California buckwheat scrub/Foothill needlegrass grassland, slender/club-haired mariposa lily, paniculate tarplant, southern California walnut, would be reduced under this alternative. Additionally, impacts to California gnatcatcher and an open water area would be reduced. Consistent with the proposed Project, these impacts would be reduced to less than significant levels with implementation of mitigation measures identified in Section 5.2.

Impact conclusions would be consistent with the proposed Project.

Cultural Resources

The Phase 1 Development Alternative would involve disturbance of on- and off-site areas that would occur with implementation of the *NorthLake Specific Plan*; however, this alternative would result in a reduced development footprint. However, because potential impacts would involve archaeological and paleontological resources that have not yet been discovered, there is no way to tell if the reduction in development area would reduce actual impacts. Therefore, as with the proposed Project, development of the Phase 1 Development Alternative would have the potential to impact unknown archaeological and paleontological resources during ground-disturbing activities. Consistent with the proposed Project, these impacts would be reduced to less than significant levels with implementation of identified mitigation measures.

Impact conclusions would be consistent with the proposed Project.

Geology and Soils

The Phase 1 Development Alternative would involve development of the Project site including off-site areas that would occur with implementation of the proposed Project; however, this alternative would result in a substantially smaller impact footprint when compared to the proposed Project. There would be less earth disturbance with this alternative; however, as with the proposed Project, development of the Phase 1 Development Alternative would expose people and structures to seismic ground shaking and the project site would be subject to soil erosion and loss of topsoil. Further, the presence of unsuitable soils and potentially expansive soils within the area identified for development under this alternative would result in a potentially significant impact. As with the proposed Project, the impacts under this alternative would be mitigated to a less than significant level.

Impact conclusions would be consistent with the proposed Project.

Hydrology and Water Quality

The Phase 1 Development Alternative would involve development of the site including off-site areas that would occur with implementation of the proposed Project; however, this alternative would result in less impacts related to hydrology as the proposed Project due to a reduced development footprint. Similar to the proposed Project, development under this alternative would increase the amount of storm water runoff and alter existing drainage patterns due to the increase in the amount of impervious surfaces. As with the proposed Project, it is assumed that application of BMPs would ensure that impacts to storm drain infrastructure are less than significant. An on-site storm drain system would be constructed to detain flows such that they are released from the site at pre-development levels and would not result in impacts to existing storm drain facilities or flooding. As with the proposed Project, hydrology impacts resulting from this alternative would be less than significant.

As with the proposed Project, there is a potential for construction-related surface erosion with the Phase 1 Development Alternative. Potential impacts from this alternative would be less than the proposed Project because of a reduced development footprint. The proposed Project and the Phase 1 Development Alternative would result in surface runoff after buildout. Surface runoff from a developed condition (with either this alternative or the proposed Project) would have a different composition in comparison to the existing condition, which is undeveloped. This runoff is likely to include a similar type of pollutants commonly found in urban runoff. The proposed Project and this alternative would be required to comply with applicable regulations related to water quality, including the LID Ordinance and National Pollutant Discharge Elimination System (NPDES) permit requirements which would minimize potential short-term, construction-related and long-term, operational water quality impacts. Consistent with the proposed Project, water quality impacts from this alternative would be reduced to a level considered less than significant.

Impact conclusions would be consistent with the proposed Project.

Land Use and Planning

The Phase 1 Development Alternative would result in the development of a primarily residential project, similar to the proposed Project, however the Phase 1 Development Alternative would include development of a reduced area and approximately 37 percent fewer dwelling units (1,974 versus 3,150 dwelling units). Additionally, the amount of park acreage and open space area associated with the Phase 1 Development Alternative would be less than with the proposed

Project. Other land uses, including commercial and industrial uses would be consistent with what is proposed for the proposed Project. Consistent with the proposed Project, the Phase 1 Development Alternative would comply with design guidelines outlined in the *NorthLake Specific Plan* to ensure compatibility of this alternative with existing character of the area. Because the types of land uses use under this alternative would be the same as that allowed with the proposed Project, this alternative would be consistent with relevant goals and policies of applicable local and regional planning programs. However, because the number of housing units and park acreage would be reduced, this alternative would not provide as many housing opportunities as the proposed Project. Because the amount of park acreage that would not be developed under this Alternative would not directly correlate to the number of dwelling units that would not be constructed, the Phase 1 Development Alternative would have a higher ratio or parklands to residents than the proposed Project. The reduction in residential dwelling units while maintaining the same acreage of industrial and commercial development would also encourage a reduction in vehicle miles traveled because the same number of employment opportunities would be offered to a smaller number of future residents. Therefore, the Phase 1 Development Alternative would better support the County General Plan (Guiding Principle 3, Policy LU 5.10) and the 2012 SCVAP (Policy ED 2.5, LU-5.2.3, CO-8.2.13). Therefore, the Phase 1 Development Alternative would be consistent with goals and policies of relevant local and regional planning programs and would meet the goals and policies of the *NorthLake Specific Plan.*

Impact conclusions would be consistent with the proposed Project.

Noise

Development of the Phase 1 Development Alternative would involve construction activities similar to proposed Project; however, the duration of construction noise would be reduced in comparison to the proposed Project due to the elimination of development in the northern portion of the NorthLake Specific Plan area. As with the proposed Project, short-term noise and vibration effects related to construction of the proposed Project would be less than significant assuming implementation of MMs identified in Section 5.10 of this SEIR. Long-term, operational noise impacts related to traffic would be reduced due to a reduction in anticipated vehicle trips, including those that would impact off-site residential uses due to Project-generated traffic on Ridge Route Road north of Castaic Lake Road and Ridge Route Road north of Lake Hughes Road, thus potentially reducing significant and unavoidable impacts to less than significant levels.

Public Services and Utilities

The Phase 1 Development Alternative would create new demand for public services including fire protection services and police services, but the level of demand for service calls and regular patrols would be reduced when compared to the proposed Project due to reduction of residential uses; The Phase 1 Development Alternative would include development of approximately 37 percent fewer dwelling units (1,974 versus 3,150 dwelling units). Additionally, impacts to schools would also be reduced when compared to the proposed Project due to the reduction in residential uses. Overall, impacts to public services would be less than significant with this alternative and the proposed Project.

The increased demand on local utility providers (i.e., water, sewer, solid waste, electricity, natural gas, and telephone) would also be less with the Phase 1 Development Alternative compared to the proposed Project due to the reduction in development requiring utility service. Consistent with the proposed Project, the Phase 1 Development Alternative would continue to require the installation of onsite and offsite utilities to serve proposed uses and the impacts associated with installation of this infrastructure would be similar to the proposed Project. Consistent with the

proposed Project, potential impacts resulting from the Phase 1 Development Alternative would be less than significant.

Impact conclusions would be consistent with the proposed Project.

Traffic, Access and Circulation

The traffic analysis presented in Section 5.11, Traffic, Access and Circulation, assessed potential impacts at study area intersections and freeway segments. As shown on Table 5.11-12 in Section 5.11, with implementation of the proposed Project, 35,500 average daily trips would be generated (approximately 2,900 PM peak hour and 3,500 AM peak hour trips). Development of the Phase 1 Development Alternative would involve in reduction in vehicle miles traveled due to fewer residential units and fewer residents would drive outside of the development for work. Table 6-4, ICU and LOS Summary Existing Plus Phase 1 Development Alternative, shows the anticipated ICU and LOS for nine key study intersections.

TABLE 6-4
ICU AND LOS SUMMARY EXISTING PLUS PHASE 1
DEVELOPMENT ALTERNATIVE

	Existing				Existing plus Phase 1				Difference	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
Location	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
1. The Old Road & I-5 SB Ramps	0.41	A	0.39	A	0.64	B	0.42	A	0.23	0.03
2. The Old Rd & Sloan/Lake Hughes	0.34	A	0.36	A	0.57	A	0.45	A	0.23	0.09
3. 1-5 NB Ramps & Lake Hughes	0.31	A	0.41	A	0.47	A	0.62	B	0.16	0.21
4. Castaic & Lake Hughes	0.31	A	0.37	A	0.47	A	0.55	A	0.16	0.18
5. Ridge Route and Lake Hughes	0.32	A	0.19	A	0.66	B	0.62	B	0.34	0.43
6. The Old Road & Parker	0.45	A	0.42	A	0.47	A	0.47	A	0.03	0.05
7. I-5 SB On Ramp & Parker	0.60	A	0.52	A	0.72	C	0.64	B	0.12	0.12
8. I-5 NB Off Ramp & Ridge Route	0.46	A	0.55	A	0.59	A	0.72	C	0.13	0.17
9. Castaic & Ridge Route	0.33	A	0.41	A	0.42	A	0.50	A	0.09	0.09

As shown in the Table 6-4, with the Phase 1 Development Alternative, most intersections within the study area continue to operate at LOS B or better. The locations closest to being impacted are the on and off-ramp intersections at Ridge Route/Parker Road, which are forecast to operate at LOS C with a peak hour ICU of 0.72, but would not be significantly impacted by the Phase 1 Development Alternative based on the County's significant impact criteria. Therefore, the Phase 1 Development Alternative would avoid impacts to three study intersections, discussed in Section 5.11, Traffic, Access and Circulation.

Similar to the proposed Project, the No Industrial Development Alternative would not conflict with the Los Angeles County Congestion Management Program, would provide or accommodate non-vehicular transportation facilities, and would not conflict with adopted policies supporting alternative transportation.

Impact conclusions would be reduced when compared with the proposed Project.

Greenhouse Gas Emissions

The Phase 1 Development Alternative would result in a reduction in construction-related GHG emissions generated by on-site uses due to a reduced development footprint. Additionally, because the alternative would include approximately 37 percent fewer dwelling units (1,974 versus 3,150 dwelling units) than the proposed Project, there would be a reduction in daily operational area and mobile source GHG emissions. As with the proposed Project, impacts would be less than significant with incorporation of the identified mitigation measures.

Impact conclusions would be consistent with the proposed Project.

Conclusions

Ability to Avoid or Substantially Lessen the Significant Impacts of the Project

Development of the Project site with the Phase 1 Development Alternative would decrease development intensity compared to the proposed Project. Although the degree of impacts for some topics may be less with this alternative, the overall impact conclusions would be consistent with the proposed Project. Consistent with the proposed Project, the Phase 1 Development Alternative would result in significant and unavoidable impacts related to air quality, noise, and traffic. No additional significant impacts would occur with this alternative.

Attainment of Project Objectives

Although the Phase 1 Development Alternative would have similar impacts for each environmental topic when compared to the proposed Project, it would meet the project objectives.

6.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires the identification of an environmentally superior alternative. Section 15126.6(e)(2) of the CEQA Guidelines states that if the No Project Alternative is the environmentally superior alternative, then the EIR shall also identify an environmentally superior alternative among the other alternatives.

Table 6.5 shows a comparison of impacts for each impact area.

TABLE 6-5
ALTERNATIVES IMPACT COMPARISON

Environmental Topic	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: No Project/ Development Pursuant to the NorthLake Specific Plan	Alternative 3: No Industrial	Alternative 4: Phase 1 Development
Aesthetics	Less than Significant	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project
Air Quality	Significant and Unavoidable	Less than Proposed Project	More Emissions; Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project
Biological Resources	Mitigated to Less than Significant	Less than Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project
Cultural Resources	Mitigated to Less than Significant	Less than Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project
Geology and Soils	Mitigated to Less than Significant	Less than Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project
Greenhouse Gas Emissions	Mitigated to Less than Significant	Less than Proposed Project	More Emissions; Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project
Hydrology and Water Quality	Mitigated to Less than Significant	Less than Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project
Land Use	Less than Significant	Policies not met to same extent; Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project
Noise	Significant and Unavoidable	Less than Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Less than Proposed Project
Public Services and Utilities	Mitigated to Less than Significant	Less than Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project	Consistent with Proposed Project
Traffic, Access and Circulation	Significant and Unavoidable	Less than Proposed Project	Greater than Proposed Project	Consistent with Proposed Project	Less than Proposed Project

The No Project/No Development Alternative has the least impact to the environment because it would not involve any construction activities and would not introduce development of any uses that would generate potential operational impacts. Specifically, there would be no impacts associated with air quality, greenhouse gas emissions, noise or traffic, each of which are considered significant and unavoidable impacts for the proposed Project. The No Project/No Development Alternative would not require the provision of additional public services and facilities and would not result in an increased demand for utilities or service systems. Additionally, no impacts associated with development would occur, including impacts related to aesthetics, biological resources, cultural resources, geology and soils, and hydrology and water quality. While this alternative would avoid the significant and unavoidable effects of the proposed Project, the benefits of the proposed Project associated with providing commercial and industrial lands to accommodate the projected labor force and to develop housing that satisfies the needs of the present and future residents of the NorthLake community would not occur; none of the Project objectives would be met.

In compliance with Section 15126.6(e)(2) of the State CEQA Guidelines, the Phase 1 Development Alternative is considered the environmentally superior alternative. Due to the reduction in development area footprint as well as the reduction in proposed dwelling units, the impact levels would be less than the proposed Project for traffic and noise, primarily due to the reduction in VMTs since.

SECTION 7.0 OTHER CEQA TOPICS

Section 15126 of the California Environmental Quality Act (CEQA) Guidelines requires that all aspects of a project must be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation and sets forth general content requirements for environmental impact reports (EIRs). Potential significant effects of the proposed project, mitigation measures to address these effects, and potential cumulative impacts have been identified throughout the analysis presented in Sections 5.1 through 5.12 of this Draft SEIR. An analysis of alternatives is included in Section 6, Alternatives. This section provides (1) a summary of effects determined not to be significant based on the analysis presented in the Initial Study (IS) included in Appendix A (as required by Section 15128 of the CEQA Guidelines); (2) identification of significant environmental effects which cannot be avoided if the proposed project is implemented; (3) identification of significant irreversible environmental changes that would result from implementing the proposed project; and (4) growth-inducing impacts of the proposed project.

7.1 EFFECTS DETERMINED NOT TO BE SIGNIFICANT

Section 15128 of the State CEQA Guidelines states that "an EIR shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR". The IS included in Appendix A identifies environmental issues for which the proposed project would result in no impacts, less than significant impacts, or less than significant impacts with the implementation of the Standards and Guidelines identified in the *NorthLake Specific Plan* and Mitigation Measures (MMs) identified in the NorthLake 1992 EIR and SCVAP 2012 EIR.

The following is a summary of the impact conclusions presented in the IS for effects determined not to be significant based on project-specific analysis or analysis presented in the *NorthLake Specific Plan* (County of Los Angeles 1992).

7.1.1 AESTHETICS

- **Scenic Vistas:** The proposed project would conform to the *NorthLake Specific Plan's* design guidelines, including requirements for grading, circulation, landscape, architecture, and signage. Specific statements and guidelines would be applied related to community features; streetscapes; appropriate building mass and scale; and parameters for architectural design of residential and commercial structures. According to the *NorthLake Specific Plan,* adherence to the grading guidelines would minimize conflict within the constraints of existing topography while allowing for livable, attractive areas. As discussed, project construction would include mass grading; re-contouring slopes; introducing residential and industrial structures; building streets; and constructing other appurtenant development associated with a new community. However, compliance with the design guidelines set forth in the *NorthLake Specific Plan* would ensure that development of the project would not result in a significant impact on a scenic vista.
- **Visible From or Obstruct Views from a Regional Riding or Hiking Trail:** Project construction would include mass grading; re-contouring slopes; introducing residential and industrial structures; building streets; and constructing other appurtenant development associated with a new community. Due to the location of the Castaic Lake SRA trail system, the project will be visible from the trail; however, compliance with the design guidelines set forth in the *NorthLake Specific Plan* would ensure that development of the project would not result in a significant impact on a scenic vista. Additionally, because the project would be located in a canyon and because the trails are located east of the Project site and any significant views would be to the east of south, project-related development

would not obstruct distant views from the trails. Therefore, impacts related to visibility from or obstruction of views from a regional riding or hiking trail would be less than significant.

- **Damage Scenic Resources within a State Scenic Highway:** The proposed project site is adjacent to I-5, which is a State of California Eligible State Scenic Highway from its intersection with I-210 north to its intersection with State Route (SR) 126. This eligible portion of I-5 is located near the City of Santa Clarita (approximately five miles south of the project site) and with no views of the project site. SR-126 is also designated as a State of California Eligible State Scenic Highway, but is not officially designated. The project site is located north of the SR-126 and is not visible from any portion of the SR-126. Since there are no State scenic highways located near the project site, implementation of the proposed project would not affect scenic resources along a State scenic highway. According to the County of Los Angeles General Plan Scenic Highway Element (1974), Lake Hughes Road between Old Ridge Route and Elizabeth Lake Road is considered to be a Second Priority Route – Proposed for Further Study; however, views of the project site are extremely limited due to intervening topography and elevation differences. Additionally, because this is not a formal designation, no impact would occur.
- **Degrade the Existing Visual Character or Quality of the Site:** Consistent with the findings of the NorthLake 1992 EIR, the proposed project would involve substantial grading and removal of existing vegetation. Removing such vegetation and replacing it with mixed-use development would alter the visual character of the project site. However, because of the project site's canyon location, there would be minimal visual impacts from surrounding land uses, including motorists along I-5 and recreational users at the Castaic Lake SRA. Project development would occur primarily in the canyon area and on moderate slopes below ridgeline elevations to reduce potential visual impacts. As discussed previously, the existing major ridgelines would remain intact in their existing natural condition, unaffected by the proposed project. Open space is integrated within the design of the *NorthLake Specific Plan* and would preserve ridgelines and hillsides; protect sensitive environmental resources; provide view amenities; accommodate the greenbelt trail; and separate residential neighborhood enclaves. Further, the project would comply with all established design guidelines set forth in the previously approved *NorthLake Specific Plan.* Therefore, impacts would be less than significant.
- **Create a New Source of Substantial Shadows, Light, or Glare:** The proposed project would create new sources of light and glare during construction. Limited lighting would be necessary in active construction areas for security reasons. Because of the depth of the canyon, and requirements for shielding night lighting, light and glare effects from construction activities are not expected to affect drivers on I-5 or visitors to the Castaic Lake SRA. During construction activities, lighting may be required, which could be visible from the Castaic Lake SRA; however, construction lighting would be temporary and limited in nature. Overall, construction-generated light and glare would be considered less than significant.

  Operation of the proposed project would introduce new light sources into the area. New light sources are anticipated to occur from the illumination of on-site structures such as signage, interior and exterior lighting, and street and vehicle lights. New permanent light sources would be introduced with the proposed project where none currently exist. Light "spill" occurs when light shines beyond the intended area and illuminates an unintended area. Lighting associated with the proposed project would be confined to the project boundaries, and proposed lighting would be shielded or directed downwards to minimize light spillover. All development would conform to the lighting design guidelines set forth in the *NorthLake Specific Plan;* therefore, potential impacts would be less than significant.

  No potential sources of glare are proposed with the project. No impact would occur.

7.1.2 AGRICULTURE AND FORESTRY RESOURCES

- **Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to Non-Agricultural Use:** According to Figure 3.5-1, Farmland Designations within the OVOV Planning Area, of the SCVAP 2012 EIR, the project site is designated as "Grazing Land". This is not included in the definition of Important Farmland (land designated as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance); therefore, the conversion of grazing land is not a significant impact. The proposed project would not change the environment in a manner that would result in the conversion of farmland to non-agricultural uses.
- **Conflict with Agricultural Zoning or a Williamson Act Contract:** As noted in the SCVAP 2012 EIR, the only Williamson Act contracted lands in Los Angeles County are located on Catalina Island and do not impact the project site. The proposed project would not change the environment in a manner that would result in the conversion of farmland to non-agricultural uses.
- **Conflict with Zoning for or Cause Forest Land or Timberland to Be Rezoned or Result in Loss or Conversation of Forest Land to Non-Forest Use:** The project site is not zoned as forest land as defined by Section 1220(g) of the *California Public Resources Code,* as timberland as defined by Section 4526 of the *California Public Resources Code*, or as timberland zoned for timberland production as defined by Section 51104(g) of the *California Public Resources Code.* The existing zoning for the project site is SP (Specific Plan). Therefore, the proposed project would not conflict with existing zoning for, or cause the rezoning of, forest land, timberland, or timberland zoned for timberland production. No impact would occur and no mitigation measures would be required.

7.1.3 AIR QUALITY

- **Objectionable Odors:** The proposed commercial, industrial, and residential land uses are not expected to create unusual or objectionable odors. Some odors may be associated with the operation of diesel engines during site preparation. However, these odors are typical of urbanized environments and would be subject to construction and air quality regulations, including proper maintenance of machinery, in order to minimize engine emissions. These emissions are also of short duration and odors are quickly dispersed into the atmosphere. Any future on-site commercial uses that may emit steam (such as restaurants) are required to secure appropriate permits from the South Coast Air Quality Management District (SCAQMD). Compliance with SCAQMD rules and permit requirements would ensure that no objectionable odors would be created. Proposed residential uses would not generate objectionable odors.

7.1.4 BIOLOGICAL RESOURCES

- **Convert Oak Woodlands or Otherwise Contain Oak or Other Unique Native Trees:** Based on preliminary biological surveys conducted for the proposed project, there are no oak trees or areas characterized as oak woodlands on the project site. No impact would occur.
- **Local Policies and Ordinances Protecting Biological Resources:** As shown on Exhibit CO-5 of the Santa Clarita Valley Area Plan 2012, the project site is not located in an SEA. No oak or other significant indigenous woodlands or biological resources in the designated Significant Ecological Areas (SEAs) would be impacted through project development. Therefore, there would be no impact.

- **Habitat Conservation Plan or Other Approved Local, Regional, or State Habitat Conservation Plan:** The proposed project site is not located within an adopted habitat conservation plan; natural community conservation plan; or other approved local, regional, or State habitat conservation plan. Therefore, implementation of the proposed project would not result in a significant adverse impact by conflicting with any of the above-mentioned plans.

7.1.5 ENERGY

- **Los Angeles County Green Building Standards Code:** As discussed in the SCVAP 2012 EIR, all newly constructed buildings in California are subject to the requirements of the CALGreen Code; therefore, the project would be required to comply with the CALGreen Code, as adopted by Los Angeles County as L.A. County Code Title 31. Therefore, no impacts would occur.

7.1.6 GEOLOGY AND SOILS

- **Soils Incapable of Supporting Onsite Wastewater Treatment Systems:** The proposed project will be connected to the municipal sewer system and does not propose any septic tanks. Therefore, there would be no impact from development of the proposed project.
- **Hillside Management Area Ordinance or Design Standards:** As shown on Figure 9.8, Hillside Management Areas and Ridgeline Management Map, of the *Draft Los Angeles County General Plan 2035,* the project site is located in a Hillside Management Area (greater than 25 percent slope). However, it is noted that the updated Hillside Management Area Ordinance is currently draft in form and, therefore, would not apply to development of a currently approved specific plan. Because the *NorthLake Specific Plan* was approved and entitled for development prior to adoption of the updated Hillside Management Ordinance, development need only to comply with any hillside design standards in effect at the time that the *NorthLake Specific Plan* was approved and as further addressed in the SCVAP 2012. No impact would occur.

7.1.7 HAZARDS AND HAZARDOUS MATERIALS

- **Create a Significant Hazard to the Public or Environment through Use, Transport, and/or Disposal of Hazardous Materials or Potential Upset and Accident Conditions:** Grading and construction activities would involve limited transport, storage, use, and disposal of hazardous materials such as fuel for construction equipment. However, construction activities are short-term and hazardous materials used during construction would be transported, used, stored, and disposed of according to federal, State, and local health and safety requirements.

  The proposed project consists primarily of residential uses with limited commercial and light industrial uses. These uses typically do not generate hazardous emissions, nor do they involve the routine use, transport, or disposal of hazardous materials. Hazardous materials used on site would consist of common commercial cleansers, solvents, paints, and other janitorial materials. New commercial development will adhere to the guidelines and requirements set forth by the County of Los Angeles in the Los Angeles County Hazardous Waste Management Plan.
- **Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or waste into the environment:** Based on preliminary evaluation of the project site and consistent with the analysis provided in the NorthLake 1992 EIR, the project site

includes two easements containing underground pipelines. Implementation of the proposed project would require the relocation of these pipelines. However, anticipated relocation activities would be performed in accordance with all applicable rules and regulations set forth by the State Fire Marshal and pursuant to Section 51010 *California Code of Regulations* and the *Code of Federal Regulations* (Title 49 and Part 195). Therefore, potential impacts associated with the release of hazardous materials or waste into the environment would be less than significant.

- **Emit or Handle Hazardous Materials Substances or Waste within One-Quarter Mile of Sensitive Land Uses:** The project site is currently undeveloped with the exception of the NorthLake Hills Elementary School located in the southern portion of the project site. The operation of proposed commercial and industrial uses would involve the transport, storage, and sale of various hazardous materials, such as petroleum products, pesticides, fertilizers, and other products such as paint, solvents, and cleaning products. However, these uses would not involve the use, storage, handling, transport, or emission of these hazardous materials in a manner or quantity that would result in a risk to NorthLake Hills Elementary School.
- **Hazardous Materials Sites Compiled Pursuant to Section 65962.5 of the *California Government Code:*** There are currently no active sites listed on the CERCLIS Database or the Envirostor Database on the NorthLake Specific Plan project site.
- **Safety Hazard for Those Residing or Working Within an Airport Land Use Plan or Within Two Miles of a Public or Public Use Airport:** According to the SCVAP 2012 EIR, the County's Planning Area currently contains one privately owned public airport known as Agua Dulce Airpark, located approximately 18 miles west of the project site. The Airpark is located in an unincorporated area of Los Angeles County, and the County has adopted an Airport Land Use Plan to protect the clear zones and ensure land use compatibility with airport operations. The project site is outside the Airport Influence Area. No impacts are anticipated.
- **Private Airstrip Safety Hazard:** The project site is not within the vicinity of a private airstrip.
- **Impair Implementation of or Interfere with an Emergency Response Plan:** Implementation of the proposed project would generate an increase in the amount and volume of traffic on local and regional roadway networks. However, the developers of the proposed project would be required to design, construct, and maintain structures, roadways, and facilities to comply with applicable local, regional, State, and/or federal requirements related to emergency access and evacuation plans. Due to these design considerations and the fact that the project site is not included as part of an adopted emergency response plan or emergency evacuation plan, no impact would occur.
- **Potentially Dangerous Fire Hazard:** Proposed land uses do not constitute an unusually high or potentially dangerous fire hazard despite increased population in that it would provide significantly greater fire service access to open space areas; provide for the construction of up to six new water tanks to serve the project site, thereby providing greater water access and increased water pressure; and provide a 1.4-acre parcel for the construction of an interim fire station on the project site to ensure adequate fire protection for the proposed project and surrounding areas. The proposed project design shall also be in conformance with requirements of the County of Los Angeles for emergency ingress and egress and shall be reviewed by Los Angeles County Fire Department and Los Angeles County Department of Building and Safety. Rather, development in the project vicinity would substantially decrease the possibility of wildfires.

7.1.8 HYDROLOGY AND WATER QUALITY

- **Add Water Features or Conditions that Increase Habitat for Mosquitoes and Other Vectors that Transmit Diseases and Result in Increased Pesticide Use:** The proposed project would not introduce any water features or create conditions in which standing water can accumulate that could increase habitat for mosquitoes and other vectors. However, to the extent feasible, proposed development would adhere to applicable prevention and control recommendations according to the California Department of Public Health, the California Department of Pesticide Regulation, and the Centers for Disease Control and Prevention.
- **Result in Point or Nonpoint Source Pollutant Discharges into State Water Resources Control Board designated Areas of Special Biological Significance:** The nearest State Water Resources Control Board-designated Area of Special Biological Significance (ASBS) is the Laguna Point to Latigo Point ASBS located along 24 miles of coast in Ventura and Los Angeles Counties, located approximately 40 miles southwest of the project site. Due to the distance from the project site, development of the NorthLake Specific Plan would not result in point or nonpoint source pollutant discharges into a designated ASBS; no impact would occur.
- **Use Onsite Wastewater Treatment Systems in Areas with Known Geological Limitations or in Close Proximity to Surface Water:** The project site would require annexation into the Sanitation Districts of County of Los Angeles. Once annexation is complete, the wastewater flow originating from the proposed project would discharge into a local sewer line and flow through existing local sewer lines. Wastewater would then be treated by one of ten existing water reclamation plants. Therefore, no impacts related to use of on-site wastewater treatment systems would occur.
- **Place Housing or Structures in a 100-year Flood Hazard Area:** Consistent with the analysis presented in the SCVAP 2012 EIR and according to Exhibit S-4, Floodplains, of the SCVAP 2012, no portion of the proposed project is located in areas designated as Special Flood Hazard Areas or within the boundary of the 100- or 500-Year floodplains. Therefore, the project would not place housing or other structures within a flood hazard area, floodway, or floodplain.
- **Expose People or Structures to a Significant Risk of Loss, Injury or Death Involving Flooding:** The project site is not adjacent to any levee or dam structures, with the exception of the dam associated with Castaic Lake and Castaic Lagoon. However, both of these structures are located downstream of the project site (to the south and east) and would not pose a risk to structures or residents of the project site.
- **Inundation by Seiche, Tsunami, or Mudflow:** The project site is located over 40 miles from the coast; therefore, there would be no threat of a tsunami. The project site is located in the vicinity of Castaic Lake; however, the main area that would be subject to inundation would be Grasshopper Canyon, which currently runs in a general north-south direction and extends the length of the project site. As part of the project' grading, Grasshopper Canyon would be filled and the elevation would be such that Castaic Lake would not represent a threat. Further, project-related grading and development, including landscaping, would minimize exposed ground surface that would be subject to mudflows. Therefore, the project would not create a hazard by placing structures in areas subject to inundation by seiche, tsunami, or mudflow.

7.1.9 LAND USE AND PLANNING

- **Physically Divide an Established Community:** The project site is currently undeveloped with the exception of the NorthLake Hills Elementary School located in the southern portion of the project site. The parcels to the north include six scattered single-family residences. The existing NorthLake residential development is located adjacent to and southeast of the site along Ridge Route Road and additional residential and commercial development in the City of Castaic is located to the south. Castaic Lake and uses associated the Castaic Lake SRA as well as undeveloped lands are located east of the project site. Limited development exists to the north and south, and the project site is bordered by the I-5 freeway to the west. Due to the lack of development on the project site, implementation of the proposed project would not physically divide an established community.
- **Conflict with Hillside Management Criteria, Significant Ecological Areas Conformance Criteria, or Other Applicable Land Use Criteria:** Based on Figure CO-1, Hillsides and Designated Ridgelines in the Santa Clarita Valley, of the SCVAP 2012, the project site is characterized by natural slopes of 25 percent or greater and would qualify as an HMA. Because development of the proposed project was contemplated as part of the previously approved and currently entitled *NorthLake Specific Plan,* which was approved prior to the HMA ordinance, compliance with the HMA ordinance is not required. Development need only to comply with any hillside design standards in effect at the time that the *NorthLake Specific Plan* was approved and as further addressed in the SCVAP 2012. Additionally and as shown on Figure CO-5, Significant Ecological Areas Designated by Los Angeles County, of the SCVAP 2012, the project site is not designated as an SEA.

7.1.10 MINERAL RESOURCES

- **Loss of Availability of a Known, Valuable Mineral Resource or a Locally-Important Mineral Resource Recovery Site:** As shown on Figure 3.10-1, Existing Mineral Resources, of the SCVAP 2012 EIR, there are no mineral resources in the project area. For this reason, development of the project site would not result in the loss of availability of known mineral resources that would be of value to the region and the residents of the state. According to the SCVAP 2012 EIR, there are no oil and natural gas fields, wells, or extraction areas located within the project area. As shown on Figure 3.10-1, Existing Mineral Resources, of the SCVAP 2012 EIR, all identified oil and natural gas resources are located east of I-5 Freeway or south of Lake Hughes Road, outside of the project area. Therefore, there would be no loss of mineral resources or of a locally important mineral resource recovery site.

7.1.11 NOISE

- **Expose People Residing or Working in the Project Area to Excessive Noise Levels Due to Airport Noise:** The Agua Dulce Airpark is located approximately 18 miles west of the project site. According to the Los Angeles County Airport Land Use Plan (2004), the project site is located outside of the 70 Community Noise Equivalent Level (CNEL) noise contour; therefore, aircraft overflights would not significantly contribute to the noise environment and would not subject future residents of the project to excessive noise levels. The project site is not located near a private airstrip.

7.1.12 POPULATION AND HOUSING

- **Induce Substantial Population Growth or Cumulatively Exceed Official Regional or Local Population Projections:** The project proposes development of up to 3,150 dwelling units and would not exceed the current entitlement for the project site (i.e., development of up to 3,623 housing units is allowed), which are the primary means for population growth in an area. Based on an average household size of 3.09 persons per household, as identified in the SCVAP 2012 EIR, the NorthLake Specific Plan would generate approximately 9,734 new residents. Although the project would introduce new population to the area through project implementation, the increase in population has been anticipated and included in regional and local projections, including the recent SCVAP 2012 and its associated EIR, as well as regional planning efforts by SCAG. Therefore, anticipated impacts associated with the project would be less than significant.
- **Displace Substantial Numbers of Existing Housing or People:** Development of the proposed project would not result in the displacement of any existing housing and would not necessitate a need for the construction of replacement housing elsewhere. For this reason, no impacts associated with the displacement of existing housing would occur.

7.1.13 PUBLIC SERVICES

- **Fire Protection:** Fire protection services are provided to the project site by the County of Los Angeles Fire Department. With the introduction of various commercial, industrial, and residential uses on site as part of the proposed project, there would be an associated increase in demand for fire protection services. According to the SCVAP 2012 EIR, to achieve fire protection for all residents of the County's Planning Area, the County Department of Public Works Building and Safety Division and LACoFD would enforce fire standards as they review building plans and conduct building inspections. Additional programs implemented to ensure compliance with established fire standards include: the maintenance of a Countywide Information Map, showing area of high fire hazard areas, and the provision of uniform fire improvement standards for various land uses. Fire stations would also be funded by the Joint Consolidated Annual Tax Bill (Fire Service Funding subsection). As discussed in Section 4.0, a 1.4-acre site will be conveyed to the Los Angeles County Fire Department for future development of a fire station to serve the Project site and surrounding areas (refer to Exhibit 4-1). Additionally, the SCVAP 2012 EIR identifies mitigation measures (MM 3.15-2 and 3.15-3) that require payment of a Developer Fee as well as provision of water service which would reduce impacts to less than significant levels. Therefore, implementation of mitigation and compliance with the policies identified below as set forth in the SCVAP 2012 EIR, would ensure that impacts related to fire protection services would be less than significant.

  SCVAP MM 3.15-2 Concurrent with the issuance of building permits, the project applicant shall participate in the Developer Fee Program to the satisfaction of the County of Los Angeles Fire Department and, prior to the issuance of the 1,750th building permit for VTTM 7336 (Phase 1) the developer shall convey an improved 1.4-acre fire station site to the Los Angeles County Fire Department (see attached "Fire Station Site Requirements").

  SCVAP MM 3.15-3 Adequate water availability shall be provided to service construction activities of any project to the satisfaction of the County of Los Angeles Fire Department.

- **Sheriff Protection:** Sheriff protection services are provided to the project site by the Los Angeles County Sheriff's Department. With the introduction of various commercial, industrial, and residential uses on site as part of the proposed project, there would be an associated increase in demand for sheriff protection services. According to the SCVAP 2012 EIR, the LA County Sheriff's Department has a standard of one sworn officer per 1,000 residents. It was determined that full buildout of the SCVAP 2012, which includes the proposed NorthLake Specific Plan project, would create a need for additional officers to adequately cover the area and meet the standard as well as additional stations to house these officers and incarcerated people. The SCVAP 2012 EIR identifies mitigation measure MM 3.15-4 that requires payment of the Los Angeles County Sheriff's established law enforcement facilities fees for North Los Angeles County, the Law Enforcement Facilities Mitigation Fees as specified in Chapter 22.74 of the Los Angeles County Municipal Code. Payment of fees would fund the acquisition and construction of additional sheriff stations, which would reduce impacts to less than significant levels. Additionally, the Project would implement strategies and design principles to discourage potential criminal behavior and activities, including principles of Crime Prevention Through Environmental Design. Therefore, implementation of mitigation and compliance with the policies identified below as set forth in the SCVAP 2012 EIR, would ensure that impacts related to police protection services would be less than significant.

  SCVAP MM 3.15-4 Development applicant(s) shall be required to pay the Los Angeles County Sheriff's established law enforcement facility fees for North Los Angeles County prior to issuance of a certificate of occupancy on any structure. The fees are for the acquisition and construction of public facilities to provide adequate service to the residents of the County's Planning Area.

- **Schools:** According to the SCVAP 2012 EIR, six public school districts serve the Santa Clarita Valley Planning Area. These local public school districts provide 17 schools including 14 elementary schools; 2 junior high schools, and 1 high school. Consistent with the findings of the SCVAP 2012 EIR, the proposed project would generate an increase in student enrollment within the local school districts. However, compliance with SB 50 will provide full and complete mitigation; therefore, a significant impact would not occur.
- **Parks:** Based on an anticipated population increase of approximately 9,734 new residents, approximately 48.67 acres of parkland would be required to be consistent with the County standard of 5 acres of parkland per 1,000 residents as recommended by the SCVAP 2012. Approximately 791.6 acres of parks and open space are proposed within the NorthLake Specific Plan and, within these areas, approximately 166.9 acres would be designated as parkland and other recreational facilities, including parks, enhanced parkways, trails, a sports park, and neighborhood parks. As part of the project, a portion of this acreage would be designated as public parklands, consistent with the County Code and the Quimby Act. Therefore, impacts to parks would be less than significant.
- **Libraries:** The County of Los Angeles Public Library operates all public libraries within the project area. The County of Los Angeles Public Library System has a service level guideline of 2.75 items per 1,000 residents and 0.5 square foot of library space per 1,000 residents. Implementation of the proposed project could result in the potential for increased demand for library services to the extent that expansion and construction of new facilities would be required. Consistent with the SCVAP 2012 EIR, implementation of the identified mitigation measure (MM 3.15-1), summarized below, requiring payment of library fees would reduce the potential impact to a less than significant level.

SCVAP MM 3.15-1 Project developers shall pay the current library fee at the time of building permit issuance ($885.00 per residential unit for FY 2016-17) to the County of Los Angeles to offset the demand for library items and building square footage generated by the proposed project. The library mitigation payment shall be made on a building permit by building permit basis by the developer for residential projects.

- **Other Public Facilities:** As discussed in the SCVAP 2012 EIR, there are a variety of healthcare facilities in the project area, including the Henry Mayo Newhall Memorial Hospital, which is the primary acute care and trauma hospital in the Santa Clarita Valley, and several urgent care facilities. Healthcare services are provided based on demand. Because these services are not government-funded, as demand increases through population growth, the number of healthcare facilities and services increases, as well. Consistent with the analysis provided in the SCVAP 2012 EIR, the HMNMH received approval from the City of Santa Clarita to expand its facilities to better meet the needs of the Santa Clarita Valley area, including the proposed NorthLake Specific Plan site, as proposed. As of March 2015, improvements have included the complete renovation and expansion of the intensive care unit; the opening of the Henry Mayo Center; the opening of the neonatal intensive care unit; the opening of a new operating room, as well as the expansion and updating of the emergency and imaging departments; and construction of the new infusion center. Future expansion plans for the HMNMH include construction of a new inpatient hospital building that will add up to 120 new beds, new medical office buildings designed to support hospital programs and services, a new central plan, new parking structures, and a helipad. Because these improvements are intended to address long-term growth associated with the SCVAP 2012, which includes the NorthLake Specific Plan, impacts on health services would be less than significant.

7.1.14 RECREATION

- **Increased Use of Existing Neighborhood and Regional Parks or Other Recreational Facilities:** As part of the project approximately 166.9 acres would be designated as parkland and other recreational facilities, including parks, enhanced parkways, trails, a sports park, and neighborhood parks. These areas would be developed as a combination of public and private parklands and recreational facilities which would serve the anticipated demand resulting from project development as well as a need for park and recreational facilities within the local project area. Therefore, impacts to parks would be less than significant.
- **Construction or Expansion of Recreational Facilities:** As discussed previously, the proposed project would include the development of approximately 166.9 acres of public and private parklands and recreational uses; however, development of these uses would occur entirely within the development footprint assumed for the proposed project. Impacts would be less than significant.
- **Interfere with Regional Open Space Connectivity:** Due to existing development to the south and the I-5 freeway to the west, the project site does not serve as key open space connection. Additionally, the Castaic Lake SRA trail system, located east of the project site and which provides connection to local open space areas in the region, would not be impacted through development of the project and would continue to provide trail connectivity to open space areas. It should be noted, however, that various “informal” or unofficial trails traverse the project site and likely connect to portions of the Castaic Lake SRA trail system. Development of the project site would preclude future use of these trails; however, use of these trails within the boundaries of the project site is prohibited (i.e.,

users are trespassing on private property). Therefore, this would not represent a significant impact.

7.1.15 TRAFFIC AND CIRCULATION

- **Changes in Air Traffic Patterns:** The proposed project will not impact air traffic patterns. No airports are located in the immediate project area. Regional air traffic demands would be accommodated by Los Angeles International Airport, John Wayne Airport, Ontario Airport, Long Beach Airport, and San Diego International Airport.
- **Increase Hazards Due to a Design Feature:** According to the SCVAP 2012 EIR, hazards due to roadway design would be evaluated on a project-by-project basis. The proposed project would include implementation of the Access and Circulation Plan that provides circulation and design standards for the layout of arterial highways and local collector streets in support of the Northlake land use plan. Because the NorthLake Specific Plan, including the Access and Circulation Plan, was evaluated as part of the NorthLake 1992 EIR and approved as part of the Specific Plan, no significant impacts are anticipated. Further, all roadway design would comply with applicable design standards and requirements set forth in the NorthLake Specific Plan and would be subject to review and approval by the County of Los Angeles Department of Public Works. Therefore, impacts would be less than significant.

7.1.16 UTILITIES AND SERVICE SYSTEMS

- **Exceed Wastewater Treatment Requirements of Either the Los Angeles or Lahontan Regional Water Quality Control Boards:** The project site is located within the service area of the County of Los Angeles Sanitation Districts and would be served by Santa Clarita Valley Sanitation District (SCVSD). Waste Discharge Requirements are issued by the Los Angeles Regional Water Quality Control Board (LARWQCB) under the provisions of the *California Water Code* (Division 7 Water Quality, Chapter 4 Regional Water Quality Control, Article 4 Waste Discharge Requirements). The first tier of requirements regulates the discharge of wastes which are not made to surface waters but which may impact the region's water quality by affecting underlying groundwater basins. As a second tier of requirements, operational discharge flows treated at the Valencia Water Reclamation Plant (VWRP) would be required to comply with waste discharge requirements specifically identified for the facility. Because the project would be subject to all applicable requirements governing the types of discharge entering the wastewater collection system, the proposed project would not discharge wastewater into the domestic sewer system that would cause the VWRP to exceed requirements, as determined by the LARWQCB's Water Discharge Requirements resulting in a less than significant impact. The SCVSD's compliance with conditions, permits, and discharge requirements would further ensure that wastewater treatment requirements would not be exceeded.

7.2 SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

Section 15126.2(b) of the CEQA Guidelines requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. The environmental impacts of the proposed Project are discussed in Sections 5.1 through 5.12 of this EIR. With incorporation of SP EIR MMs, SCVAP EIR MMs, and additional project-specific MMs, the proposed project would result in less than significant impacts for the following topical issues: biological resources, cultural resources, energy, fire hazards, geology and soils, greenhouse gas emissions, hydrology and water quality, land use and planning, and utilities.

Even with incorporation of the SP EIR MMs, SCVAP EIR MMs and additional project-specific MMs, the proposed project would result in the following significant and unavoidable impacts. There are no feasible mitigation measures to reduce these potentially significant project and cumulative impacts to a less than significant level; therefore adoption of a Statement of Overriding Considerations is required.

- ***Operational Air Quality Impacts.*** Long-term emissions would remain significant and unavoidable for CO, VOC, NO_X, PM10, and PM2.5 on a regional level, after implementation of mitigation measures.
- ***Construction Air Quality Impacts.*** Construction NOx emissions, both regional and local, would be significant and unavoidable with implementation of mitigation measures.
- ***Cumulative Air Quality Impacts.*** The project's contribution toward long-term cumulative impacts to regional O_3, NO_2, PM10, and PM2.5 concentrations would be cumulatively significant and unavoidable.
- ***Construction Noise Impacts.*** There would be significant and unavoidable vibration and noise impacts from blasting.
- ***Operational Noise Impacts.*** Off-site residential uses and the NorthLake Elementary School would experience a significant and unavoidable impact related to noise from Project-generated traffic on Ridge Route Road north of Castaic Lake Road and off-site residential uses would experience a significant and unavoidable cumulative impact related to noise from Project-generated traffic on Ridge Route Road north of Lake Hughes Road.
- ***Cumulative Noise Impacts.*** The project's contribution toward long-term cumulative off-site residential uses would experience a significant and unavoidable cumulative impact related to noise from Project-generated traffic on Ridge Route Road north of Castaic Lake Road and Ridge Route Road north of Lake Hughes Road.
- ***Project and Cumulative Traffic Impacts.*** The proposed Project would result in significant and unavoidable cumulative impacts at the following intersections:
    - **The Old Road and I-5 Southbound Ramps.** Horizon Year 2028 (The intersection is partially under Caltrans' jurisdiction).
    - **I-5 Northbound Ramps and Lake Hughes Road.** Horizon Year 2028 (The intersection is partially under Caltrans' jurisdiction).
    - **I-5 Southbound On-Ramp and Parker Road.** Existing Plus Project and Horizon Year 2028 (This intersection is partially under Caltrans' jurisdiction).
    - **I-5 Northbound Off-Ramp and Ridge Route Road.** Existing Plus Project and Horizon Year 2028 (This intersection is partially under Caltrans' jurisdiction).
    - **Ridge Route Road at Lake Hughes.** Existing Plus Project and Horizon Year 2028. This intersection would be mitigated to LOS C (0.78), better than the LOS D threshold established in the Los Angeles County General Plan and the Santa Clarita Valley Area Plan, One Valley One Vision. However, the intersection would not be fully mitigated to the LOS C (0.74) threshold utilized in the County's Traffic Impact Analysis Guidelines. Improvements to fully mitigate the intersection to the LOS C threshold were considered, such as a southbound free-right turn lane; however, this was determined to not be geometrically feasible. Therefore, this impact would remain significant and unavoidable.

7.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL EFFECTS

Section 15126.2(c) of the CEQA Guidelines requires a discussion of any significant irreversible environmental changes that would be caused by a proposed project. Specifically, Section 15126.2(c) states:

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

Generally, a project would result in significant irreversible environmental changes if:

- The primary and secondary impacts would generally commit future generations to similar uses;
- The project would involve a large commitment of nonrenewable resources;
- The project involves uses in which irreversible damage could result from any potential environmental accidents associated with the project; and
- The proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Determining whether the proposed project may result in significant irreversible effects requires a determination of whether key resources would be degraded or destroyed in such a way that there would be little possibility of restoring them. The proposed project site has historically been used for grazing purposes. However, the County's General Plan, the SCVAP, and the NorthLake Specific Plan anticipate that the site will eventually support uses that would provide residential opportunities and generate jobs and revenue. Additionally, the proposed project would permanently alter the site by converting the undeveloped property which has previously been used for grazing purposes to urban uses. This is a significant irreversible environmental change that would occur as a result of project implementation. Because no significant mineral or agricultural resources were identified within the project limits, no significant impacts related to these issues would result from development of the project site.

Construction and long-term operation of the proposed project would require the irreversible commitment and reduction of nonrenewable and/or slowly renewable resources, including: petroleum fuels and natural gas (for vehicle emissions, construction, lighting, heating, and cooling of structures); and lumber, sand/gravel, steel, copper, lead, and other metals (for use in building construction, piping, and roadway infrastructure). Other resources that are slow to renew and/or recover from environmental stressors would also be impacted by project implementation, such as air quality (through the combustion of fossil fuels and production of greenhouse gases) and water supply (through the increased potable water demands for drinking, cleaning, landscaping, and general maintenance needs). However, their use is not expected to negatively impact the availability of these resources as the project remains consistent with the current land use and zoning designation under the NorthLake Specific Plan, which indicates that growth is anticipated by the County.

An increased commitment of public services (e.g., police, fire, sewer and water services) would also be required. Project development is an irreversible commitment of the land, energy resources, and public services. After the 50- to 75-year structural lifespan of the buildings is reached, it is improbable that the site would revert to its current use due to the large capital investment that will already have been committed.

7.4 GROWTH-INDUCING IMPACTS

CEQA requires a discussion of ways in which the proposed project could be growth inducing. The CEQA Guidelines identify a project as growth inducing if it fosters economic or population growth or if it encourages the construction of additional housing either directly or indirectly in the surrounding environment (CEQA Guidelines, Section 15126.2[d]). New employees from commercial or industrial development and new population from residential development represent direct forms of growth. These direct forms of growth have a secondary effect of expanding the size of local markets and inducing additional economic activity in the area.

In accordance with Section 15126.2(d) of the CEQA Guidelines, the growth-inducing analysis of the proposed project must address two key issues. The first is the potential for the project to foster economic or population growth or the construction of additional housing (either directly or indirectly) in the surrounding environment. The second issue is the potential for the project to encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. Typically, this issue involves the project's potential to induce further growth by the expansion or extension of existing services, utilities, or infrastructure. By definition, the CEQA Guidelines state that "it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."

As described in detail in Section 4.0, Project Description, the proposed project involves the development of the Project site with residential, commercial, industrial, recreational, utility, school, and open space uses. Approximately 297.2 acres would be set aside as undisturbed open space areas. The project would be located adjacent to the Castaic Lake State Recreation Area and Castaic Lake to the east; residential development to the south; Interstate 5 (I-5) to the west; and open space and the Angeles National Forest to the north beyond the Project site. Therefore, property to the north and to the east of the project site would not be able to accommodate new development due to the existing open space/recreational uses of the land. Property to the south of the project site is already developed.

Property to the west of I-5 may be further developed in the future; however, the development of these areas would not be the result of the proposed project. This project is the implementation of a previous commitment to develop 3,623 residential units; 13.2 acres of commercial uses; and 50.1 acres of industrial uses, including a golf course, school, park, and fire station site. These commitments were made in 1992 when the *NorthLake Specific Plan* was adopted. Therefore, this project is developing housing that was previously planned for and approved. Additionally, Los Angeles County is experiencing a shortage of all housing types and the proposed project would be accommodating an existing population and housing demand rather than providing a surplus or inviting more growth.

With respect to the second criteria for growth inducement, the proposed project would not extend or expand services, utilities, or infrastructure beyond those areas already planned for by the NorthLake Specific Plan. The proposed project includes the construction of five new water tanks solely to ensure the provision of water supply and fire-flow to the Project site. It is important to note that the extension of utilities would not promote development in other areas because the developable land surrounding the project site is either already developed or not able to be developed (Angeles National Forest/Castaic Lake State Recreation Area), with the exception of

some property west of I-5. These properties (if developed in the future) would not be served through the extension of utilities or roadways from Project site because of their location on the other side of I-5; therefore, development of these properties would not be hastened by the development of the Specific Plan. Thus, with regard to the second criterion, the proposed project would not be considered growth-inducing.

Additionally, it is noted that the proposed Project would implement the *NorthLake Specific Plan* and would not involve a Specific Plan or Area Plan amendment or zone change. Additionally, no changes to any of the County's Code are proposed or required to implement this project. SP EIR MMs, SCVAP EIR MMs, and additional project-specific MMs have been identified in Sections 5.1 through 5.12 of this SEIR to ensure that implementation of the project complies with all applicable regional and County plans, policies, and ordinances to ensure that there are no conflicts with adopted land development regulations, and environmental impacts are minimized. The proposed project does not propose any precedent-setting actions that, if approved, would specifically allow or encourage other projects and resultant growth to occur.

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