

DRAFT

**Environmental Impact Report (EIR)
(SCH #2020020548)**

For

CHADWICK RANCH ESTATES SPECIFIC PLAN

Prepared for:

CITY OF BRADBURY



City of Bradbury Planning Department

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PROJECT INFORMATION SHEET

- 1. Project Title** Chadwick Ranch Estates Specific Plan

- 2. CEQA Lead Agency and Address** City of Bradbury
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- 3. Contact and Phone Number** Trayci Nelson, Project Manager
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- 4. Project Applicant** Nevis Capital, LLC, C/O TRG Land Inc.
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- 5. Project Location** The project site is in the northeast part of the City of Bradbury in the southern foothills of the San Gabriel Mountains. The Assessor's Parcel Numbers (APNs) for the project site are: 8527-005-001, 8527-005-004, and 8527-001-010. The three parcels total approximately 111.8 acres. The project site lies within the Bradbury Community Services District.

- 6. Project site General Plan Designation** Open Space, Privately Owned Undeveloped

- 7. Project site Zoning** Agriculture/Estate Residential (A-5), Specific Plan Overlay

- 8. Surrounding Land Uses and Setting** The project site is surrounded by vacant land to the north; the Duarte Wilderness Preserve and residential uses in the City of Duarte to the east; Spinks Debris Basin, Bradbury Debris Basin, and residential uses in the City of Bradbury to the south; and vacant land and the Bradbury Debris Basin and Spinks Debris Disposal Site to the west. Urban development in the cities of Bradbury and Duarte is generally southwest, south, and southeast of the project site.

- 9. Description of Project** The Chadwick Ranch Estates Specific Plan project includes requests for several discretionary permits that would allow grading of 14 lots for single-family estate residences; construction of related roadways and utilities; and designation of 15 lettered nonresidential lots consisting of open space, debris

basins and a water quality basin, a reservoir, a private street and an emergency access.

Below is a list of the discretionary permits required from the City for the proposed project:

General Plan Amendment (Case No. GPA 19-001). An amendment to the Land Use Element of the General Plan which modifies the current land use designation for the project site from Open Space, Privately Owned Undeveloped to Specific Plan and makes other corresponding changes to the Land Use Element to reflect this change.

Chadwick Ranch Estates Specific Plan (Case No. SP 19-001). Approval of the proposed Chadwick Ranch Estates Specific Plan to guide development of, and become the zoning regulations for the project site.

Zone Change (Case No. ZC 19-001). A change of Zone from Agriculture/Estate Residential (A-5), SP Overlay, which allows for five-acre minimum single-family lots with the adoption of a Specific Plan, to Chadwick Ranch Estates Specific Plan. The Zone Change is required to amend the Bradbury Zoning Map and Development Code to be consistent with the General Plan.

Zoning Code Amendment (Case No. ZCA 19-001). An amendment to the Development Code of the City of Bradbury to add references to the revised General Plan Land Use designation and reference the Chadwick Ranch Estates Specific Plan.

Vesting Tentative Tract Map No. 82349. Vesting Tentative Tract Map No. 82349 subdivides the project site into 14 numbered estate residential parcels and 15 lettered non-residential lots.

Tree Preservation and Protection Plan/Tree Removal Permit (Case No. TP 19-001). A plan identifying regulated trees within the project site classified as native, prominent, significant and orchard trees, the impacts associated with removal, and recommended measures for tree protection, relocation, removal and mitigation. This includes a proposed plan for the removal of significant on-site trees.

10. Other Agencies whose Approval is Required

Agencies that will review the proposed project include but are not limited to the following:

- Los Angeles County Board of Supervisors



- Los Angeles County Fire Department
- Los Angeles Department of Public Health
- Bradbury Estates Community Services District
- California Department of Fish and Wildlife
- U.S. Army Corps of Engineers
- Regional Water Quality Control Board

- 11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code § 21080.3.1? If so, has consultation begun?**
- The City of Bradbury has concluded the consultation process. The Native American Heritage Commission (NAHC) was contacted to obtain a list of tribes that are affiliated with the project area, and the City of Bradbury also made use of other tribal contacts based on AB 52 consultation for prior projects. The City of Bradbury sent letters to those tribes to determine if they have an interest in the proposed project and to see if they request agency to agency consultation. The District received a response from the Gabrieleno - Kizh Nation and proceeded to meet with representatives of that tribe.



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ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Stands for:
°F	degrees Fahrenheit
AB	Assembly Bill
AB 32	California Global Warming Solutions Act of 2006
AB 939	California Integrated Waste Management Act
AB 1327	California Solid Waste Reuse and Recycling Access Act of 1991
ADA	Americans with Disabilities Act
ADT	average daily traffic
AMSL	above mean sea level
APE	area of potential effect
APN	Assessor's Parcel Number
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
AST	above ground storage tank
ASTM	American Society for Testing and Materials
ATP	Active Transportation Plan
bgs	below ground surface
BMPs	Best Management Practices
CAAQS	California Ambient Air Quality Standards
Cal-Am	California American Water Company
Cal/OSHA	California Division of Occupational Safety and Health
CalEEMod	California Emissions Estimator Model
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CAOs	Cleanup and Abatement Orders
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDOs	Cease and Desist Orders
CDFW	California Department of Fish & Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGS	California Geologic Society
CH ₄	methane
CHP	California Highway Patrol
CHRIS	California Historic Resources Inventory System
CIWMA	State of California Integrated Waste Management Act
CMP	Congestion Management Program
CNDDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level



Acronym/Abbreviation	Stands for:
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO ₂	carbon dioxide
CO _{2e}	carbon dioxide equivalent
CRC	California Residential Code
CRHR	California Register of Historic Resources
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel scale
DIF	Development Impact Fees
DMA	drainage management area
DOC	California Department of Conservation
DOSH	California Division of Safety and Health
DRP	Design Review Project
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EMS	Emergency Medical Service
EOP	Emergency Operations Plan
ESA	Endangered Species Act
ESA	Environmental Site Assessment
FAR	floor area ratio
FFPD	Fontana Fire Protection District
FHSZ	Fire Hazard Severity Zones
FMMP	Farmland Mapping and Monitoring Program
FRAP	CalFire Fire Resource and Assessment Program
FTA	Federal Transit Administration
GHG	greenhouse gas
GPCD	gallons per capita per day
GWP	global warming potential
GWTS	groundwater treatment system
HAZNET	Hazardous Waste Tracking System
HCP	Habitat Conservation Plan
HFCs	hydrofluorocarbons
Hz	hertz
IFC	International Fire Code
IPCC	Intergovernmental Panel on Climate Change
IS/MND	Initial Study/Mitigated Negative Declaration
kWh	killowatt hours
L ₉₀	noise level that is exceeded 90percent of the time
L _{eq}	equivalent noise level
LED	light-emitting diode
LHMP	Local Hazard Mitigation Plan
LID	Low Impact Development
L _{max}	root mean square maximum noise level
LOS	Level of Service
LRA	Local Responsibility Area



Acronym/Abbreviation	Stands for:
LRP	Legally Responsible Person
LSTs	Localized Significance Thresholds
LUST	Leaking Underground Storage Tank
M-1	Light Industrial zoning designation
MBTA	Migratory Bird Treaty Act
MCR	Master Case No.
MLD	Most Likely Descendant
MM(s)	mitigation measure(s)
MMRP	Mitigation Monitoring and Reporting Program
MMT	million metric tons
MMTCO _{2e}	million metric tons of CO _{2e}
MND	Mitigated Negative Declaration
MRZ	Mineral Resource Zone
MS4	municipal separate storm sewer systems
MWD	Metropolitan Water District of Southern California
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Communities Conservation Plan
ND	Negative Declaration
NHPA	National Historic Preservation Act
NO	nitric oxide
NO ₂	nitrogen dioxide
NO _x	Nitrogen oxides
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O ₃	Ozone
OPR	Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
Pb	lead
PFCs	perfluorocarbons
PM	particulate matter
PM _{2.5}	fine particulate matter
PM ₁₀	respirable particulate matter
Porter-Cologne	Porter-Cologne Water Quality Control Act
PPM	parts per million
PPV	peak particle velocity
PRDs	Permit Registration Documents
PRP	potential responsible party
Qyf5	Young Alluvial Fan Deposits, unit 5
RCRA	Resource Conservation and Recovery Act
REC(s)	recognized environmental condition(s)
RMS	root mean square



Acronym/Abbreviation	Stands for:
ROG	Reactive organic gases
ROW	right-of-way
RP	Regional Plant
RWQCB	Regional Water Quality Control Board
SARWQCB	Santa Ana Regional Water Quality Control Board
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SF ₆	sulfur hexafluoride
SIP	State Implementation Plan
SLF	Sacred Lands File
SMARTS	Stormwater Multi-Application and Report Tracking System
SO ₂	sulfur dioxide
SoCalGas	Southern California Gas Company
SOPs	Standard Operating Procedures
SR	State Route
SRA	State Responsibility Area
SRAs	source receptor areas
SSP	Sunset Specific Plan
STIP	Statewide Transportation Improvement Program
SUSMP	Standard Urban Stormwater Mitigation Plan
SVE	soil vapor extraction
SWP	California State Water Project
SWRCB	California State Water Resources Control Board
SWPPP	Stormwater Pollution Prevention Plan
TCRs	tribal cultural resources
TMP	Traffic Management Plan
USDA	United States Department of Agriculture
USGS	United States Geological Survey
USEPA	United States Environmental Protection Agency
UWMP	Urban Water Management Plan
VCP	Vitrified Clay Pipe
VdB	vibration decibels
VHFHSZs	very high fire hazard severity zones
VMT	vehicle miles traveled
VOC	volatile organic compound
WEAP	Worker Environmental Awareness Program
WQMP	Water Quality Management Plan
WOUS	water(s) of the United States

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

This section has been prepared pursuant to the California Environmental Quality Act (CEQA) for the proposed Chadwick Ranch Estates Project (Project). In accordance with State CEQA Guidelines § 15123, this section provides a brief project description; identifies significant effects and proposed mitigation measures or alternatives that would reduce or avoid those effects; describes areas of controversy known to the Lead Agency and issues to be resolved; summarizes alternatives; and summarizes environmental impacts.

Purpose of this Draft EIR

As described in § 15123(a) and 15362 of the CEQA Guidelines, an EIR is an informational document that will inform public agency decision-makers and the public of the significant environmental effects of a project, identify possible ways to minimize any significant effects, and describe reasonable project alternatives. Therefore, the purpose of this Draft EIR is to focus the discussion on the Project's potential environmental effects that the City of Bradbury, as the Lead Agency, has determined to be, or potentially may be significant. In addition, feasible mitigation measures are recommended, when applicable, that could reduce or avoid the Project's significant environmental impacts.

This Draft EIR serves as the environmental document for all actions associated with the Project. This Draft EIR is a "Project EIR" as defined by §15161 of the CEQA Guidelines. Furthermore, this Draft EIR complies with §15064 of the CEQA Guidelines which discusses determining the significance of the environmental effects caused by a project.

Draft EIR Focus

The Initial Study for the Project was distributed for public review between February 28, 2020 and March 30, 2020, for 31 days, in excess of the 30-day required distribution under CEQA. The Initial Study provides a detailed discussion of the potential environmental impacts of the Project and the reasons that each environmental topic is or is not analyzed in this Draft EIR. The Initial Study found the potential for significant impacts in the following environmental issues areas, although not in all subtopics within these areas:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils (and Paleontology)
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Fire Protection Services and Wildfire Hazards

The threshold questions that were not screened out in the Initial Study prepared for the project are analyzed in this Draft EIR. It was determined through the Initial Study that the Project would not have the potential to result in significant impacts related to: Agriculture and Forestry Resources, Mineral Resources, Population and Housing, Public Services, and Recreation, as well as certain other subtopic issues within the other categories. Therefore, these areas were not analyzed in this Draft EIR. The Initial Study can be found at Appendix G.

Draft EIR Organization

This Draft EIR is comprised of the following sections:

Executive Summary. This section describes the purpose of this Draft EIR, Draft EIR focus and effects found not to be significant, Draft EIR organization, project summary, areas of controversy and issues to be resolved, public review process, summary of alternatives, and summary of environmental impacts and mitigation measures.

1.0 Introduction. Describes the purpose and use of the draft EIR, provides a brief overview of the proposed project, and outlines the organization of the draft EIR.

2.0 Project Description. This section describes the project location, existing conditions, project objectives, and characteristics of the project.

3.0 Environmental Setting, Impacts, and Mitigation Measures. For each environmental topic, describes the existing physical and regulatory setting, impact significance thresholds, the environmental impact analysis, the conclusions reached regarding impact significance, mitigation measure requirements (if any), and the level of impact significance after mitigation.

4.0 Cumulative Impacts. Describes the potential cumulative impacts of the proposed project.

5.0 Other CEQA Considerations. This section includes various subsections that address the growth-inducing impacts of the proposed project and identifies any significant and unavoidable adverse impacts of the proposed project.

6.0 Alternatives to the Proposed Project. This section analyzes a reasonable range of project alternatives, including the No Project/No Action Alternative and Reduced Intensity (9-lot) Alternative.

7.0 References. Identifies the references cited in the EIR/EIS, including the documents (printed references) and individuals (personal communications) consulted in preparing this document.

8.0 List of Preparers. Identifies the agencies, consultants, and individuals involved in preparing this Draft EIR.

Appendices. Presents data supporting the analysis and contents of this Draft EIR.

This Draft EIR includes the following appendices:

- Appendix A – Notice of Preparation
- Appendix B – Notice of Completion
- Appendix C – Summary Form
- Appendix D – Newspaper Affidavit
- Appendix E – Initial Study Distribution
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- Appendix Q – Hydrology/Hydraulics Report and LID Plan
- Appendix R – Well Sites Evaluation Memo
- Appendix S – Noise Analysis
- Appendix T – VMT Memo
- Appendix U – Water System Memo and CalAM Water Will Serve Notice
- Appendix V – Chadwick Ranch Estates Specific Plan
- Appendix W – Energy Use Calculations

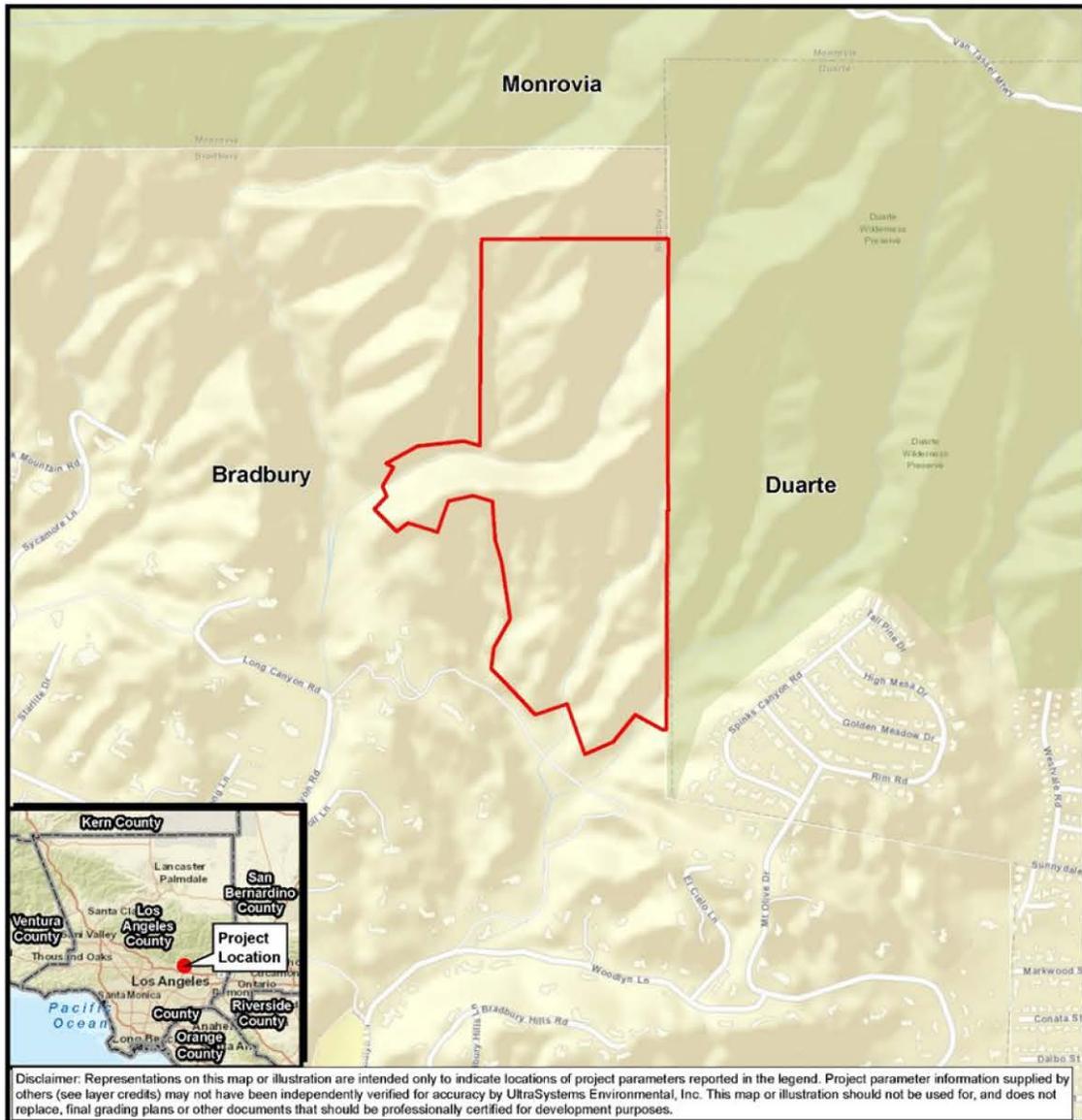
Existing Project Site Conditions

The project site is within the northern portion of the San Gabriel Valley and the urbanized portion of the Los Angeles basin, in the southern foothills of the San Gabriel Mountains, near the southern boundary of the Angeles National Forest. **Figure ES-1, *Project Site Vicinity Location Map***, shows the project site location.

The project site is vacant; comprises approximately 111.8 acres and is heavily vegetated with trees and shrubs, the majority of which is mixed chaparral with inclusions of coastal sage scrub, as well as native scrub oak woodland and scattered large oaks on the canyon floor areas. **Figure ES-2, *Aerial View of The Project Site and Vicinity***, shows an aerial photograph of the project site and surroundings. The existing topography of the northern half of the project site is very steep, sloping from the northeast to the southwest with a high point of 1,790 feet above mean sea level (amsl). The southern half of the project site is fairly steep, with rolling terrain sloping towards the south and a low point of 790 feet amsl.

The General Plan land use designation for the project site is Open Space–Privately Owned Undeveloped, which permits maximum density of one dwelling unit per five acres. The zoning designation for the project site is A-5 (SP) (Agriculture Residential Estate, 5 Acre Minimum) with a Specific Plan Overlay. Any development of this area requires a Specific Plan.

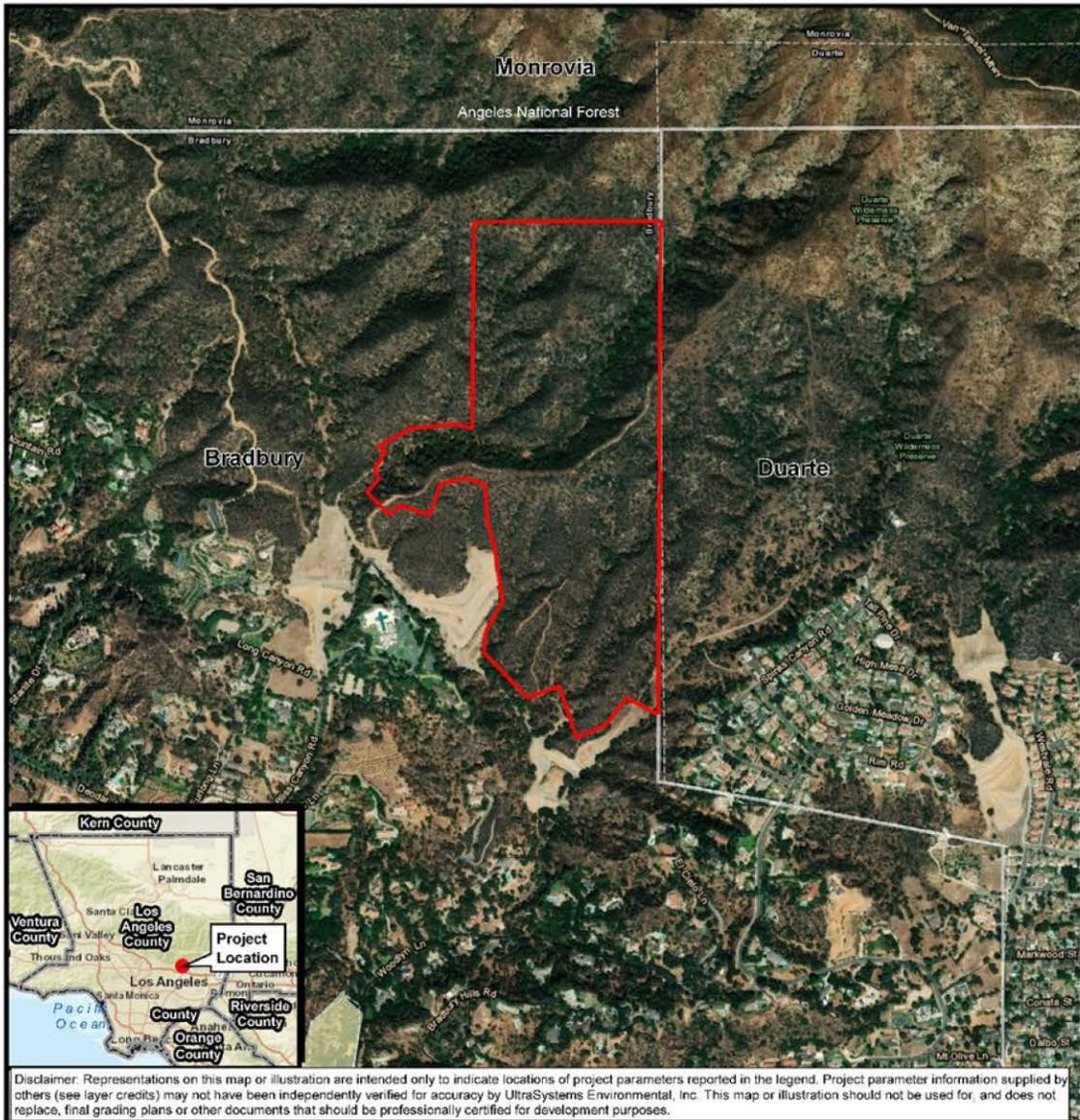
Figure ES-1
PROJECT SITE VICINITY LOCATION MAP



September 26, 2019

<p>Scale: 1:12,000</p> 	<p>Legend</p> <p> Project Boundary</p>	<p>Chadwick Ranch Estates Project</p> <p>Project Site and Vicinity</p>
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Figure ES-2
AERIAL VIEW OF THE PROJECT SITE AND VICINITY



Path: J:\Projects\6081_Lake_Hughes_MM_2_47\UEI_Data\Land_Cover_Types\7023_Bradbury_31-2_Project Site Aerial_2019_09_26.mxd. Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, DeLorme, IGN, IGP, swisstopo, and the GIS User Community. Sources: Esri, HERE, DeLorme, USGS, Inmap, Ingram P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, Mapbox, OpenStreetMap contributors, and the GIS User Community. Esri, HERE, DeLorme, Mapbox, OpenStreetMap contributors. Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, UNIP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, Infrared P Corp., Esri, HERE, DeLorme, TomTom, Mapbox, OpenStreetMap contributors, and the GIS user community; Teale Data Center GIS Solutions Group, 2003; CA Dept. of Conservation, March 2013; UltraSystems

September 26, 2019

Scale: 1:12,000

0 500 1,000 Feet

0 180 360 Meters

Legend

Project Boundary

Chadwick Ranch Estates Project

Aerial View of Project Site and Vicinity

Description of the Proposed Project

Project Overview

Discretionary Approvals

The project includes requests for several discretionary approvals from the City of Bradbury that would allow creation of 14 lots for single-family estate residences; grading of the lots; construction of related roadways and utilities; and creation of 15 lettered nonresidential lots consisting of conservation areas; open space; debris and a water quality basin; a reservoir; a private street; and emergency access.

- **General Plan Amendment (Case No. GPA 19-001).** An amendment to the Land Use Element of the General Plan which modifies the current land use designation for the project site from Open Space, Privately Owned Undeveloped to Specific Plan and makes other corresponding changes to the Land Use Element to reflect this change.
- **Chadwick Ranch Estates Specific Plan (Case No. SP 19-001).** Approval of the proposed Chadwick Ranch Estates Specific Plan to guide development of and become the zoning regulations for the project site.
- **Zone Change (Case No. ZC 19-001).** A change of zone from Agriculture/Estate Residential (A-5), Specific Plan Overlay, which allows for five-acre minimum single-family lots with the adoption of a Specific Plan, to Chadwick Ranch Estates Specific Plan. The Zone Change is required to amend the Bradbury Zoning Map and Development Code to be consistent with the General Plan.
- **Zoning Code Amendment (Case No. ZCA 19-001).** An amendment to the Development Code of the City of Bradbury to add references to the revised General Plan Land Use designation and reference the Chadwick Ranch Estates Specific Plan.
- **Vesting Tentative Tract Map No. 82349.** Proposed Vesting Tentative Tract Map No. 82349 subdivides the project site into 14 numbered estate residential parcels and 15 lettered non-residential lots.
- **Tree Preservation and Protection Plan/Tree Removal Permit (Case No. TP 19-001).** A plan identifying regulated trees within the project site classified as native, prominent, significant and orchard trees, the impacts associated with removal, and recommended measures for tree protection, relocation, removal and mitigation. This includes a proposed plan for the removal of significant on-site trees.

Lots

The Project would involve division of the property into 14 residential lots and 15 lettered lots for non-residential purposes. The 14 residential lots will be graded to allow construction of a primary home, secondary living quarters, and other ancillary structures including, but not limited to, garages. Lot areas would vary from approximately 28,217 square feet (0.65 acre) to 91,511 square feet (2.1 acres). The remainder of the project site would be subdivided into 15 non-residential parcels, three of which would be for conservation purposes; six of which would be open space; three developed with debris basins and a water quality basin; one with a reservoir; one a private street; and one an emergency access. **Table ES-1, Chadwick Ranch Estates Project Statistical Summary by Parcel/Lot,** provides a statistical breakdown of the lot areas, pad areas, and total areas associated with each of the 14 numbered residential parcels, and similar information for each of the 15 lettered non-residential parcels comprising the project site. **Figure ES-3, Conceptual Site Plan,** shows the project site plan including the 14 residential and 15 nonresidential lots.

**Table ES-1
CHADWICK RANCH ESTATES PROJECT STATISTICAL SUMMARY BY PARCEL/LOT**

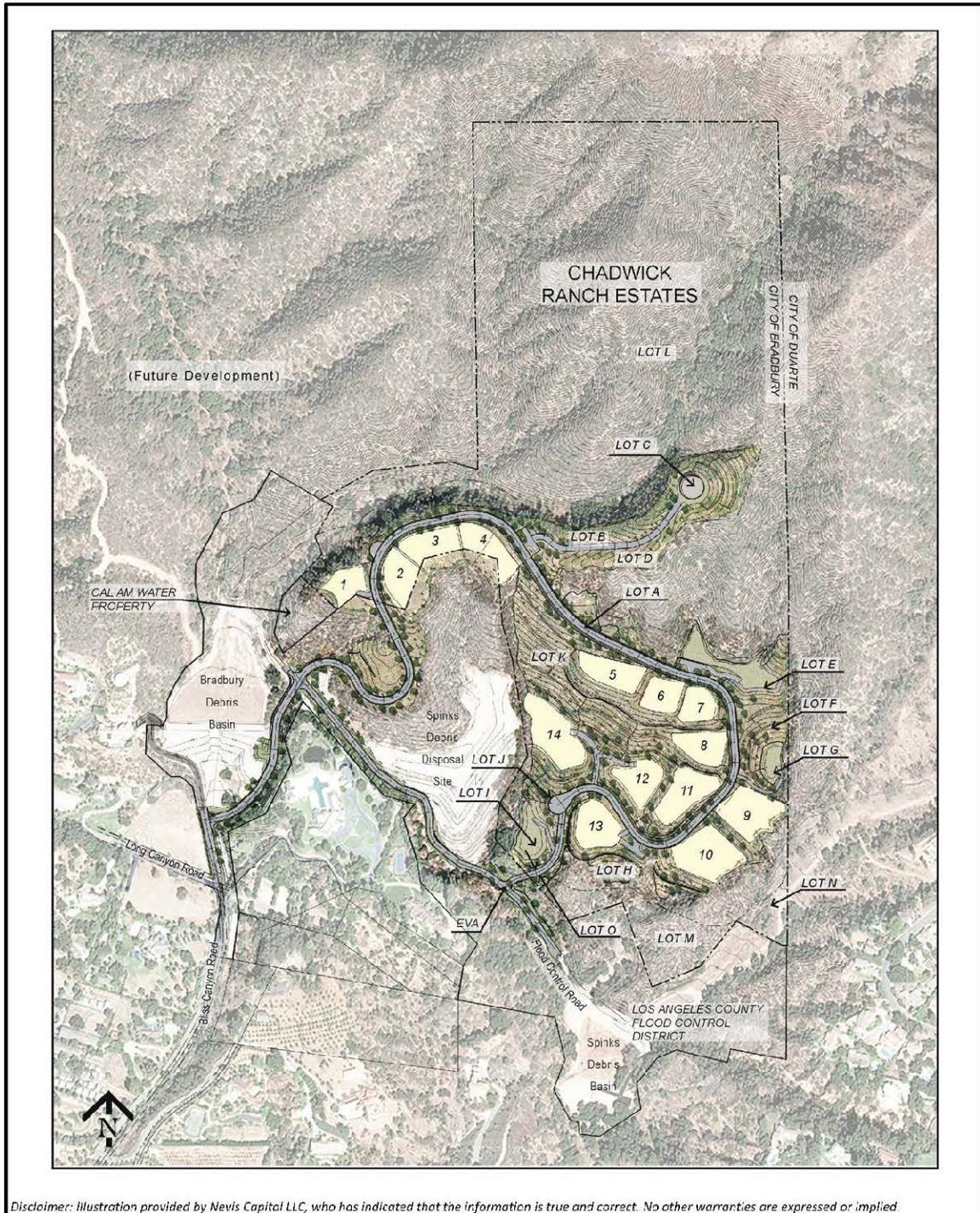
Parcel/Lot	Land Use	Pad Area	Lot Area SF/Acreage
1	Residential Estate	20,000 sf	30,121 sf/0.7 ac
2	Residential Estate	26,000 sf	33,296 sf/0.8 ac
3	Residential Estate	28,000 sf	32,283 sf/0.7 ac
4	Residential Estate	29,000 sf	38,704 sf/0.9 ac
5	Residential Estate	31,000 sf	31,577 sf/0.7 ac
6	Residential Estate	22,000 sf	29,117 sf/0.7 ac
7	Residential Estate	20,000 sf	28,217 sf/0.6 ac
8	Residential Estate	26,000 sf	39,517 sf/0.9 ac
9	Residential Estate	41,000 sf	52,112 sf/1.2 ac
10	Residential Estate	48,000 sf	70,082 sf/1.6 ac
11	Residential Estate	37,000 sf	67,008 sf/1.5 ac
12	Residential Estate	27,000 sf	75,248 sf/1.7 ac
13	Residential Estate	33,000 sf	75,248 sf/0.9 ac
14	Residential Estate	49,000 sf	91,511 sf/2.1 ac
Subtotal: Residential Estate Uses		437,000 sf	694,043 sf/15.0 ac
Parcel/Lot	Land Use	-	Lot Area SF/Acreage
A	Private Street	-	152,460 sf/3.5 ac
B	Open Space	-	209,088 sf/4.8 ac
C	Water Reservoir	-	117,612 sf/2.7 ac
D	Open Space	-	139,392 sf/3.2 ac
E	Debris Basin	-	87,120 sf/2.0 ac
F	Open Space	-	69,696 sf/1.6 ac
G	Debris Basin	-	30,492 sf/0.7 ac
H	Open Space	-	235,224sf/5.4 ac
I	Water Quality Basin	-	52,272 sf/1.2 ac
J	Open Space	-	56,628 sf/1.3 ac
K	Open Space	-	248,292 sf/5.7 ac
L	Conservation	-	2,639,746 sf/60.6 ac
M	Conservation	-	135,036 sf/3.1ac
N	Conservation	-	34,848 sf/0.8 ac
O	Emergency Access	-	8,712 sf/0.2 ac
Subtotal: Non-Residential Uses		-	4,216,608 sf/96.8 ac
TOTAL		-	4,910,651 sf/111.8 ac

Sources: Proactive Engineering Consultants and TRG Land, Inc., 2020

Open Space

Development is estimated to disturb approximately 43 percent of the project site. It is the Applicant’s intention ultimately to dedicate the remaining undisturbed acreage, about 57 percent of the site, to a conservancy yet to be named. By doing so, the preservation of open space in this portion of the project would be assured in perpetuity. While a conservancy would administer this open space conservation areas, the common areas and open space areas on private lots in the remaining portion of the project site would be maintained by a Homeowner’s Association.

Figure ES-3
CONCEPTUAL SITE PLAN



Disclaimer: Illustration provided by Nevis Capital LLC, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Source: Nevis Capital LLC



Chadwick Ranch Estates Project

Conceptual Site Plan

Circulation

Primary vehicular access to the project site would begin off-site at the intersection of Long Canyon Road and Bliss Canyon Road. From there, the project access road would traverse Los Angeles County Flood Control District (LACFCD) property and utilize a portion of the LACFCD road system using existing easements until it reaches the project site boundary. A large portion of the existing LACFCD road system would be improved for the safety of future residents, as well as for ongoing LACFCD operations. **Figure ES-4, *Circulation Plan***, shows the circulation system for the proposed project. As shown, from the site boundary, the on-site roadway climbs until it reaches its high point at the water tank access. From there, it proceeds downhill to provide access to the remaining residential lots and debris basins along the way. Once the access road reaches the residential lots in the southern portion of the site, it comes to a cul-de-sac and an emergency access road would connect to the Flood Control Road immediately south of the project boundary. The flood control road will be upgraded to Los Angeles County Fire Road standards.

Utilities

Water

California American Water Company (Cal-Am) provides domestic water service to Bradbury, including the Chadwick Ranch Estates project site. Currently, domestic water service lines exist in Bliss Canyon Road and Long Canyon Road. Elements of the water system expansion required to accommodate the project include tie-ins to an existing water main in Bliss Canyon Road, domestic water distribution lines to the residential parcels, one water reservoir at a pad elevation of 1,230 feet amsl, and two pressure-reducing stations and one booster station.

Sewage Disposal

Each lot will be developed with a stub out to the street for such time as sewer service is brought to the Specific Plan area. Until then, each lot will be required to employ individual on-site wastewater treatment systems.

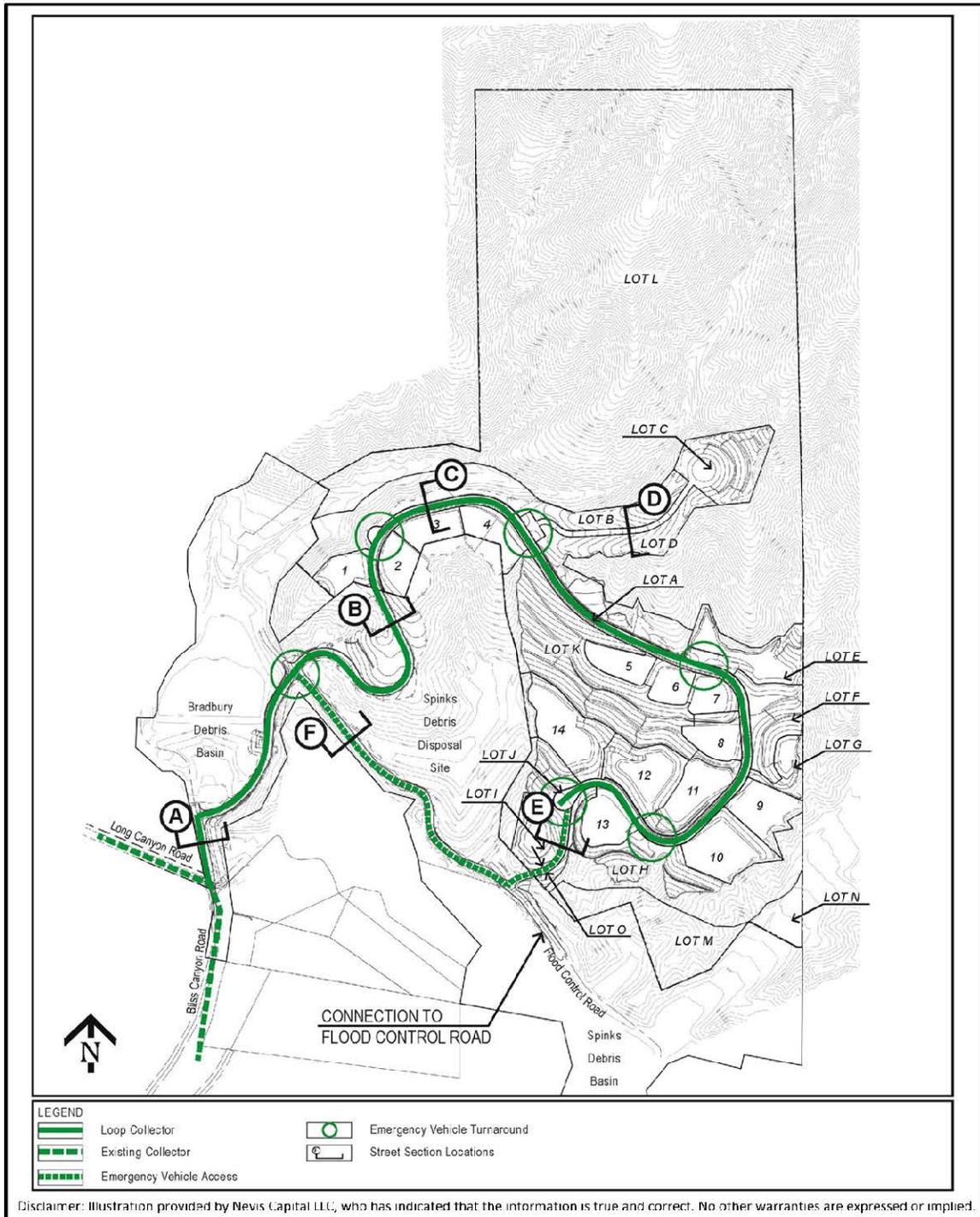
Drainage

The Chadwick Ranch Estates project has been designed to collect runoff from each residential pad and some of the open space areas along the main project roadway, direct such runoff to buried storm drains in the main project roadway, which would ultimately convey the runoff in a southeasterly direction and then discharge the collected runoff into one of two desilting/retention basins along the eastern boundary of the project site and a Water Quality basin at the south end of the developed area on-site.

Project Construction

Site grading would be conducted in one phase and would last approximately one year. No import or export of earth materials is anticipated since the grading plan has been designed to balance soils on-site. The proposed grading blends with the natural topography and is designed to vary the slope ratio from 2:1 to 5:1 (horizontal to vertical). Where proposed grades meet existing topography, the grades would be rounded to blend and provide a natural effect.

**Figure ES-4
CIRCULATION PLAN**





The parts of the project site and environs to be subject to site preparation and grading include off-site areas necessary to construct the access road leading to the project site boundary, the on-site circulation system, the pad for the water reservoir and its attendant access roadway, areas required for slope stabilization, building pads within each residential lot, and the creation of basins for stormwater retention and water quality management purposes. The grading plan prepared for the proposed project indicates that site grading would involve the movement of approximately one million cubic yards of earth materials. The total area to be disturbed by site grading is estimated to be approximately 44.4 acres. Overlapping the grading phase of project construction would be utility trenching and installation. Then the primary backbone features of the proposed project would be built, including roadbed installation and paving, creation of emergency vehicle turnarounds, and improvement of common areas. Graded lots will be sold and homeowners will construct their own homes subject to the Specific Plan requirements. Full residential buildout would be a function of market conditions and is currently anticipated to be five years from the start of construction.

Fire Protection Plan

The project site is in a Very High Fire Hazard Severity Zone (VHFHSZ) designated by the California Department of Forestry and Fire Protection (CAL FIRE). The proposed project includes a Fire Protection Plan (FPP), included as Appendix J. The FPP prescribes requirements for ignition-resistant construction including implementation of California Building Code Chapter 7A, Materials and Construction Methods for Exterior Wildfire Exposure; new Class-A fire-rated roofs and associated assemblies; multi-pane window glazing with a minimum of one tempered, fire-resistant pane; and automatic interior fire sprinkler system for all dwellings. The FPP also requires fuel modification zones 200 feet from structures next to the sides of structures exposed to native vegetation, exceeding the Los Angeles County standard of 100 feet, with the exception of Lot 9 where a 100-foot wet zone is being used. The goal of the FPP is to enable structures to survive a fire with little intervention from firefighting forces.

Necessary Approvals

Approvals required for development of the project may include, but are not limited to those listed in **Table ES-2, Permits and Approvals**, below:

**Table ES-2
PERMITS AND APPROVALS**

Agency	Permit or Approval
Approvals by City of Bradbury	
City of Bradbury CEQA Lead Agency	<ul style="list-style-type: none"> • General Plan Amendment (Case No. GPA 19-001) • Chadwick Ranch Estates Specific Plan (Case No. SP 19-001) • Zone Change (Case No. ZC 19-001) • Zoning Code Amendment (Case No. ZCA 19-001) • Vesting Tentative Tract Map No. 82349 • Tree Preservation and Protection Plan/Tree Removal Permit (Case No. TP 19-001) • Grading permits and related building permits • Stormwater Pollution Prevention Plan
Approvals by Responsible/Trustee Agencies	
Bradbury Estates Community Services District	<ul style="list-style-type: none"> • Approval of street lighting and landscaping on property, rights-of way, and easements not within private lots • Approval of streets, roads, rights-of-way, bridges, culverts, drains, curbs, gutters, sidewalks, and incidental work
Los Angeles County Board of Supervisors	<ul style="list-style-type: none"> • Approval of revised access easements across Flood Control District property • Approval of maintenance agreements on Flood Control District Property • Approval of fuel modification zone on County property
Los Angeles County Department of Public Health	<ul style="list-style-type: none"> • Approval of Non-Conventional Onsite Wastewater Treatment System (NOWTS) [upon construction of individual homes]
Los Angeles Regional Water Quality Control Board	<ul style="list-style-type: none"> • Approval of Low-Impact Development Plan • Approval of Section 401 Water Quality Certification
Los Angeles County Fire Department	<ul style="list-style-type: none"> • Approval of Fire Protection Plan
California Department of Fish and Wildlife	<ul style="list-style-type: none"> • Approval of Section 1600 Lake and Streambed Alteration Agreement • Incidental take permits (possibly) for mountain lion and Crotch bumble bee
US Army Corps of Engineers	<ul style="list-style-type: none"> • Approval of Section 404 Nationwide Permit

Public Review Process

The Initial Study for the project was distributed for public review between February 28, 2020 and March 30, 2020, for 31 days, in excess of the 30-day required distribution under CEQA. Below is a summary of the public notification and scoping process for the project. The Notice of Preparation (NOP) included information regarding the project, notice of availability of the Initial Study, the public comment period, and notice regarding the public scoping meeting. Refer to **Appendix A**, which is a copy of the NOP. A copy of the NOP, which included notice for the scoping meeting, was sent to

residents and owners within 500 feet of the project site. **Appendix B** is the Notice of Completion & Environmental Document Transmittal form (NOC) that was submitted to the State Clearinghouse. **Appendix C** is the Summary Form that was submitted to the State Clearinghouse.

On February 27, 2020 the following documents were submitted to the State Clearinghouse CEQA Submit database: One original signed copy of the NOC, a copy of the NOP, and an electronic version of the Initial Study and Initial Study Appendices. The NOP for the project was published on March 2, 2021 in the San Gabriel Valley Tribune, a newspaper of general circulation in the project region; the newspaper publication affidavits are in **Appendix D**. **Appendix E** contains the project’s Initial Study Distribution Information, including the residential mailing list, agency distribution list and scanned envelopes from the public distribution of the Initial Study. **Appendix F** includes the Certified Mailing Receipts. As part of the public distribution process for the Initial Study for the proposed project, Native American tribal contacts were sent a copy of the NOP and a CD with the Initial Study and Initial Study Appendices. Refer to **Appendix E** (Agency Distribution List) for a list of tribes to whom these documents were sent. **Appendix G** includes the Initial Study and its appendices. **Appendix H** includes the public comments in the Initial Study prepared for the proposed project. A virtual public scoping meeting for the project was held at 7:00PM on April 22, 2020. Refer to **Appendix I**, which includes the scoping meeting files for the proposed project.

Areas of Controversy

Based on the NOP comment letters provided in **Appendix H** of this Draft EIR, issues known to be of concern included, but were not limited to, Project impacts on: biological resources, hydrology and water quality, transportation, and fire protection service and wildfire hazards. Refer to **Appendix H** for all comments received during the public review period. A tracking table that provides a summary of the comments received during the public review period, where those comments are addressed in the EIR are set forth below in Table ES-3. It should be noted that CEQA does not require the lead agency to respond individually to all comments received during the public scoping period.

TABLE ES-3
COMMENTS ON INITIAL STUDY

Commenter	Subjects	Where Addressed in DEIR
3-27-20	site access roadway water tank, booster station, debris and water quality basin,	These topics all pertain to the project description and are addressed in DEIR Section 2, <i>Project Description</i>
3-18-20	<ul style="list-style-type: none"> • Scope and Impact of Infrastructure Construction <ul style="list-style-type: none"> ○ Access Points <ul style="list-style-type: none"> ▪ Where? ▪ Are there at least two? ▪ Will there be in temporary access points or roads? If so, where? ○ Plan for Roads <ul style="list-style-type: none"> ▪ Routing? ▪ Bridges? 	These topics all pertain to the project description and are addressed in DEIR Section 2, <i>Project Description</i>



Commenter	Subjects	Where Addressed in DEIR
	<ul style="list-style-type: none"> ○ Excavation / Fill – for infrastructure like roads and building pads <ul style="list-style-type: none"> ▪ How much? ▪ Where? ○ Is there any planning that directly impacts the Bradbury Oaks Estates area or infrastructure? • General Logistics <ul style="list-style-type: none"> ○ Anticipated Start / Finish? ○ Scope of Project - # of home sites? ○ Contingency plans / stages if construction stops mid-project with critical feature incomplete? • Building Pads <ul style="list-style-type: none"> ○ Locations, Number, Impact to View, Any ridgeline impact? Don't think just top of the ridge, there are many ridgelines in the area below the crest. <p>Will individual home site building pads be created in advance of home construction?</p>	
	<p>If so, what will be done to prevent run-off and erosion of those pads in the interval between creation and beginning of construction – likely an extended period, i.e. years?</p>	<p>Impacts on hydrology are analyzed in DEIR Section 3.8, <i>Hydrology and Water Quality</i></p>
	<ul style="list-style-type: none"> • Environmental <ul style="list-style-type: none"> ○ Impact to water sources, blue lined streams? <p>Impact to any identified endangered species – plants or animals: Near Threatened, Vulnerable, Endangered, Critically Endangered?</p>	<p>Impacts on biological resources are analyzed in DEIR Section 3.3, <i>Biological Resources</i></p>
	<p>Run off, erosion, catch basin plans?</p>	<p>Impacts on hydrology are analyzed in DEIR Section 3.8, <i>Hydrology and Water Quality</i></p>
<p>3-17-20</p>	<p>Fire protection and wildfire: Fire access; adequate fire hydrants; is brush clearance required beyond code requirements?</p>	<p>Impacts regarding fire protection and wildfire risks are analyzed in DEIR Section 3.15, <i>Fire Protection Service and Wildfire Hazards</i></p>
	<p>Bio: impacts: wildfire corridors and animal migration</p>	<p>Impacts on biological resources are analyzed in DEIR Section 3.3, <i>Biological Resources</i></p>
<p>4-29-20</p>	<p>Seismic safety re. critical facilities and essential facilities (reservoir; large retaining walls): ground motion, landslide, settlement Specifies several laws governing seismic safety; and mentions multispectral analysis will be needed.</p>	<p>Geology and soils impacts are analyzed in DEIR Section 3.6, <i>Geology and Soils</i></p>



Summary of Environmental Impacts and Mitigation Measures

Table ES-4, *Impacts and Mitigation Measures*, below summarizes the environmental impacts of the Project evaluated in this Draft EIR along with mitigation measures.



**Table ES-4
IMPACTS AND MITIGATION MEASURES**

Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
Aesthetics			
Impacts Analyzed in EIR			
a) Would the project have a substantial adverse effect on a scenic vista? b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? and c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Temporary Impact (during grading and while vegetation maturing): significant	No mitigation measures are available that would reduce this impact to less than significant	Significant and unavoidable
	Long-term Impact (after vegetation on common area and private lots matures): less than significant	No mitigation measures are required	Less than significant
Impacts Determined to be Less than Significant in Initial Study			



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.			
Agricultural and Forestry Resources			
Impacts determined to be No Impact in Initial Study			
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?			
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?			
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code § 12220(g)), timberland (as defined by Public Resources Codes § 4526), or timberland zoned Timberland Production (as defined by Government Code § 51104(g))?			
d) Result in the loss of forest land or conversion of forest land to non-forest use?			
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?			
Air Quality			
Impacts Analyzed in EIR			
b) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	Less than Significant	No mitigation measures are required.	Less than Significant
c) Would the project expose sensitive receptors to	Less than Significant	No mitigation measures are required.	Less than Significant



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
substantial pollutant concentrations?			
Impacts Determined to be No Impact or Less than Significant in Initial Study			
a) Would the project conflict with or obstruct implementation of the applicable air quality plan? (No Impact)			
d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? (Less Than Significant Impact)			
Biological Resources			
Impacts Analyzed in EIR			
a) 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?	Significant	MM BIO-1 Project development could impact nesting birds. As feasible, Project activities that could disturb active nests or otherwise disrupt nesting activities, including but not limited to the removal or trimming of vegetation, the removal of structures, and the general disturbance of the ground surface, should be conducted outside of the nesting season, which is generally identified as February 1 through September 15. If avoidance of the nesting season is not feasible, then a qualified biologist shall conduct a nesting bird survey within seven days prior to any disturbance of the site. Since some raptor species can begin nesting as early as January 1, trees with the potential to support raptors should be surveyed if the habitat is to be removed after January 1. If active nests are identified, the biologist shall establish suitable buffers around the nests, and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests. The buffer size should vary as a function of the type of bird that is nesting (raptor versus non-raptor), the level of disturbance, and other factors such as the	Less than Significant with Mitigation Incorporated



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
		<p>terrain and other vegetation separating the construction activity from the active nest.</p> <p>MM BIO-2 Project development could impact bat roosting habitat. As feasible, the removal of potential bat roosting habitat (i.e., trees) shall be avoided during the bat maternity season (April 1 through July 31). If avoidance of the maternity season is infeasible, then pre-construction bat surveys should be performed prior to the removal of any trees with the potential to support bats. If individual trees are determined to be maternity roosts, then those trees shall be avoided until after July 31.</p>	
<p>b) Would the project have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?</p>	<p>Significant</p>	<p>MM BIO-3 Project development would impact potential jurisdictional waters including riparian habitat. Prior to the disturbance of jurisdictional waters, the Project proponent shall obtain a CWA Section 404 permit from the Corps and a Section 401 Water Quality Certification from the Regional Board, as well as a Lake and Streambed Alteration Agreement from CDFW. The Project proponent shall purchase mitigation credits from an approved mitigation bank to offset impacts at a minimum 1:1 ratio. The actual mitigation ratio will be determined through coordination with the Corps, Regional Board, and CDFW during the permitting process. The final replacement ratio may be offset through the preservation of existing jurisdictional waters within the Project's open space.</p>	<p>Less than Significant with Mitigation Incorporated</p>
<p>c) Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool,</p>	<p>No Impact</p>	<p>No mitigation measures are required</p>	<p>No Impact</p>



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			
d) Would the project interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	Less than Significant	No mitigation measures are required	Less than Significant
e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Significant	<p>MM BIO-4 To mitigate the removal to 346 protected native trees and the encroachment of 57 protected native oak trees the project applicant shall have 806 trees or shrubs planted within and/or adjacent to the project site. To mitigate direct impacts to 25 non-native (significant) trees (16 due to removal and 9 due to encroachment), the Project shall plant another 25 native trees, for a total of 831 replacement trees.</p> <p>Based on the current Landscape Plan a total of 472 trees (269 coast live oak, 197 scrub oak, and 6 sycamores) can be accommodated within the project site, and within portions of the offsite improvement areas. Most coast live oak trees would be planted along the entry road and the main road through the Specific Plan; however, a number of oak trees will be planted around some of the housing pads in HOA maintained areas, which will provide more of a clustered appearance. The scrub oak individuals will be planted in slope re-vegetation areas along the access roads but will also be planted on revegetated slopes within HOA maintained areas. In addition to the specific tree/shrub</p>	Less than Significant with Mitigation Incorporated



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion						
		<p>locations identified on the Landscape Plan, the Project will also restore approximately 7.66 acres, including 4.30 acres identified on the Landscape Plan as Habitat Restoration Area and 3.36 acres of remedial grading areas to be restored within Lots L, M, and N. It is likely that the balance of replacement trees/shrubs can be accommodated in these additional restoration areas. However, it should be noted that mitigation for the trees that cannot be replanted on site will be replaced through off-site mitigation (project proponent owned/deeded, mitigation bank, or other in-lieu fee with available lands), as determined by the City Arborist. Furthermore, it should be noted, that all mitigation requirements (species, location, ratio, and size) are at the discretion of the City Arborist. Thus, the applicant shall work with the City to identify off-site mitigation (project proponent owned/deeded, mitigation bank, or other in-lieu fee with available lands) in case the 831 replacement trees cannot all be sufficiently accommodated within the project site. Table 3.3-11, Summary of Impacts and Recommended Mitigation For Protected Trees, presents the number of trees impacted by type and recommended mitigation.</p> <p>Native trees:</p> <table data-bbox="997 1226 1554 1388"> <tr> <td>Removal</td> <td>346</td> </tr> <tr> <td>Encroachment</td> <td>57</td> </tr> <tr> <td>Total direct impacts</td> <td>403</td> </tr> </table>	Removal	346	Encroachment	57	Total direct impacts	403	
Removal	346								
Encroachment	57								
Total direct impacts	403								



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
		<p>Replacement trees (2:1 ratio) 806</p> <p>Non-native significant trees:</p> <p>Removal 16</p> <p>Encroachment 9</p> <p>Total direct impacts 25</p> <p>Replacement trees (1:1 ratio) 25</p> <p>Total:</p> <p>Removal 362</p> <p>Encroachment 66</p> <p>Total direct impacts 428</p> <p>Replacement trees 831</p>	
Impacts Determined to be No Impact in Initial Study			
f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or state habitat conservation plan?	No Impact	No mitigation measures are required	No Impact
Cultural Resources			



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
Impacts Analyzed in EIR			
<p>b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?</p>	<p>Significant</p>	<p>MM CUL-1 If archaeological resources are encountered during project construction, the applicant shall hire a Project Archaeologist, meeting Secretary of the Interior standards. The Project Archaeologist will be allowed to temporarily divert or redirect grading or excavation activities in the vicinity of the find in order to make an evaluation of the find. The Project Archaeologist, upon evaluation of the resource(s), shall propose conducting spot-check or regular monitoring of sub-surface grading activities into native soil if warranted.</p> <p>The disposition of any prehistoric and historic archaeological resources shall be governed by mitigation measure CUL-3.</p> <p>MM CUL-2 Prior to the start of any project-related grading, the following note shall be placed on the Conditions of Approval:</p> <p>“If any suspected archaeological resources are discovered during ground-disturbing activities and the Project Archaeologist or their designated archaeological monitor or Tribal representatives are not present, the construction supervisor is obligated to halt work in a 100-foot radius around the find and call the Project Archaeologist and appropriate Tribal representatives to the site to assess the significance of the find.”</p> <p>MM CUL-3 Any archaeological resources that are uncovered during the course of project-related grading shall be recorded</p>	<p>Less than Significant with Mitigation Incorporated</p>



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
		<p>and/or removed per applicable guidelines, in consultation and cooperation with the City, and appropriate Native American tribal representatives.</p> <p>If a significant archaeological resource(s) is discovered on the property, ground disturbing activities shall be suspended 50 feet around the resource(s). The Project Archaeologist or their designated archaeological monitor and representatives of the appropriate Native American Tribe(s), and the City Planning Department shall confer regarding mitigation of the discovered resource(s). A treatment plan and/or preservation plan shall be prepared and by the Project Archaeologist and reviewed by representatives of the appropriate Native American Tribe(s) and the City Planning Department and implemented by the archaeologist to protect the identified archaeological resource(s) from damage and destruction.</p> <p>The City shall relinquish ownership of all archaeological artifacts that are of Native American origin found on the project site to the culturally affiliated Native American tribe(s) for proper treatment and disposition. A final report containing the significance and treatment findings shall be prepared by the archaeologist and submitted to the City Planning Department, the appropriate Native American tribe(s), and the South-Central Coastal Information Center. All cultural material, excluding sacred, ceremonial, grave goods and human remains, collected during the grading monitoring program shall be curated, as determined by the treatment plan, according to the current professional repository standards and may include a culturally affiliated tribal curatorial facility. All monitoring, treatment, and disposition shall be at the project applicant's expense.</p>	



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
c) Disturb any human remains, including those interred outside of formal cemeteries?	Significant	<p>MM CUL-4 If human remains are encountered during any project-related ground-disturbing activities, § 7050.5 of the California Health and Safety Code states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition of the materials pursuant to § 5097.98 of the California Public Resources Code. The cessation of ground disturbance shall extend 50 feet from the discovery site. The provisions of § 15064.5 of the California Environmental Quality Act Guidelines shall also be followed. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner shall notify the NAHC. The NAHC will determine and notify a Most Likely Descendent (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The descendent must complete the inspection within 24 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. These requirements shall be included as notes on the contractor specification and verified by the Community Development Department, prior to issuance of grading permits. This measure shall be implemented to the satisfaction of the City in consultation with the Los Angeles County Coroner.</p>	Less than Significant with Mitigation Incorporated
Impacts Determined to be No Impact in Initial Study			
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?			
Energy			
Impacts Analyzed in EIR			



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
<p>a) Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?</p> <p>And</p> <p>b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?</p>	Less than Significant	No mitigation measures are required	Less than Significant
Geology and Soils			
Impacts Analyzed in EIR			
<p>a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:</p>			
<p>i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines</p>	Less than Significant	No mitigation measures are required	Less than Significant



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
and Geology Special Publication 42.			
ii) Strong seismic ground shaking?	Less than Significant	No mitigation measures are required	Less than Significant
iii) Seismic-related ground failure, including liquefaction?	Less than Significant	No mitigation measures are required	Less than Significant
iv) Landslides?	Less than Significant	No mitigation measures are required	Less than Significant
b) Would the project result in substantial soil erosion or the loss of topsoil?	Less than Significant	No mitigation measures are required	Less than Significant
c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	Less than Significant	No mitigation measures are required	Less than Significant
d) 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?	Less than Significant	No mitigation measures are required	Less than Significant
e) Would the project have soils incapable of adequately supporting the use of septic tanks	Less than Significant	No mitigation measures are required	Less than Significant



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?			
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Significant	<p>MM GEO-1 Before the commencement of ground disturbance, the project proponent shall retain a qualified paleontologist to be on-call for the duration of ground-disturbing activities. If paleontological resources are uncovered during construction activities, the contractor shall halt construction activities in the immediate area and notify the City of Bradbury. The on-call paleontologist shall be notified and afforded the necessary time and funds to recover, analyze, and curate the find(s). Subsequently, the paleontologist shall remain onsite periodically for the duration of the ground disturbance to ensure the protection of any other resources that may be in the area.</p>	Less than Significant with Mitigation Incorporated
Greenhouse Gas Emissions			
Impacts Analyzed in EIR			
a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less than Significant	No mitigation measures are required	Less than Significant
b) Would the project conflict with an applicable plan, policy or regulation adopted for	Less than Significant	No mitigation measures are required	Less than Significant



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
the purpose of reducing the emissions of greenhouse gases?			
Hazards and Hazardous Materials			
Impacts Analyzed in EIR			
Impacts and mitigation measures pertaining to Hazards and Hazardous Materials thresholds (f) and (g) are addressed in Section 3.15, <i>Fire Protection Services and Wildfire Hazards</i> .			
Impacts Determined to be Less than Significant or No Impact in Initial Study			
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (Less Than Significant Impact)		
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? (Less Than Significant Impact)		
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (No Impact)		
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment? (No Impact)		
e)	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 or excessive noise for people residing or working in the project area? (No Impact)		
Hydrology and Water Quality			
Impacts Analyzed in EIR			



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less than Significant	No mitigation measures are required	Less than Significant
b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Less than Significant	No mitigation measures are required	Less than Significant
<p>c) 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 through the addition of impervious surfaces, in a manner which would:</p> <p>i) Result in substantial erosion or siltation on- or offsite;</p> <p>ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;</p>	Less than Significant	No mitigation measures are required	Less than Significant



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;			
iv. Impede or redirect flood flows?	No Impact	No mitigation measures are required	No Impact
e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	No Impact	No mitigation measures are required	No Impact
Impacts Determined to be No Impact in Initial Study			
d) Would the project result in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			
Land Use and Planning			
Impacts Analyzed in EIR			
b) Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Significant	No feasible mitigation measures are available that would reduce this impact to less than significant	Significant and unavoidable



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
Impacts Determined to be No Impact in Initial Study			
a) Would the project physically divide an established community?			
Mineral Resources			
Impacts Determined to be No Impact in Initial Study			
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? (No Impact)			
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? (No Impact)			
Noise			
Impacts Analyzed in EIR			
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Significant	MM N-1 The construction contractor will use the following source controls: <ul style="list-style-type: none"> • Use of noise-producing equipment will be limited to the interval from 8:00 a.m. to 5:00 p.m. when within 500 feet of a residence, Monday through Friday and 9:00 a.m. to 5:00 p.m. on Saturday. • Locate equipment staging areas onsite, at maximum practical distances between the noise sources and sensitive receptors. • For all noise-producing equipment, use types and models that have the lowest horsepower and the lowest noise generating potential practical for 	Significant and Unavoidable



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
		<p>their intended use with standard recommended noise shielding and muffling devices.</p> <ul style="list-style-type: none"> • Minimize the number of pieces of particularly noisy equipment (greater than 80 dBA at 50 feet) that operate simultaneously within 500 feet of a residence. • Face noise producing equipment away from sensitive receivers. • The construction contractor will ensure that all construction equipment, fixed or mobile, is properly operating (tuned-up) and lubricated; is muffled; and that mufflers are working adequately. • Have only necessary equipment onsite. • Use manually-adjustable or ambient sensitive backup alarms. <p>MM N-2 The contractor will use the following path controls, in response to complaints and when ambient noise monitoring of complainant’s exposure shows exceedance of local standards, except where not physically feasible:</p> <ul style="list-style-type: none"> • Install portable noise barriers, including solid structures and noise blankets, between the active noise sources and the nearest noise receivers. • Temporarily enclose localized and stationary noise sources. 	



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
		<ul style="list-style-type: none"> Store and maintain equipment, building materials and waste materials as far as practical from as many sensitive receivers as practical. 	
Impacts Determined to be Less than Significant or No Impact in Initial Study			
b) Generation of excessive groundborne vibration or groundborne noise levels? (No Impact)			
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? (Less Than Significant Impact)			
Population and Housing			
Impacts Determined to be Less than Significant or No Impact in Initial Study			
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? (Less Than Significant Impact)			
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? (No Impact)			
Public Services			
Impacts Determined to be Less than Significant in Initial Study			
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, construction of which could cause significant environmental			



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:			
Fire Protection			
Police Protection			
Schools			
Parks			
Libraries			
Recreation			
Impacts Determined to be Less than Significant or No Impact in Initial Study			
a)		Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? (Less Than Significant Impact)	
b)		Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? (No Impact)	
Transportation			
Impacts Analyzed in EIR			
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit,	No Impact	No mitigation measures are required.	No Impact



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
roadway, bicycle and pedestrian facilities.			
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	Significant	No feasible mitigation measures were identified (See the evaluation of potential mitigation measures in Section 3.12, Transportation, of the EIR).	Significant and Unavoidable
d) Would the project result in inadequate emergency access?	Less than Significant	No mitigation measures are required	Less than Significant
Impacts Determined to be Less than Significant in Initial Study			
c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			
Tribal Cultural Resources (all impacts analyzed in EIR)			
Impacts Analyzed in EIR			
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:			



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
<p>ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.</p>	<p>Significant</p>	<p>MM TCR-1 Prior to the commencement of any ground-disturbing activity at the project site, the project applicant shall retain a Native American Monitor approved by the Gabrieleño Band of Mission Indians-Kizh Nation – the tribe that consulted on this project pursuant to Assembly Bill AB52 - SB18 (the “Tribe” or the “Consulting Tribe”). A copy of the executed contract shall be submitted to the City of Bradbury Planning and Building Department prior to the issuance of any permit necessary to commence a ground-disturbing activity. The Tribal monitor will only be present onsite during the construction phases that involve ground-disturbing activities. Ground-disturbing activities are defined by the Tribe as activities that may include, but are not limited to, pavement removal, potholing or auguring, grubbing, vegetation removals, boring, grading, excavation, drilling, and trenching, within the project boundary, including ridgeline soil and fill. Monitoring shall not be required for any work in bedrock. The Tribal Monitor will complete daily monitoring logs that will provide descriptions of the day’s activities, including construction activities, locations, soil, and any cultural materials identified. The Tribal Monitor shall be in communication with the construction foreman/supervisor on a daily basis and the Tribal Monitor shall determine when monitoring is not required and when monitoring is likely to resume. The City and Applicant shall be notified of the Tribal Monitor’s schedule changes. The onsite monitoring shall end when all ground-disturbing activities on the project site are completed, or when the Tribal Representatives and Tribal Monitor have indicated that all upcoming ground-disturbing activities at the project site have little to no potential for impacting Tribal Cultural Resources.</p> <p>MM TCR-2</p>	<p>Less than Significant with Mitigation Incorporated</p>



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
		<p>Upon discovery of any Tribal Cultural Resources, construction activities shall cease in the immediate vicinity of the find (not less than 100 feet) until the find can be assessed. The developer will have a Secretary of the Interior qualified archaeologist on call as approved by the City of Bradbury to assess the discovery. Work in the immediate area of the find will not continue until the discovery has been evaluated by the archaeologist and Tribal monitor approved by the Consulting Tribe. They shall be afforded the necessary time and funds to recover, analyze, and curate the find(s). A treatment plan established for the resources shall be in accordance with CEQA Guidelines §15064.5(f) for historical resources and PRC §21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation is not feasible, treatment may include implementation of archeological data recovery excavation to remove the resource followed by laboratory processing and analysis. The archaeologist shall recommend the extent of archaeological monitoring necessary to ensure the protection of any further resources that may be present in the project site. A Monitoring and Treatment Plan shall be prepared by the qualified archaeologist as deemed needed. Construction activities may continue on other parts of the site while evaluation and treatment of prehistoric or historical archaeological resources takes place.</p> <p>MM TCR-3 If human remains and/or grave goods are encountered during excavations associated with this project, all work shall stop within a 50-foot radius of the discovery and the Los Angeles County Coroner shall be notified (§ 5097.98 of the Public Resources Code). The Coroner shall determine whether the remains are recent human origin or older</p>	



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
		<p>Native American ancestry. If the coroner determines that the remains are prehistoric, they shall contact the NAHC. The NAHC shall be responsible for designating the Most Likely Descendant (MLD). The MLD (either an individual or sometimes a committee) shall be responsible for the ultimate disposition of the remains and grave/burial goods, as required by § 7050.5 of the California Health and Safety Code. The MLD shall make recommendations within 24 hours of their notification by the NAHC. These recommendations may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials (§ 7050.5 of the Health and Safety Code).</p>	
<p>Impacts Determined to be No Impact in Initial Study</p>			
<p>i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)? (No Impact)</p>			
<p>Utilities and Service Systems</p>			
<p>Impacts Analyzed in EIR</p>			
<p>a) Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause</p>	<p>Less than Significant</p>	<p>No mitigation measures are required.</p>	<p>Less than Significant</p>



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
significant environmental effects?			
b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	Significant	MM USS-1 Before issuance of a grading permit for the project, the Project applicant must either install a new well or contribute funding towards a well that Cal-Am is in the process of designing and constructing.	Less than Significant with Mitigation Incorporated
Impacts Determined to be Less than Significant or No Impact in Initial Study			
c)	Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? (No Impact)		
d)	Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? (Less Than Significant Impact)		
e)	Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste? (Less Than Significant Impact)		
Fire Protection Services and Wildfire Hazards (all impacts analyzed in EIR)			
a) Substantially impair an adopted emergency response plan or emergency evacuation plan.	Less than Significant	No mitigation measures are required	Less than Significant
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from	Significant	MM W-1 Before combustible materials are brought onto the project site, the project applicant shall have fuel reduced in all three fuel modification zones (zones A, B, and C). Zone C shall extend 100 feet wide from the outer edge of Zone B (which shall be 100 feet from structures or at the property line, whichever is closer to structures). Zone C shall include	Less than Significant with Mitigation Incorporated



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
<p>a wildfire or the uncontrolled spread of a wildfire.</p>		<p>a minimum of 50 percent fuel reduction, on average. Thinning of less than 50 percent of the existing condition may be acceptable where erosion is of high concern, but the average cover throughout Zone C shall be reduced by 50 percent, resulting in approximately 50 percent ground cover by plant canopy.</p> <p>MM W-2 Plants used in the fuel modification areas or landscapes shall include drought-tolerant, fire resistive trees, shrubs, and groundcovers. The planting list and spacing shall be reviewed and approved by LACoFD and included on submitted landscape plans. The plantings shall be consistent with LACoFD's Suggested Plant Reference Guide (refer to Appendix D of the project Fire Protection Plan). The suggested plant reference guide provides examples of plants that are less prone to ignite or spread flames to other vegetation and combustible structures during a wildfire. Additional plants may be added to the landscape plant material palette with the approval from LACoFD.</p> <p>MM W-3 Prior to combustible materials being brought on site, perimeter fuel modification areas must be implemented and approved by the LACoFD. Upon commencement of construction existing flammable vegetation shall be reduced by 50% on vacant lots. Dead fuel, ladder fuel (fuel which can spread fire from ground to trees), and downed fuel shall be removed and trees/shrubs shall be properly limbed, pruned, and spaced per this plan.</p> <p>MM W-4 Prior to commencement of construction activities the project applicant shall have a fire protection consultant or fire protection engineer prepare a construction fire</p>	



Threshold	Level of Significance Without Mitigation	Mitigation Measures	Significance Conclusion
		protection plan (CPPP) designating fire safety measures to reduce fire risks during project construction. The plan may include the following measures: fire watch/ fire guards during hot works and heavy machinery activities, hose lines attached to hydrants or a water tender, red flag warning weather period restrictions, required on-site fire resources, and others as determined necessary.	
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.	Significant	Mitigation measures W-1 through W-4	Less than Significant with Mitigation Incorporated
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.	Less than Significant	No mitigation measures are required	Less than Significant
e) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires (Threshold (g) from Hazards and Hazardous Materials).	Significant	Mitigation measures W-1 through W-4	Less than significant

Summary of Alternatives

This Draft EIR examines in detail two alternatives to the project: Alternative 1: No Project/No Action Alternative, and Alternative 2: Reduced Intensity (9-Lot) Alternative. A general description of these alternatives is provided below. Refer to **Section 6.0** of this Draft EIR for a more detailed description of these two alternatives, a comparative analysis of the impacts of these alternatives to those of the proposed project, and a description of the alternatives that were considered but rejected as infeasible.

Alternative 1 – No Project/No Action Alternative

In accordance with the CEQA Guidelines, the No Project Alternative for a development project on an identifiable property consists of the circumstances under which the project does not proceed. Section 15126.6(e)(3)(B) of the CEQA Guidelines states in part that, “in certain circumstances, the No Project Alternative mean ‘no build’ wherein the existing environmental setting is maintained.” Accordingly, for the purposes of this analysis, Alternative 1, the No Project Alternative, assumes that the project would not be approved, no new development would occur within the project site, and existing conditions would be maintained. No residential lots would be constructed onsite.

While the No Project Alternative would avoid all of the Project’s significant impacts it would not achieve any of the basic Project objectives. The proposed project would reduce wildfire hazards on and next to the project site—largely through fuel modification zones wider than those required by the City of Bradbury Fire Code—reducing wildfire risk somewhat for existing residences southwest, south, and southeast of the project site. This reduction in wildfire hazard would not occur in Alternative 1.

Alternative 2 – Reduced Intensity (9-Lot) Alternative

This alternative would develop nine residential building pads on the site compared to 14 pads in the proposed project. Seven of the nine building pads would be in the east half of the development area of the proposed project (see **Figure 6.2**). Access for this alternative would be the same as for the proposed project, that is, one road throughout the development area connecting to existing roadway at Bliss Canyon Road approximately 250 feet north of its intersection with Long Canyon Road and ending in a cul-de-sac in the southern portion of the site where an emergency access road would connect to the Flood Control Road. The Flood Control Road will be upgraded to Los Angeles County Fire road standards. The reservoir in this alternative would be at the same location, and the same elevation, as in the proposed project. The total disturbance area in this alternative would be the same as the proposed project. This alternative is proposed in order to reduce project-generated vehicle miles traveled (VMT) to 108 trips per day, below the 110-trip-per-day screening threshold for small projects used by the City of Bradbury.

Thus, this alternative would avoid the significant and unavoidable transportation impact of the proposed project.

Environmentally Superior Alternative

Section 15126.6(e)(2) of the CEQA Guidelines indicates that an analysis of alternatives to a project shall identify an Environmentally Superior Alternative among the alternatives evaluated in an EIR. The CEQA Guidelines also state that should it be determined that the No Project/No Build Alternative



is the Environmentally Superior Alternative, the EIR shall identify another Environmentally Superior Alternative among the remaining alternatives.

With respect to identifying an Environmentally Superior Alternative among those analyzed in this Draft EIR, the range of feasible alternatives includes the No Project/No Action Alternative and the Reduced Intensity (9-Lot) Alternative. Pursuant to § 15126.6(c) of the CEQA Guidelines, the analysis below addresses the ability of the alternatives to "avoid or substantially lessen one or more of the significant effects" of the Project.

Of the alternatives analyzed in this Draft EIR, Alternative 1, the No Project/No Action Alternative would avoid all of the Project's significant environmental impacts, including the Project's significant and unavoidable impacts related to transportation and short-term significant and unavoidable noise impacts during construction. However, the No Project/No Action Alternative would not meet any of the Project's basic objectives.

As mentioned previously, § 15626.6(e)(2) of the State CEQA Guidelines indicates that when the No Project Alternative is the environmentally superior alternative, the EIR shall also identify another environmentally superior alternative. Alternative 2 would be environmentally superior to the proposed project. It meets the objectives of the proposed project and precludes or reduces to less than significant levels the occurrence of significant impacts associated with the proposed project.

SECTION 1.0 - INTRODUCTION



1.0 INTRODUCTION

This document is an Environmental Impact Report (EIR). It presents the environmental review for a proposed estate residential project, Chadwick Ranch Estates (CRE). The project (referred to as project or proposed project) is summarized below and detailed later in this document. This Draft EIR, prepared by the City of Bradbury, incorporates input from the public and other public agencies and will be considered by the Bradbury Planning Commission and Bradbury City Council, and other public agencies in their deliberations regarding the approval of applications for discretionary permits and other entitlements before them concerning the proposed project.

1.1 Project Overview

The proposed project is comprised of 14 numbered estate residential lots and 15 lettered non-residential lots. CRE includes a site access roadway extending from the intersection of Bliss Canyon Road/Long Canyon Road, an onsite backbone circulation system, requisite infrastructure, as well as a water tank, a booster station, and debris and water quality basins, among other improvements. Development of the proposed project would occur pursuant to a Specific Plan. Easements for a portion of the site access roadway would be required from the Los Angeles County Flood Control District (LACFCD). The easements will be modified from the existing easements to address the improvements needed by the Applicant. The project site comprises 111.8-acres of which more than half of the land would remain undisturbed. It is the Applicant's intent to ultimately dedicate the undisturbed area to a conservancy to be named. Detailed information about the proposed project is provided in **Section 2.0**, Project Description, later in this document.

The Environmental Review Process

Statutory Authority

California's environmental policy is formally set forth in the California Environmental Quality Act of 1970 (CEQA), as amended, and is implemented pursuant to the provisions of the State CEQA Guidelines, also as amended. State CEQA Guidelines § 15002 states that the basic purposes of CEQA are to:

- Inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

A project is defined in State CEQA Guidelines § 15378 as the whole of the action having the potential to result in a direct physical change or a reasonably foreseeable indirect change to the environment and is any of the following:



- An activity directly undertaken by any public agency including but not limited to public works construction and related activities, clearing or grading of land, improvements to existing public structures, enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements.
- An activity undertaken by a person which is supported in whole or in part through public agency contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies.
- An activity involving the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies.

Lead Agency and Environmental Review

Unless otherwise exempted, all discretionary projects within California are required to undergo environmental review. The proposed Chadwick Ranch Estates project is not exempt. The City of Bradbury is the public agency which has the principal responsibility for carrying out or approving the proposed project. As such, pursuant to § 15050 and § 15367 of the State CEQA Guidelines, the City of Bradbury is the Lead Agency.

Environmental Impact Report Required

This Environmental Impact Report (EIR) contains the city’s environmental review. It has been prepared in conformance with the California Environmental Quality Act (CEQA) (California Public Resources Code § 21000 [PRC] [18] et seq.); *California CEQA Guidelines* (California Code of Regulations, [CCR] Title 14, § 15000 et seq.). In accordance with § 15121 of CEQA Guidelines, the primary purpose of this Draft EIR is to provide decision makers and the public with specific information regarding the environmental effects associated with the proposed project; identify ways to minimize the potentially significant effects; and describe and analyze reasonable alternatives to the project. This Draft EIR will also ultimately serve as the primary reference document for the formulation of a mitigation monitoring and reporting program for the project.

Scoping the Environmental Impact Report

Once the Lead Agency determined that the project was subject to environmental review it decided that an EIR should be prepared. Given this, the Lead Agency needed to determine the scope of the EIR. The first step the City took in this regard was to conduct an Initial Study. Pursuant to § 15063(c) of the CEQA Guidelines one purpose of an Initial Study is, among others, to assist in the preparation of an EIR by focusing the EIR on adverse effects determined to be significant, identifying the adverse effects determined not to be significant, and explaining the reasons for determining that potentially significant adverse effects would not be significant.

The Initial Study concluded that the environmental topics listed below would experience either a *Less Than Significant Impact with Mitigation Incorporated* or a *Potentially Significant Impact* for at least one threshold of significance and are therefore evaluated in this Draft EIR.

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Land Use and Planning
- Noise
- Transportation
- Tribal Cultural Resources



- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Utilities and Service Systems
- Fire Protection Services and Wildfire Hazards
- Mandatory Findings of Significance

The Initial Study also concluded that for the remaining environmental topics that were evaluated, findings of either *No Impact* or a *Less Than Significant Impact* could be made for each of the thresholds of significance specific to that topic. As a result, no further analysis was required. Given the foregoing, the following environmental topics are not analyzed in this Draft EIR:

- Agriculture
- Mineral Resources
- Population and Housing
- Public Services
- Recreation

Notice of Preparation (NOP)

After completion of the Initial Study, on February 27, 2020 the Lead Agency sent a Notice of Preparation (NOP) of a Draft EIR to the Office of Planning and Research, Responsible and Trustee agencies, other Agencies with Jurisdiction by Law, and any others entities that had previously requested receipt of such notices. Responsible and Trustee Agencies and Agencies with Jurisdiction by Law are defined as follows:

- A **Responsible Agency** (14 CCR § 15381) is a public agency, other than the Lead Agency, that has discretionary approval power over the project, such as permit issuance or plan approval authority. Responsible agencies for the proposed project are the Bradbury Community Services District; Los Angeles County Public Works; Los Angeles Regional Water Quality Control Board; and U.S. Army Corps of Engineers.
- A **Trustee Agency**¹ (14 CCR § 15386) is a state agency having jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California. The California Department of Fish and Wildlife is a trustee agency for this project.
- **Agencies with Jurisdiction by Law** (14 CCR § 15366) are any public agencies that have authority (1) to grant a permit or other entitlement for use; (2) to provide funding for the project in question; or (3) to exercise authority over resources which may be affected by the project. Furthermore, a city or county will have jurisdiction by law with respect to a project when the city or county having primary jurisdiction over the area involved is: (1) the site of the project; (2) the area in which the major environmental effects will occur; and/or (3) the area in which reside those citizens most directly concerned by any such environmental effects.

The NOP informed public agencies and the public that a Draft EIR was being prepared for the proposed project. The NOP requested feedback regarding the proposed project and its potential environmental impacts. The NOP had a copy of the Initial Study attached. A copy of the Notice of Preparation, Initial Study and distribution list are provided herein as **Appendices A, G, and E** to this Draft EIR, respectively. Each entity receiving the NOP initially had until March 30, 2020 to submit

¹ The four Trustee Agencies in California listed in CEQA Guidelines §15386 are California Department of Fish and Wildlife, State Lands Commission, State Department of Parks and Recreation, and University of California.

written comments to the Lead Agency. That period was extended until April 30, 2020. In all, the City received five written responses. Of these, two were from public agencies and three were from private groups and/or individuals. A copy of all written responses to the NOP received by the City are provided in **Appendix H**. A summary of the comments was included at **Table ES-3**.

Public Scoping Meeting

The NOP also provided notice that a scoping meeting for the proposed project was scheduled to occur on Wednesday, March 18, 2020 at Bradbury City Hall. However, due to the COVID19 pandemic and directives from the Office of the Governor, the scoping meeting was postponed until April 22, 2020 and was conducted virtually via GotoWebinar. After initial introductions, a Power Point presentation was given to inform the public about the project and the environmental review process for the proposed project. A total of 40 individuals attended, including City staff and consultants. Of those, 10 asked a variety of questions both about the proposed project and the environmental review process. In overview, the scoping meeting did not raise any environmental issues which were not already being evaluated in this Draft EIR. A record of issues raised during the scoping meeting is provided herein as **Appendix I**.

1.2 Document Organization

This Draft EIR is organized into the following sections to enable the reader to easily obtain information about the project:

- **Executive Summary:** Presents a summary of the proposed project and its alternatives, potential impacts and mitigation measures, and cumulative impacts.
- **Section 1.0, Introduction:** Describes the purpose and use of the draft EIR, provides a brief overview of the proposed project, and outlines the organization of the draft EIR.
- **Section 2.0, Project Description:** Describes the project location, project details and the overall objectives of the proposed project.
- **Section 3.0, Environmental Setting, Impacts and Mitigation Measures:** For each environmental topic, describes the existing physical and regulatory setting, impact significance thresholds, the environmental impact analysis, the conclusions reached regarding impact significance, mitigation measure requirements (if any), and the level of impact significance after mitigation.
- **Section 4.0, Cumulative Impacts:** Describes the potential cumulative impacts of the proposed project.
- **Section 5.0, Other CEQA Considerations:** This section includes various subsections that address the growth-inducing impacts of the proposed project and identifies any significant and unavoidable adverse impacts of the proposed project.
- **Section 6.0, Alternatives to the Proposed Project:** This section presents alternatives to the proposed project developed to minimize or avoid any identified significant or potentially significant environmental effects of the proposed project, assesses the impacts of each alternative, compares them to those of the proposed project, and identifies the environmentally superior alternative among alternatives.



- **Section 7.0, References:** Identifies the references cited in, and used to prepare the EIR. References include printed and electronic documents as well as records of personal communications with individuals consulted in preparing this document.
- **Section 8.0, List of Report Preparers and Contributors:** Identifies the agencies, consultants, and individuals involved in preparing this Draft EIR.
- **Appendices:** Presents data supporting the scope, analysis and contents of this Draft EIR.

1.3 Availability of the Draft EIR

This Draft EIR for Chadwick Ranch Estates is being distributed directly to numerous agencies, organizations, and interested groups and persons for comment during the formal review period. The draft EIR is available for review at the following locations:

- City of Bradbury, 600 Winston Avenue, Bradbury, California 91008.
- Los Angeles County Public Library, Duarte Branch, 1301 Buena Vista Street, Duarte, California 91010, T: (626) 358-1865.
- Monrovia Public Library, 321 South Myrtle Avenue, Monrovia, CA 91016, T: (626) 256-8274.

The draft EIR can also be viewed on the City of Bradbury's website at <http://www.cityofbradbury/ceqadocuments>. Any comments on the EIR shall be submitted to: Trayci Nelson, Project Planner, via e-mail at: tnelson@cityofbradbury.org or by mail to Trayci Nelson, 600 Winston Ave., Bradbury, CA 91008.

SECTION 2.0 – PROJECT DESCRIPTION

2.0 PROJECT DESCRIPTION

2.1 Project Location and Boundaries

The City of Bradbury is located in Los Angeles County near the northern edge of the urbanized portion of the Los Angeles basin at the base of the San Gabriel Mountains just south of the Angeles National Forest. As shown on **Figure 2.1-1, Regional Location Map**, the city is bordered by the City of Monrovia to the west and north and the City of Duarte to the south and east. Royal Oaks Drive serves as the southern boundary of the city. Royal Oaks Drive parallels the I-210 Freeway, located approximately one mile south of the city; access to this major regional transportation corridor is available through Duarte via Buena Vista Street and Mountain Avenue. The north end of the I-605 freeway, consisting of ramps to and from Huntington Drive, is approximately 1.1 miles south of the project site.

The proposed Chadwick Ranch Estates project site is located near the northeast edge of the City of Bradbury, abutting the City of Duarte along the project site's eastern boundary. Bordering the project site's southern boundary are the Spinks Debris Basin, Spinks Debris Disposal Area, and Bradbury Debris Basin, flood control facilities owned, operated and maintained by the Los Angeles County Flood Control District (LACFCD). Future project site access would begin offsite near the Bliss Canyon Road/Long Canyon Road intersection, requiring travel through the aforementioned LACFCD property holdings to an entrance at the western edge of the project site. **Figure 2.1-2, Project Site Vicinity Location Map**, and **Figure 2.1-3, Aerial View of The Project Site and Vicinity**, show the proposed project site and its surroundings.

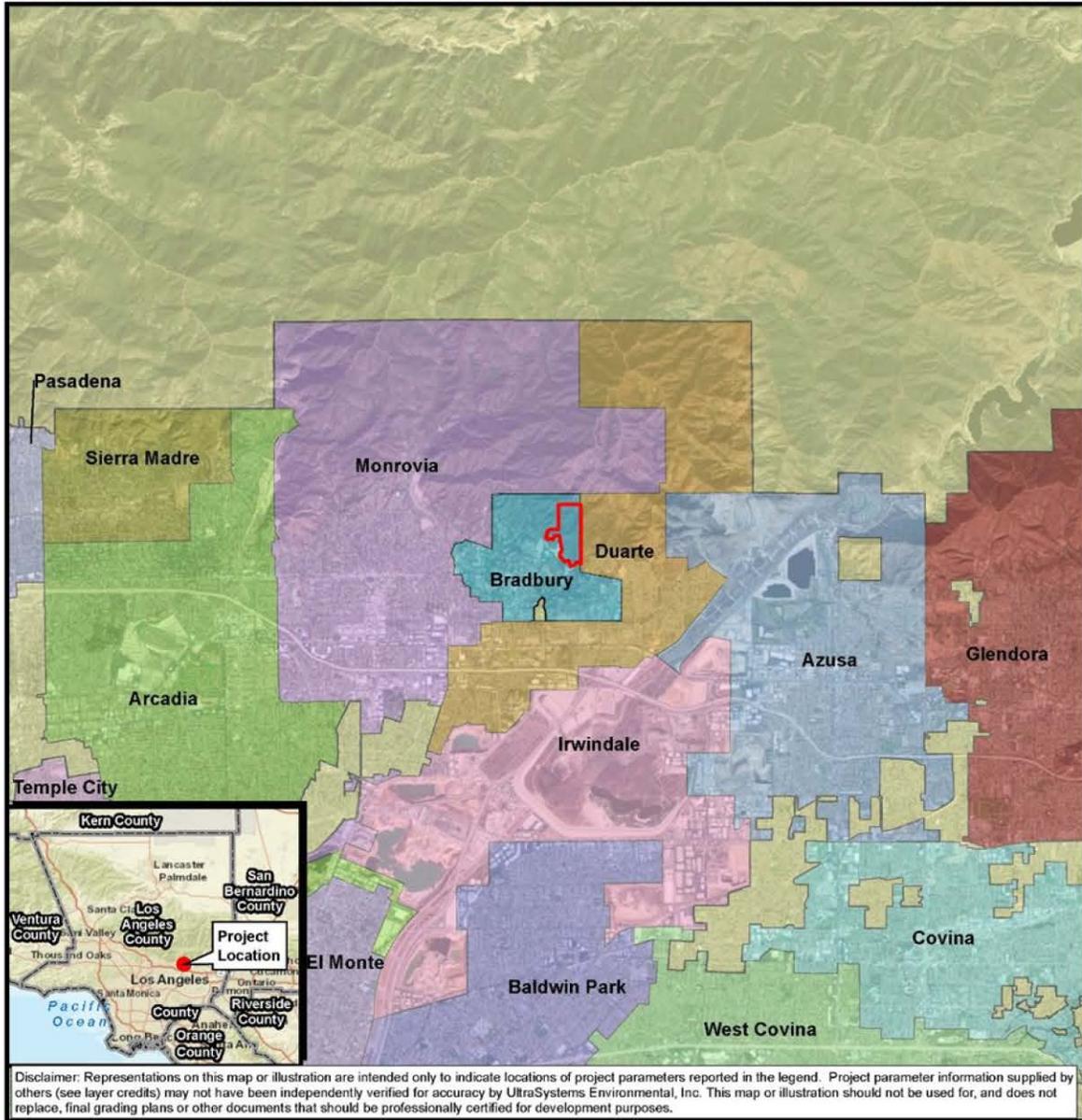
Figure 2.1-3 also shows that the project site is irregularly shaped, devoid of development, and covered with native vegetation, including chaparral, trees and scrub oak. Site topography is comprised of canyons, slopes and ridgelines with elevations that range from approximately 790 feet above mean sea level (amsl) at the lower, southern portion of the site to 1,790 feet (amsl) at the highest point to the north. The Assessor's Parcel Numbers (APNs) for the project site are: 8527-005-001, 8527-005-004, and 8527-001-010. Collectively, these three parcels comprise approximately 111.8 acres.

2.2 Project Objectives

The Chadwick Ranch Estates Specific Plan identifies the following project goals, which are the project objectives:

- Establish land use and development patterns for the Specific Plan Area that are compatible with surrounding land uses and existing Bradbury community character, and clustering homes to preserve open space.
- Preserve all significant landforms, including ridgelines and watercourses in the natural condition to the greatest extent possible.
- Establish design guidelines and development standards that allow development of flat pads that accommodate development of large residential estates while minimizing grading to the greatest extent possible; homes will be of similar size to the existing homes in the Bradbury Estates hillside areas.
- Create a development that balances the interests of private property ownership with the general welfare of the community by providing high quality estate homes with contemporary home features.

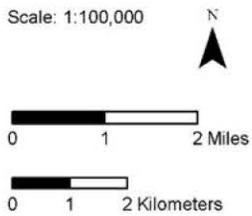
**Figure 2.1-1
REGIONAL LOCATION MAP**



Disclaimer: Representations on this map or illustration are intended only to indicate locations of project parameters reported in the legend. Project parameter information supplied by others (see layer credits) may not have been independently verified for accuracy by UltraSystems Environmental, Inc. This map or illustration should not be used for, and does not replace, final grading plans or other documents that should be professionally certified for development purposes.

Path: \\010.01.131\gis\Projects\7023_Bradbury\Map\0511023_Bradbury_3.1-1_Regional Location_2019_09_24.mxd
 Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community. Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community; Teale Data Center GIS Solutions Group, 2003; CA Dept. of Conservation, March 2013; UltraSystems Environmental, Inc., 2019

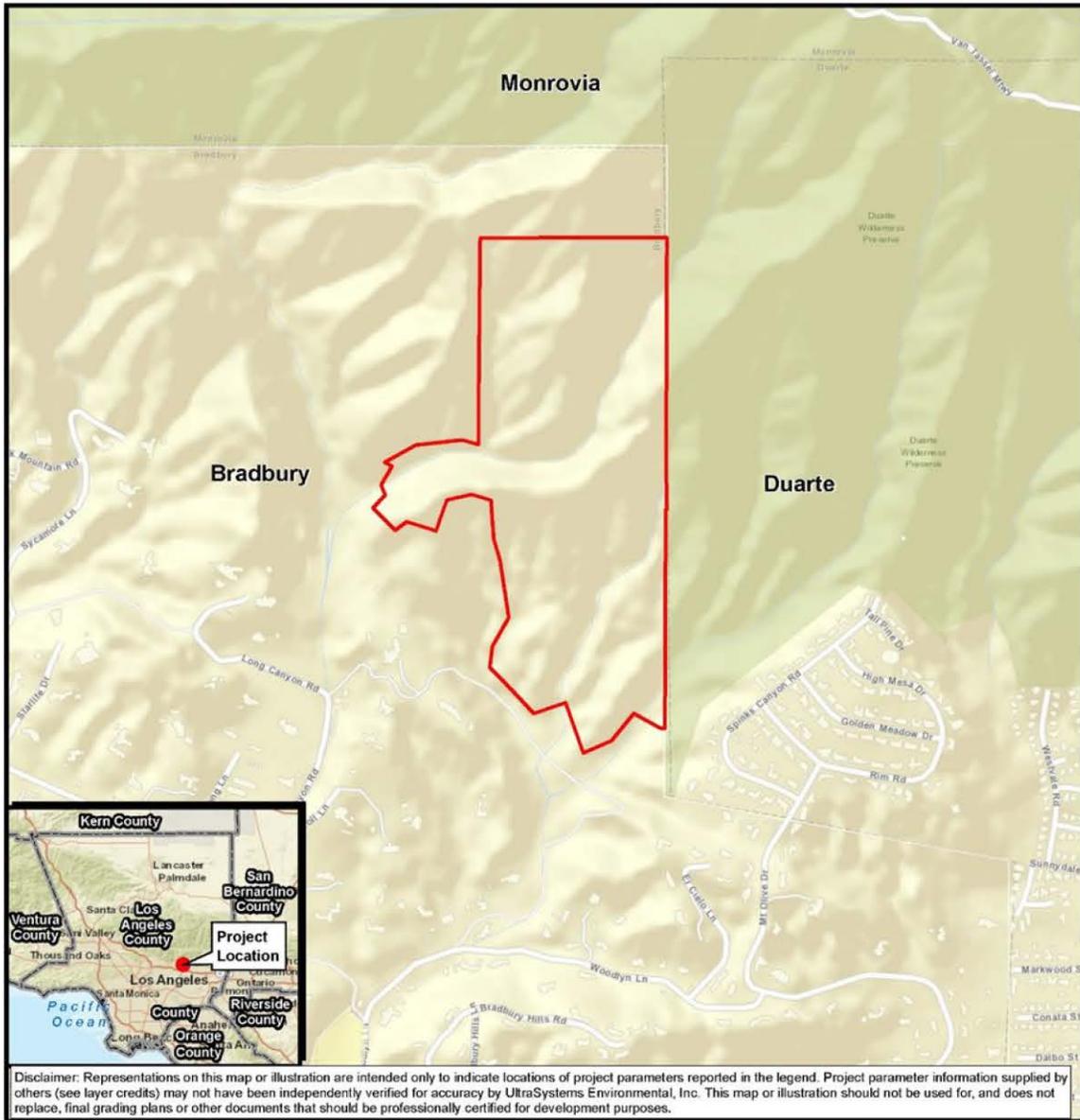
September 24, 2019



Legend	Chadwick Ranch Estates Project
Project Boundary Unincorporated	Regional Location Map



**Figure 2.1-2
PROJECT SITE VICINITY LOCATION MAP**



Path: J:\Projects\6081_Lake_Hughes_MM_2_47\UEI_Data\Land_Cover_Types\7023_Bradbury_31-2_Project_Site_2019_09_26.mxd. Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, Mapbox, © OpenStreetMap contributors, and the GIS User Community, Teale Data Center GIS Solutions Group, 2003; CA Dept. of Conservation, March 2013; UltraSystems Environmental, Inc., 2019. September 26, 2019

Scale: 1:12,000

0 500 1,000 Feet

0 180 360 Meters

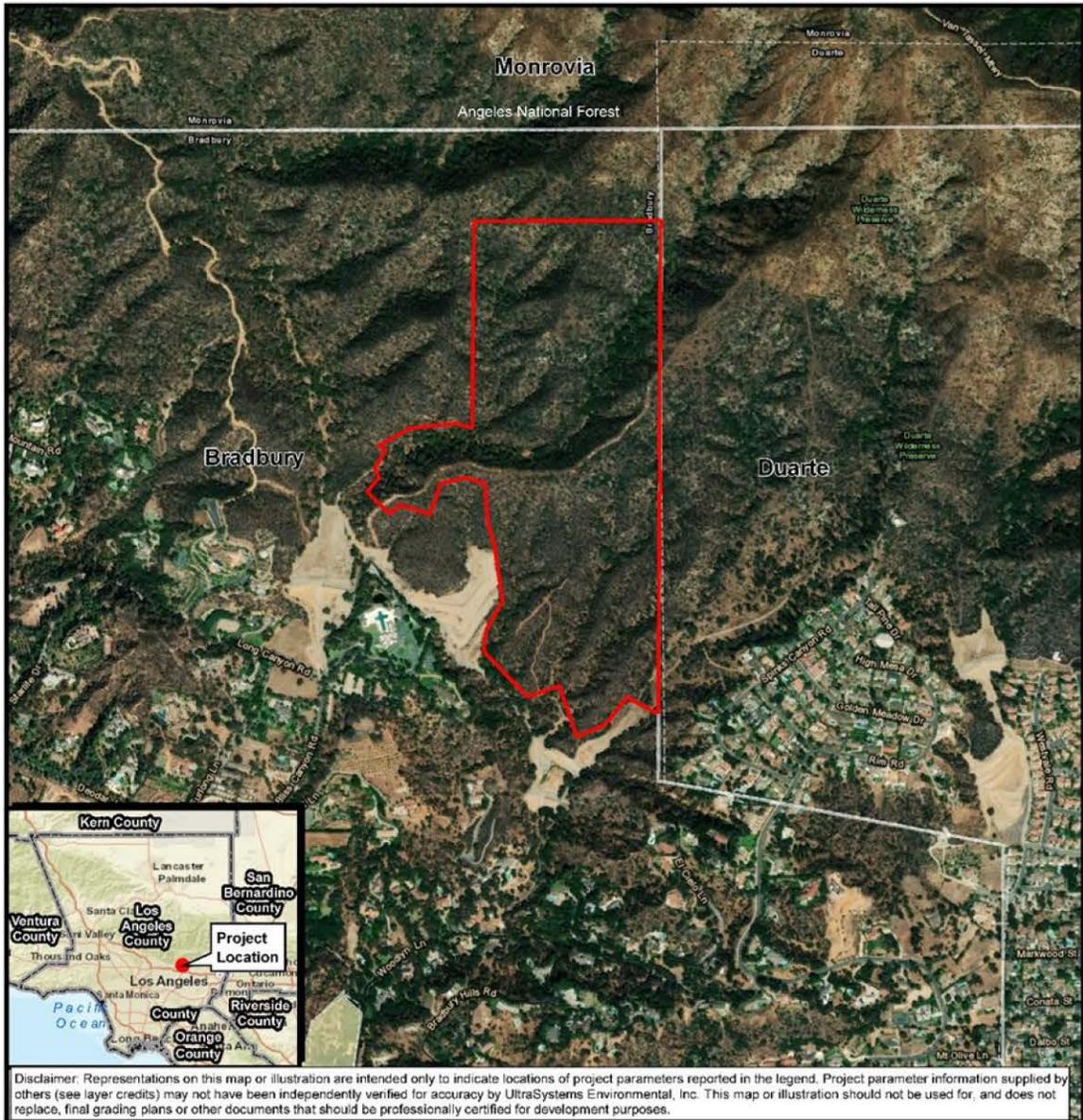
Legend

Project Boundary

Chadwick Ranch Estates Project

Project Site and Vicinity

Figure 2.1-3
AERIAL VIEW OF THE PROJECT SITE AND VICINITY



Path: J:\Projects\6081_Lake_Hughes_MM_2_47\UEI_Data\Land_Cover_Type\7023_Bradbury_3 1-2_Project Site Aerial_2019_09_26.mxd. Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, JRC, swisstopo, and the GIS User Community; Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community; Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp., Esri, HERE, DeLorme, TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS user community, Teale Data Center GIS Solutions Group, 2003, CA Dept. of Conservation, March 2013; UltraSystems

Scale: 1:12,000

0 500 1,000 Feet

0 180 360 Meters

Legend

Project Boundary

Chadwick Ranch Estates Project
Aerial View of Project Site and Vicinity

- Ensure that new development is responsible for the cost of providing CSD services by requiring all lots in the Chadwick Estates Specific Plan area to join the Bradbury Estates HOA which will define service costs unique to this project and require those equivalent monies to be paid by each lot owner through the property tax bill.
- Create view lots strategically designed so that the roadways can be screened by the existing topography and mature landscaping.
- Preserve open space resources in a permanent and natural condition by creating a 64.5-acre conservation easement for open space that will be managed by a steward in perpetuity.
- Maintain the rural character of the Specific Plan Area by using native plant materials, requiring generous building setbacks and preserving open space.
- Use grading to minimize roadways, create cluster development and preserve the hillsides adjacent to the Angeles National Forest in a natural state by minimizing the grading footprint.
- Protect views of hillsides and valleys from neighborhood streets by designing the Project to minimize view impacts.
- Protect the privacy of existing and future residents by using the natural topography to provide visual separation between lots.
- Create a community that will be as fire safe as possible through the use of fuel modification zones, appropriate building and landscape materials, and compliance with all Building and Fire Codes.

2.3 Project Characteristics

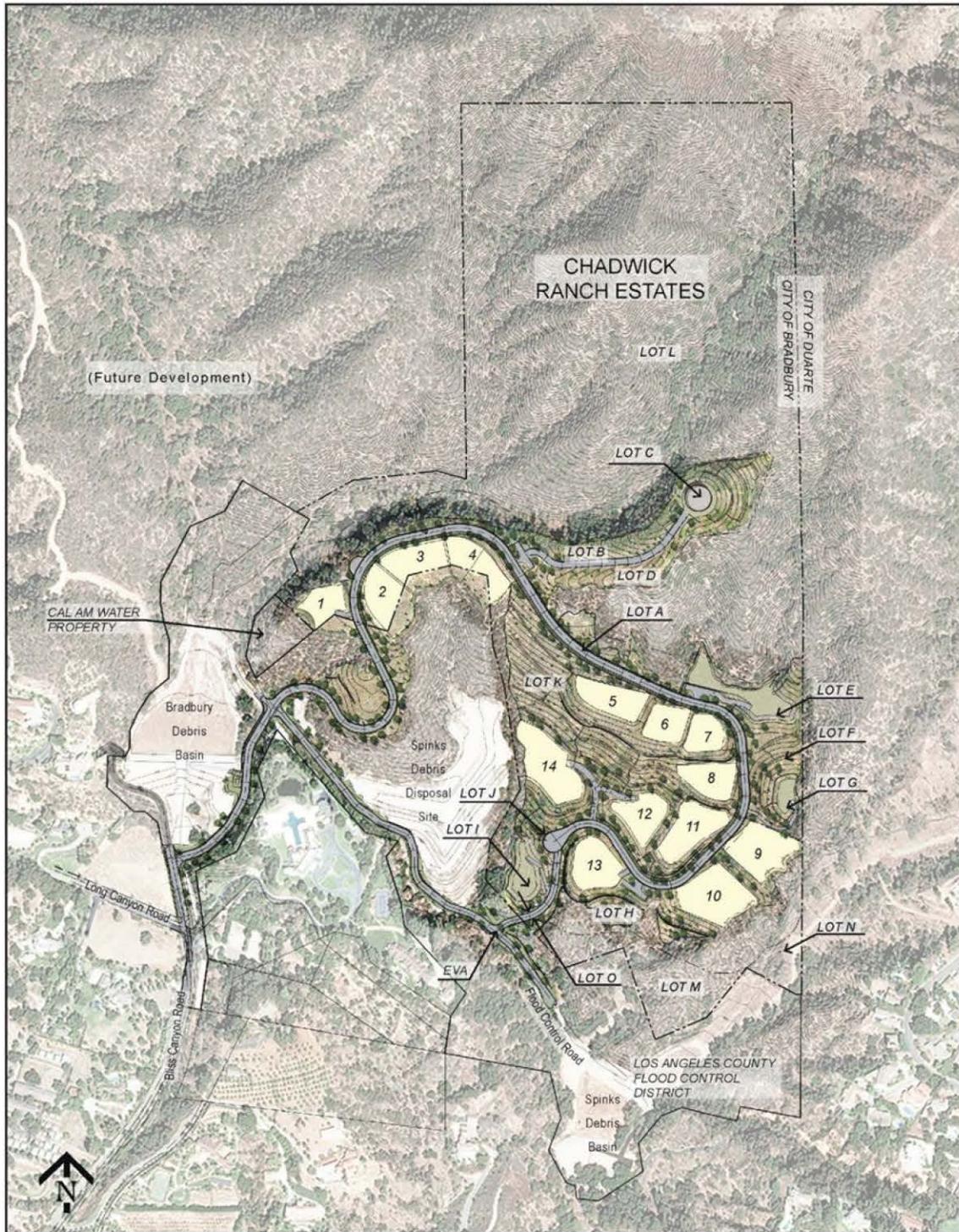
Overview

Development of the project site would occur pursuant to provisions of the Chadwick Ranch Estates Specific Plan (CRESP). The CRESP applies or refines existing development standards and guidelines promulgated by the Bradbury General Plan, Development Code, Design Guidelines, and Hillside Development Standards for development of the project site. In addition to the CRESP, project development would also occur pursuant to several other associated approvals. A summary of the entitlements associated with the proposed project is provided in **Section 2.5, Requested Entitlements**.

The site of the proposed project exhibits highly varied topography with onsite elevations ranging approximately between 790 and 1,790 feet (amsl). Utilizing a variety of grading techniques aimed at blending buildable areas with the natural terrain, minimizing abrupt elevation and slope transitions, and softening the slopes between building pads, the proposed Chadwick Ranch Estates project would facilitate the ultimate construction of 14 estate homes. The residential estates would allow a primary home, secondary type dwelling units, and other accessory structures.

Figure 2.3-1 depicts the arrangement of the developable areas within each of the 14 residential lots and the proposed project's circulation system. Lot areas vary from approximately 28,217 square feet (0.6 acre) to nearly 91,511 square feet (2.1 acres). Site grading would create developable portions in each lot that range in size from 20,000 square feet to 49,000 square feet. **Table 2.3-1, Chadwick Ranch Estates Statistical Summary by Parcel/Lot**, provides a statistical breakdown of the lot areas, pad areas, and total areas associated with each of the 14 numbered residential parcels, and similar information for each of the 15 lettered non-residential parcels proposed.

Figure 2.3-1
CONCEPTUAL SITE PLAN





**Table 2.3-1
CHADWICK RANCH ESTATES PROJECT STATISTICAL SUMMARY BY PARCEL/LOT**

Parcel/Lot	Land Use	Pad Area	Lot Area SF/Acreage
1	Residential Estate	20,000 sf	30,121 sf/0.7 ac
2	Residential Estate	26,000 sf	33,296 sf/0.8 ac
3	Residential Estate	28,000 sf	32,283 sf/0.7 ac
4	Residential Estate	29,000 sf	38,704 sf/0.9 ac
5	Residential Estate	31,000 sf	31,577 sf/0.7 ac
6	Residential Estate	22,000 sf	29,117 sf/0.7 ac
7	Residential Estate	20,000 sf	28,217 sf/0.6 ac
8	Residential Estate	26,000 sf	39,517 sf/0.9 ac
9	Residential Estate	41,000 sf	52,112 sf/1.2 ac
10	Residential Estate	48,000 sf	70,082 sf/1.6 ac
11	Residential Estate	37,000 sf	67,008 sf/1.5 ac
12	Residential Estate	27,000 sf	75,248 sf/1.7 ac
13	Residential Estate	33,000 sf	75,248 sf/0.9 ac
14	Residential Estate	49,000 sf	91,511 sf/2.1 ac
	Subtotal: Residential Estate Uses	437,000 sf	694,043 sf/15.0 ac
Parcel/Lot	Land Use	-	Total Area
A	Private Road	-	152,460 sf/3.5 ac
B	Open Space	-	209,088 sf/4.8 ac
C	Water Reservoir	-	117,612 sf/2.7 ac
D	Open Space	-	139,392 sf/3.2 ac
E	Debris Basin	-	87,120 sf/2.0 ac
F	Open Space	-	69,696 sf/1.6 ac
G	Debris Basin	-	30,492 sf/0.7 ac
H	Open Space	-	235,224sf/5.4 ac
I	Water Quality Basin	-	52,272 sf/1.2 ac
J	Open Space	-	56,628 sf/1.3 ac
K	Open Space	-	248,292 sf/5.7 ac
L	Conservation	-	2,639,746 sf/60.6 ac
M	Conservation	-	135,036 sf/3.1ac
N	Conservation	-	34,848 sf/0.8 ac
O	Emergency Access	-	8,712 sf/0.2 ac
	Subtotal: Non-Residential Uses	-	4,216,608 sf/96.8 ac
	TOTAL	-	4,910,651 sf/111.8 ac

Sources: Proactive Engineering Consultants and TRG Land, Inc., 2019



Development is estimated to disturb approximately 43 percent of the project site. The applicant intends to ultimately dedicate the remaining undisturbed acreage, about 57 percent of the site, to a conservancy yet to be named. By doing so, the preservation of open space in this portion of the project would be assured in perpetuity. While a conservancy would administer the aforementioned open space preservation area, the common areas and open space areas on private lots in the remaining portion of the project site would be maintained by a Homeowner's Association.

While CRE residences would be estate-oriented and relatively few in number, a full range of infrastructure improvements would be necessary to meet the needs of the proposed development while taking into account the many unique and site specific topographic, biological and surface hydrological conditions present on the site and in the project vicinity. Included among these improvements are water and sewage disposal systems, drainage facilities, circulation, public safety-related features, and dry utilities such as electricity, natural gas, and fiber optics for cable television and communications. Project-related infrastructure is discussed in greater detail in the following subsections.

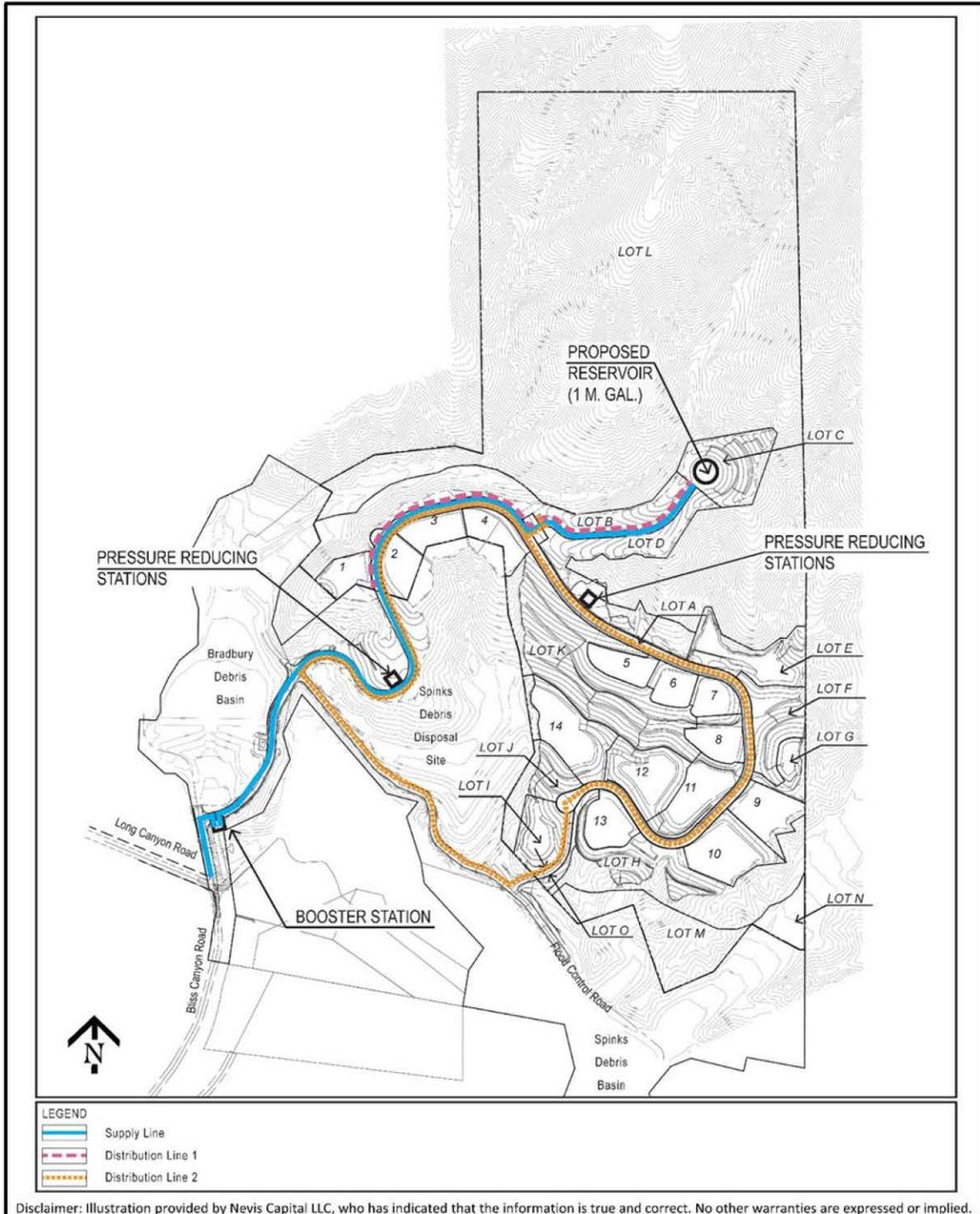
2.3.1 Water and Sewage Disposal Systems

Cal-American Water Company (Cal-Am) provides domestic water service to Bradbury, including the Chadwick Ranch Estates project area. Currently, 12-inch domestic water service mains are in Bliss Canyon Road and Long Canyon Road. The existing Bradbury Tank, approximately 1,000 feet northwest of the intersection of Long Canyon Road and Bliss Canyon Road, is at a base elevation of 1,040 feet above mean sea level (amsl), with an overflow elevation of 1,059 feet amsl. The water main supplying the tank is 12 inches diameter.

Figure 2.3-2, Conceptual Water Plan, identifies the conceptual water service facilities that would be required to provide domestic water to the community. Elements of the water system expansion required to accommodate the proposed project include tie-ins to an existing water main at the intersection of Long Canyon Road and Bliss Canyon Road, 8-inch and 12-inch domestic water mains; water laterals to the proposed residential parcels, one 1-million-gallon water reservoir at a pad elevation of 1,230 feet above mean sea level (amsl) and two domestic water pressure reducing stations and one booster station. The preliminary reservoir dimensions are 65 feet diameter and 40 feet height, giving an overflow elevation of 1,270 feet amsl. The reservoir size is based on 2,500 gallon per minute (gpm) fire flow for two hours; plus five days maximum daily water demand by the project for both domestic and irrigation uses. Additional information on the design and proposed operation of the reservoir is presented in Appendix U, *Chadwick Ranch Development Proposed Water System*. The proposed pumping station would contain two pumps each with 175 gpm capacity. Each pump would have capacity to deliver maximum daily water demand to the proposed project; the second pump would be for reliability when one pump was off-line. The two pressure reducing valves are recommended to be installed at elevations no higher than 1,090 feet amsl, and would reduce water pressure to acceptable levels (50 to 100 pounds per square inch) at lots 5 through 14, which would range in elevation from 1,024 feet amsl (lot 5) to 900 feet amsl (lots 10 and 13). All water lines serving the proposed project would be installed within the pavement width of the project circulation system. This includes the water reservoir access road.

California American Water Company ('Cal-Am') will require the Project applicant to provide additional source water by either installing a new well or by contributing towards a new well that Cal-Am is already in the process of designing and constructing, depending on the timing of the project. A specific well site location has not yet been determined if that is the chosen method. However, prospective well sites have been identified in the City of Duarte which is within the San Gabriel Valley Groundwater Basin and all are located in predominantly urban environments. It is noted that when a final well site location has been identified, approval of the well and any required improvements to

**Figure 2.3-2
CONCEPTUAL WATER PLAN**



make it operational would not rest with the City of Bradbury. Because of the uncertainty of how the project timing will align with Cal-Am's improvement projects, it is too speculative to determine which option will be implemented.

Cal-Am has sufficient forecast water supplies to meet proposed project water demands over the 2020-2035 period (WSC, 2016).

Homes built within the project site would employ a wastewater treatment system consisting of a septic tank utilizing one or more supplemental treatment components to treat the effluent prior to discharge to a dispersal field. Supplemental treatment may include systems to reduce the nitrogen concentration of the effluent, provide disinfection, or both. This type of wastewater treatment system is known as a Non-Conventional Onsite Wastewater Treatment System (NOWTS). Per the Los Angeles County Department of Public Health (Department), NOWTS apply to domestic wastewater systems producing under 10,000 gallons per day (gpd), including single family homes, where wastewater is primarily generated from toilets, sinks, clothes washers, bathtubs and showers. The approval of a domestic NOWTS by the Department exempts the user from having to obtain a Waste Discharge Requirement (WDR) permit from the Regional Water Quality Control Board. Although no public sewer system is available in close proximity to the project site, each estate lot would be stubbed to the street in the event future connection to a public sewer is warranted.

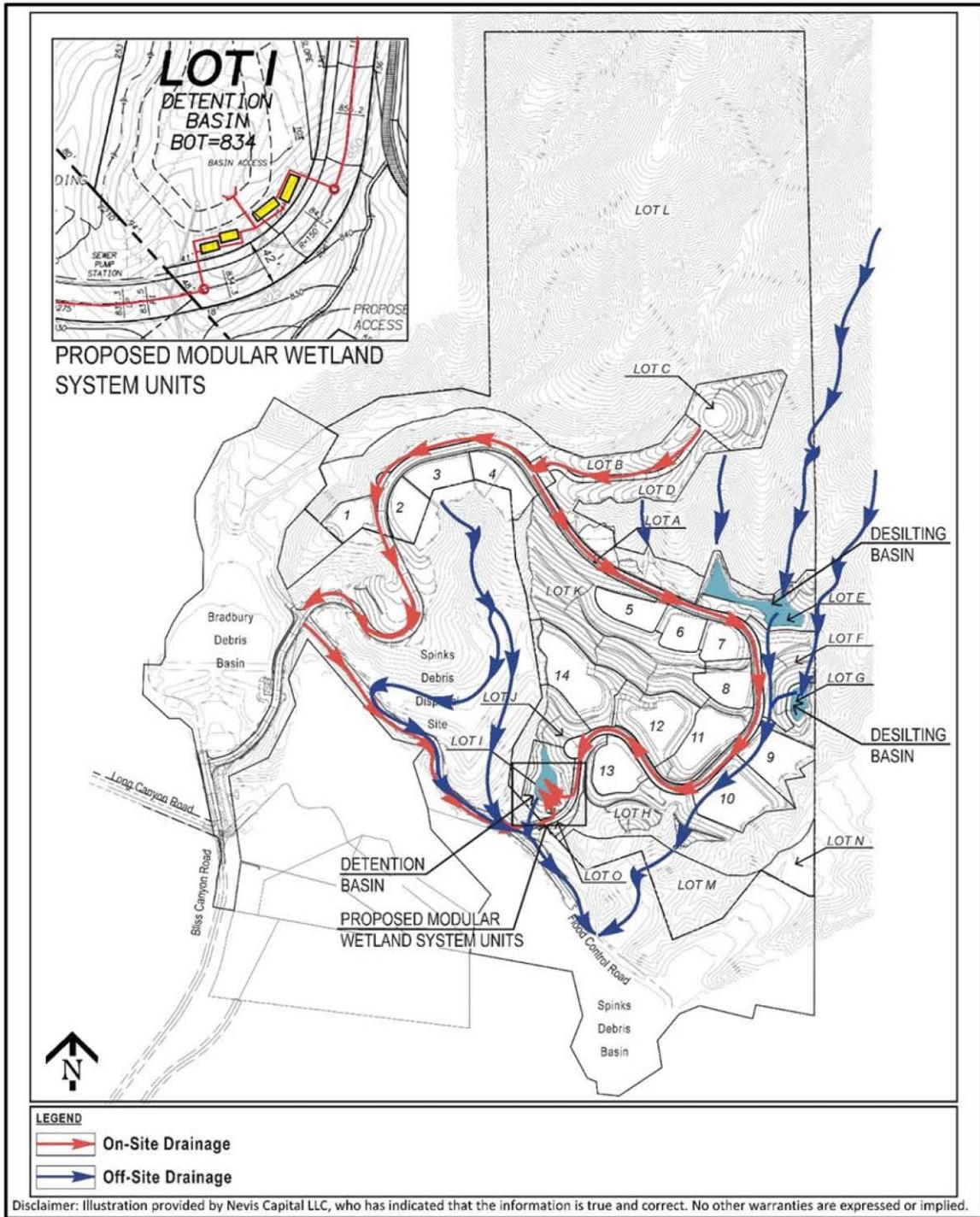
2.3.2 Conceptual Drainage Plan

The Chadwick Ranch Estates project has been designed to collect runoff from each residential pad and some of the open space areas along the main project roadway, direct such runoff to buried storm drains in the main project roadway, which would ultimately convey the runoff southeastward into one of two proposed desilting/retention basins along the eastern boundary of the project site and a Water Quality basin at the south end of the developed area onsite. The basins have been designed to accommodate runoff resulting from a 100-year storm event. **Figure 2.3-3, Conceptual Drainage Plan**, depicts the alignment of onsite storm drains and the locations of other drainage facilities associated with the proposed project.

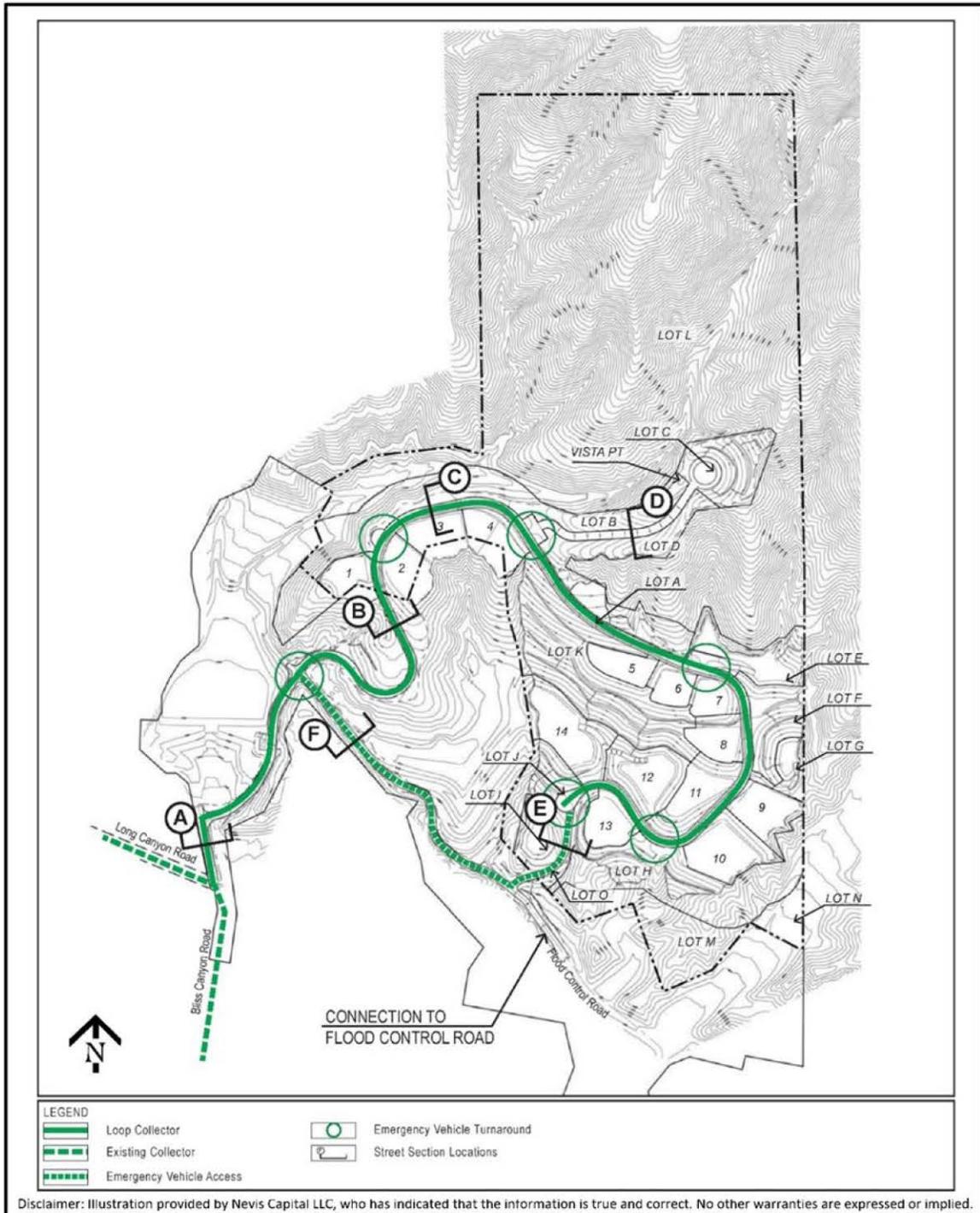
2.3.3 Circulation System

Primary vehicular access to the project site would begin offsite at the intersection of Long Canyon Road and Bliss Canyon Road. From there the project access road would traverse LACFCD property and utilize a portion of the Flood Control District road system using modified easements until it reached the project site boundary. Much of the existing LACFCD road system would be improved for the safety of current and future residents, as well as for ongoing LACFCD operations. **Figure 2.3-4, Circulation Plan**, depicts the circulation system for the proposed project. From the point that the offsite roadway enters the project site, the onsite roadway would climb to its high point at the water tank access. From there it would proceed downhill to provide access to the remaining residential lots and debris basins along the way. Once the access road reaches the residential lots in the southern portion of the site, it turns into a cul-de-sac and there is an emergency access road that connects to the Flood Control Road immediately south of the project boundary.

**Figure 2.3-3
CONCEPTUAL DRAINAGE PLAN**



**Figure 2.3-4
CIRCULATION PLAN**



2.3.4 Emergency Vehicle Access and Evacuations

The project site is in a very high fire hazard severity zone. As a consequence, the proposed project would adhere to the guidelines outlined by LA County Fire Authority. Onsite, the circulation system would be sited around the perimeter of the project area and includes several emergency vehicle turnarounds. The road system would provide access for emergency services from both Bliss Canyon and the Woodlyn Lane community via flood control roads near the Spinks Debris Basin. The neighboring uses, access, terrain, and other factors were considered during the planning and design of the proposed project. Roads have been carefully sited to reinforce the community's rural character and provide adequate access for emergency services.

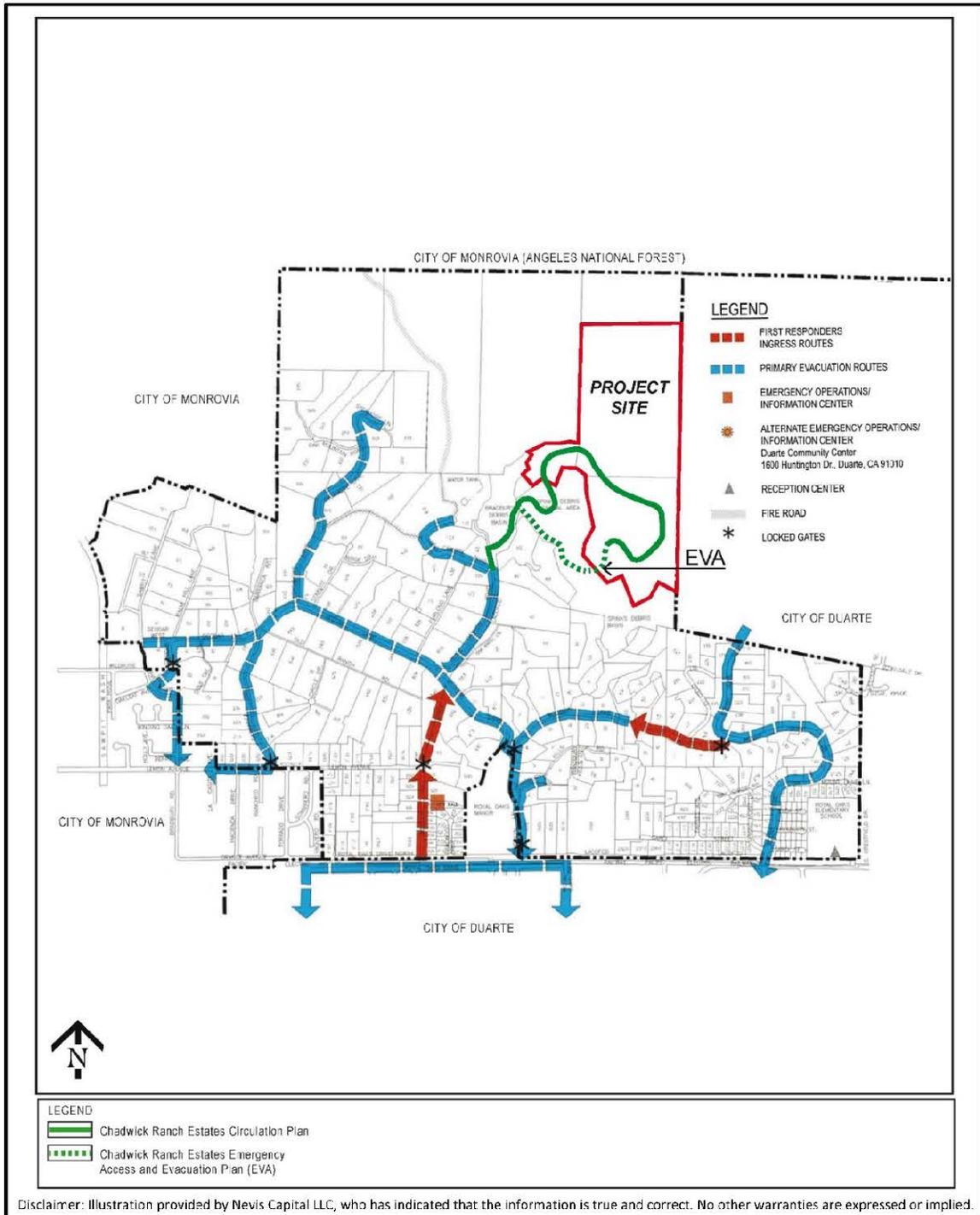
Wildfire and other emergencies are often fluid events and the need for evacuations is typically determined by on-scene first responders or by a collaboration between first responders and designated emergency response teams, including Office of Emergency Services, established for larger emergency events. The Chadwick Ranch Estates development would be consistent with the City of Bradbury General Plan's Natural Disaster Plan, an adopted Natural Hazard Mitigation Plan (dated January 2010). **Figure 2.3-5, *Evacuation Plan***, depicts the Evacuation Plan for the proposed project and how it ties into the aforementioned Circulation Plan.

2.3.5 Fire Protection Plan

A Conceptual Fire Protection Plan was prepared for Chadwick Ranch Estates (FPP) (Dudek, 2020) and is included herein as **Appendix J**. In part, the FPP provides a detailed analysis of the fire risk to the proposed project for the purpose of ensuring compliance with Los Angeles County Fire Department (LACoFD) requirements and to determine what, if any, measures to further reduce the fire risk on-site could be incorporated into the project design. The latter is discussed further in this Project Description. The analyses employed to arrive at the measures incorporated into the proposed project can be found in **Section 3.15, *Fire Protection Services and Wildfire Hazards***, of this Draft EIR.

Fire risk analysis conducted for this project determined that wildfire has occurred and will likely occur near the project area again. The latter eventuality was most recently borne out by the Bobcat Fire in September of 2020. The proposed project would provide ignition-resistant landscapes (drought tolerant and low-fuel-volume plants) and ignition-resistant structures, and defensible space with implementation of specified fire safety measures. Based on modeling and analysis of the project area to assess its unique fire risk and fire behavior, it was determined that the Los Angeles County standard of 100-foot-wide fuel modification zones (FMZs) would help considerably to set the site's structures back from off-site fuels. However, to further reduce the wildfire hazard risk, the proposed project extended the FMZ to provide additional defensible space. Thus, the proposed project has been re-designed to incorporate a fuel modification zone of 200 feet, with the exception of Lot 9, which is using a 100-foot wet zone FMZ. This FMZ, when properly maintained, would effectively minimize the potential for structure ignition from direct flame impingement or radiant heat. The FMZs for Chadwick Ranch Estates Project would be maintained in perpetuity by a funded Homeowner's Association (HOA), or similarly funded entity (Dudek, 2020).

**Figure 2.3-5
EVACUATION PLAN**



2.3.6 Proposed Modifications to City of Bradbury Hillside Development Standards

The CRESP proposes the following modifications to City of Bradbury Hillside Development Standards:

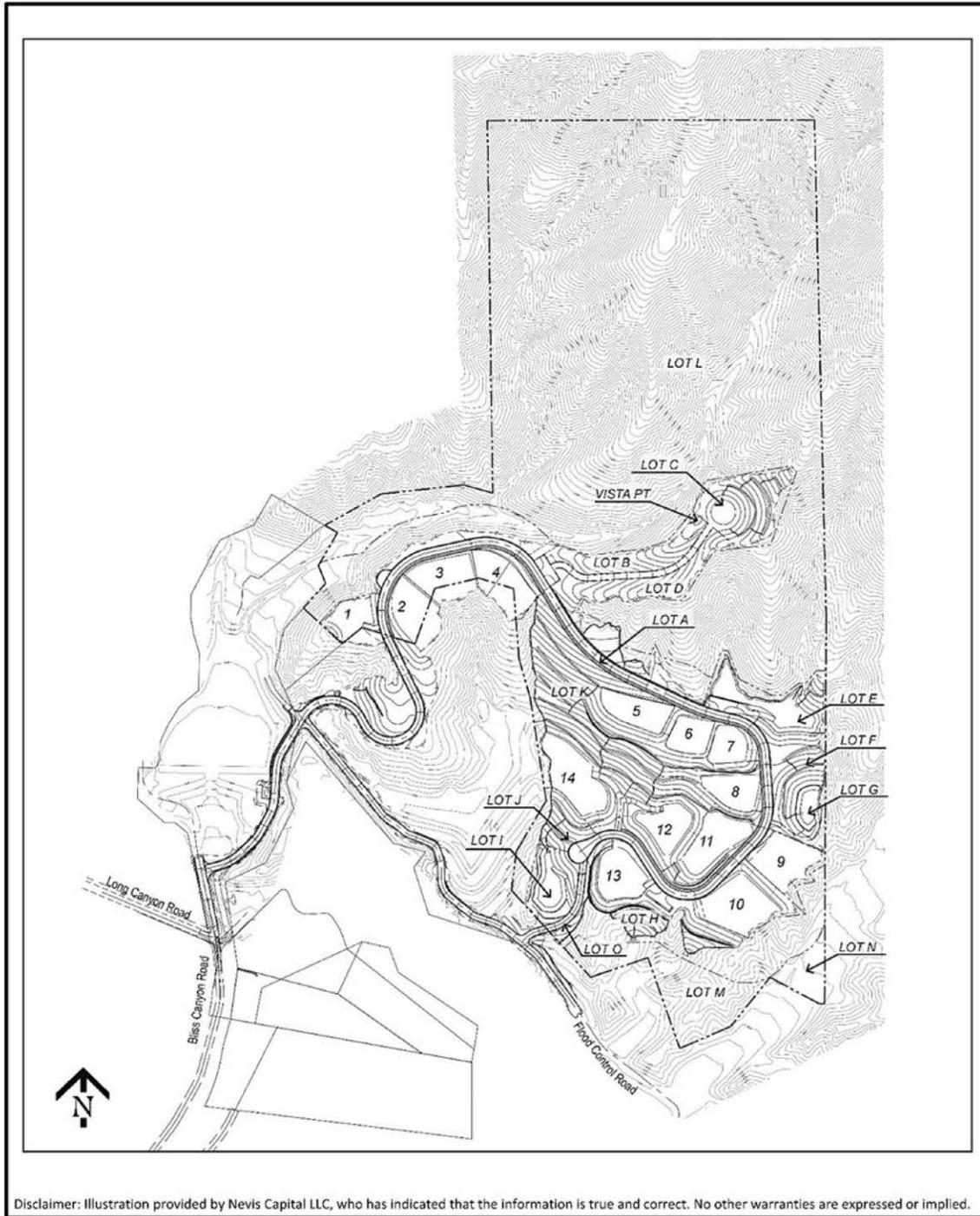
1. Hillside setbacks (BMC § 9.97.040(3)). Lot No. 14, which is two acres or greater in size has reduced setbacks to take greater advantage of clustering and preserving larger conservation easements.
2. Lot Coverage (BMC § 9.97.100(a)(2)). On Lot Nos. 6, 8-11, and 13, lot coverage may exceed 50 percent of the allowable gradable area of the lot up to 60 percent.
3. Natural open space preservation (BMC § 9.97.100(b)). While each lot may not attain the individual open space requirement due to the use of cluster development, 57.7 percent of the overall project is remaining in natural open space, which cumulatively exceeds the individual lot requirements.
4. Fill slopes; design requirements (BMC § 9.97.170(1)c). To facilitate cluster development, the amount of grading required for fill slopes will be greater than 30 feet in height. The slopes are designed to undulate to simulate natural topographical conditions.
5. Hillside lot design and lot size (BMC § 9.97.180(c)). Due to the use of clustering, none of the lots meet the minimum lot size.
6. Canyon fills (BMC § 9.97.190(e)(2)). Some fill slopes are greater than 30 feet in height to help cluster the development. They have been designed to undulate to simulate natural topographical conditions to create a natural looking condition from off-site.
7. Retaining walls (BMC § 9.97.190(f)(7)). Instead of using multiple retaining walls stepped to meet the 4-foot maximum height limit, the Specific Plan allows for six-foot high retaining walls and on Lot 8, the use of a 10-foot Mechanically Stabilized Earth wall located on the uphill side of the pad.

The modifications to the hillside development standards are intended to enable clustered development, which in turn increases the portion of the site that may be preserved as open space.

2.4 Project Construction

Site preparation and earth movement activities would comprise the first phase of construction activities and would constitute the largest component of the construction program. **Figure 2.4-1, Conceptual Grading Plan**, depicts the overall grading plan for the proposed project, highlighting areas of proposed cut and fill, while **Figure 2.4-2, Conceptual Utility Plan**, indicates the overall utility layout. The proposed grading would blend with the natural topography and is designed to vary the grade from 2:1 to 5:1 (horizontal to vertical). Where proposed grades meet existing topography, the grades would be rounded to blend and provide a natural effect. The parts of the project site and environs to be subject to site preparation and grading activities include offsite areas necessary to construct the access road leading to the project site boundary, the onsite circulation system, the pad for the water reservoir and its attendant access roadway, areas required for slope stabilization, building pads within each residential lot, and the creation of basins for storm-water retention and water quality management purposes.

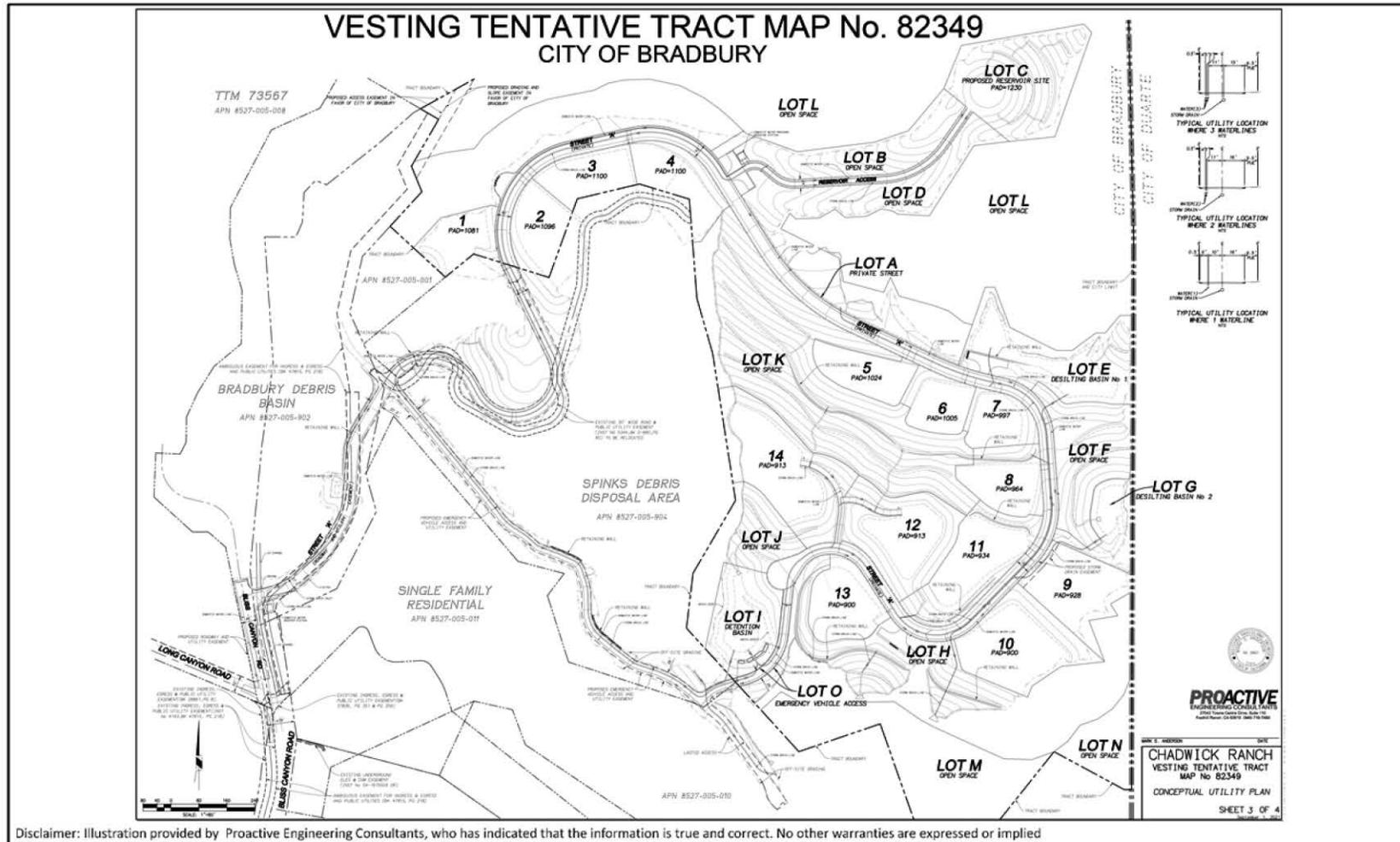
Figure 2.4-1
CONCEPTUAL GRADING PLAN



Chadwick Ranch Estates Project

Conceptual Grading Plan

Figure 2.4-2
CONCEPTUAL UTILITY PLAN



Disclaimer: Illustration provided by Proactive Engineering Consultants, who has indicated that the information is true and correct. No other warranties are expressed or implied
Source: Proactive Engineering Consultants, September 1, 2021.



Chadwick Ranch Estates Project
Conceptual Utility Plan

The applicant indicates that all site preparation and grading would be undertaken in a continuous manner and with contingencies would take about a year to complete. Total earthwork associated with the proposed project is estimated at approximately 1.25 million cubic yards, which would be balanced onsite. Therefore, no import or export of earth materials would be required. The total area to be disturbed by site grading is estimated to be approximately 44.4 acres. Site preparation activities generally include clearing and grubbing and are typically undertaken by a combination of scrapers, dozers, and haulers. Site preparation for portions of the project site may also involve the need to create soils suitable for development where rock presently exists. In such instances, blasting may be required. Such incidences are expected to be few, if any, and would be of limited duration. The project Applicant would notify the occupants of nearby residences when such activities would be anticipated.

Site grading would involve a mix of large earth-moving equipment and vehicles, including bulldozers, scrapers, compactors, and dump trucks, among others. The number and extent to which the grading equipment would be used is dependent upon the complexity of a particular phase of grading. At this time, the mix of heavy equipment is estimated to include three bulldozers (CAT D9, CAT D8 and CAT D6), five CAT scrapers, three water units, and one CAT R-Tire dozer. Overlapping the grading phase of project construction would be trenching for the installation of subsurface utilities including storm drains, water lines, and natural gas. Construction staging areas have yet to be determined but are expected to periodically move in keeping with the progress of site preparation and earth movement activities. Next the primary backbone features of the proposed project would be built, including, roadbed installation and paving, creation of emergency vehicle turnarounds, and improvement of common areas. Heavy equipment and machinery would only occasionally be required at this point in the construction process. The Project does not include development of the residences. The homes will be constructed by individual homeowners in conformance with the Chadwick Ranch Estates Specific Plan. The timing of full residential buildout would depend on market conditions and is currently anticipated to be five years from the start of construction.

2.5 Requested Entitlements from City of Bradbury

To develop Chadwick Ranch Estates as currently proposed, the project Applicant seeks approval of the following entitlements from the City of Bradbury:

- General Plan Amendment (Case No. GPA 19-001). An amendment to the Land Use Element of the General Plan which modifies the current land use designation for the project site from Open Space, Privately Owned Undeveloped to Specific Plan and makes other corresponding changes to the Land Use Element to reflect this change.
- Chadwick Ranch Estates Specific Plan (Case No. SP 19-001). The Chadwick Ranch Estates Specific Plan will guide development of, and become the zoning regulations for the project site. The Specific Plan establishes the existing regulatory framework guiding site development and how site-specific planning and design refines the broad-based development framework available in City-wide documents addressing the same topical issues. It sets forth the various development features which are common to all developments but which vary in application from site to site. Included are grading, water system, sewer system, circulation plan, evacuation plan, open space protection and preservation. The Specific Plan also presents goals and policies, development standards, design guidelines, details regarding Specific Plan administration, and Specific Plan amendment procedures.
- Zone Change (Case No. ZC 19-001). A change of zone from Agriculture/Estate Residential (A-5), Specific Plan Overlay, which allows for five-acre minimum single-family lots with the adoption of

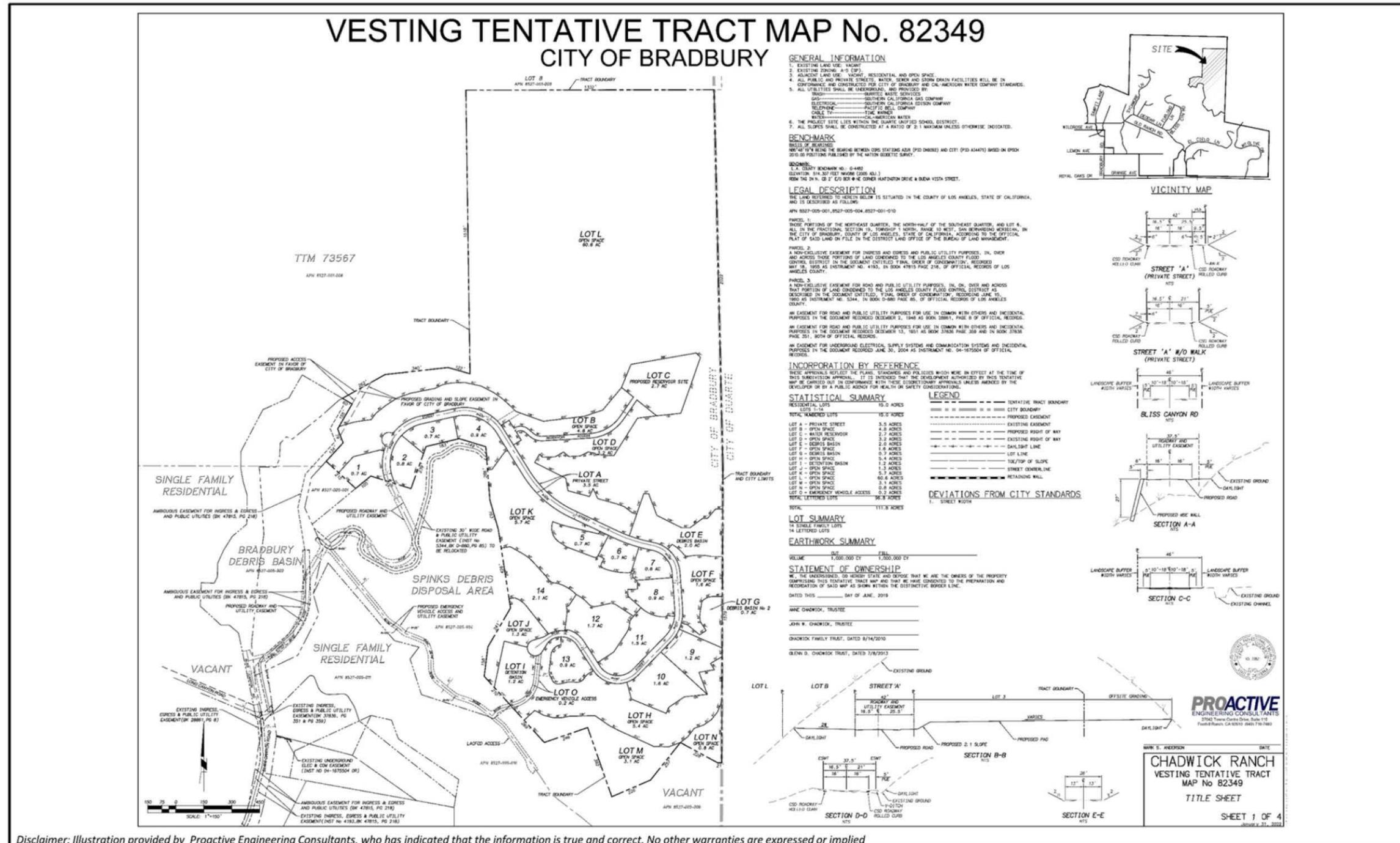
a Specific Plan, to Chadwick Ranch Estates Specific Plan. The Zone Change is required to amend the Bradbury Zoning Map and Development Code to be consistent with the General Plan.

- Zoning Code Amendment (Case No. ZCA 19-001). An amendment to the Development Code of the City of Bradbury to add references to the revised General Plan Land Use designation and reference the Chadwick Ranch Estates Specific Plan.
- Vesting Tentative Tract Map No. 82349. Vesting Tentative Tract Map No. 82349 subdivides the project site into 14 numbered estate residential parcels and 15 lettered non-residential lots See **Figure 2.5-1, Vesting Tentative Tract Map No. 82349**.
- Tree Removal Permit (Case No. TP 19-001). A plan identifying regulated trees within the project site classified as native, prominent, significant and orchard trees; specifies trees to be removed and identifies the impacts of removal; and recommends measures for tree protection, relocation, removal, and mitigation. This includes a proposed plan for the removal of significant on-site trees.

2.6 Other Agency Approvals Required

- **Bradbury Estates Community Estates District:** Approval of infrastructure improvements relating to street lighting and landscaping, streets, roads, rights-of-way, culverts, drains, curbs, gutters, sidewalks and incidental work.
- **Los Angeles County Flood Control District (LACFCD) Roadway/Access Easements:** The primary access road to the project site would in part be constructed along and/or cross maintenance roads servicing debris basins owned, operated and maintained by the Los Angeles County Flood Control District (LACFCD). The Board of Supervisors will approve the modifications to the existing access easements across Flood Control District property and approve the maintenance agreements for the same. The Board of Supervisors also approves the allowance of a fuel modification zone on County property.
- **Fire Protection Plan:** The Fire Protection Plan (FPP) must be approved by the Los Angeles County Fire Department. As the FPP includes fuel modification zones outside of the boundaries of the Specific Plan area and on County property, the Board of Supervisors must approve this easement.
- **Non-Conventional Onsite Wastewater Treatment System (NOWTS) Approval:** At the time of development each estate residential lot will employ a wastewater treatment system consisting of a septic tank utilizing one or more supplemental treatment components to treat effluent prior to discharge to a dispersal field. Such systems, also referred to as a Non-Conventional Onsite Wastewater Treatment System (NOWTS), require approval from the Los Angeles County Department of Public Health (Department). Department approval of a domestic NOWTS grants an exemption from otherwise having to obtain a Waste Discharge Requirement (WDR) permit from the Los Angeles Regional Water Quality Control Board.
- **Section 1600 Lake and Streambed Alteration Agreement** from California Department of Fish and Wildlife (CDFW) for impacts to Waters of the State including riparian habitats.
- **Low-Impact Development Plan approval** from Los Angeles Regional Water Quality Control Board.
- **Section 401 Water Quality Certification** approval from Los Angeles Regional Water Quality Control Board.
- **Section 404 Nationwide Permit** approval from US Army Corps of Engineers for impacts to Waters of the U.S.

Figure 2.5-1
VESTING TENTATIVE TRACT MAP NO. 82349



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Source: Proactive Engineering Consultants, January 31, 2022.



Chadwick Ranch Estates Project

Vesting Tentative Tract Map

**SECTION 3.0 – ENVIRONMENTAL SETTING, IMPACTS AND
MITIGATION MEASURES**



3.0 ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

Introduction

This section discusses the potential project-related significant environmental effects resulting from implementation of the proposed project and, where possible, identifies feasible mitigation for such effects. With regard to the assessment of environmental effects, California Code of Regulations (CCR) Title 14, § 15126.2 (14 CCR § 15126.2) states the following:

“An EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation [NOP] is published, or where no [NOP] is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, and human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected.”

With regard to mitigation measures, § 15126.4(a)(1) of the State CEQA Guidelines indicates that an EIR shall describe feasible measures which could minimize significant adverse impacts. State CEQA Guidelines § 15126.4(a)(2) goes on to state that mitigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments.

Environmental Topics Discussed in this Section

Section 1.0, Introduction, of this document describes the process the Lead Agency employed to ascertain which environmental topics required assessment in this Draft EIR. **Section 3.0, Environmental Setting, Impacts and Mitigation Measures**, is the section of this Draft EIR where the assessments of those environmental topics are presented. The environmental topics and corresponding section numbers are as follows:

- | | | | |
|-----|------------------------------------|------|-------------------------------|
| 3.1 | Aesthetics | 3.9 | Hydrology and Water Quality |
| 3.2 | Air Quality | 3.10 | Land Use and Planning |
| 3.3 | Biological Resources | 3.11 | Noise |
| 3.4 | Cultural Resources | 3.12 | Transportation |
| 3.5 | Energy | 3.13 | Tribal Cultural Resources |
| 3.6 | Geology and Soils | 3.14 | Utilities and Service Systems |
| 3.7 | Greenhouse Gas Emissions | 3.15 | Fire Protection Services and |
| 3.8 | Hazards and Hazardous
Materials | | Wildfire Hazards |



Topical Section Structure

This Draft EIR section is organized by environmental topic. The nomenclature identifying the environmental topics generally follows those provided in State CEQA Guidelines Appendix G, as amended. Each topic subsection is structured in a logical progression of key elements which build upon one another to arrive at an ultimate determination of impact significance both before and after mitigation measures are implemented.

Relevant Policies and Regulations

This section identifies relevant federal, state and local statutes, laws, regulations, and ordinances that have a bearing on the proposed project.

Existing Setting

The Environmental Setting provides an overview of the baseline conditions of the physical environment at the project site and in the surrounding area.

Methods

This describes the methods, processes, procedures, and/or assumptions used to formulate and conduct the impact analysis.

Thresholds of Significance

This section presents criteria established by the Lead Agency which serve as thresholds by which to determine the significance of an impact. Thresholds may be quantitative or qualitative. Thresholds of significance are typically derived from Appendix G of the State CEQA Guidelines, as amended; factual or scientific information and data; and, regulatory standards and/or action levels promulgated by federal, state, regional, and local agencies.

Impact Analysis

This section identifies potential project impacts on the existing environment in accordance with the State CEQA Guidelines (14 CCR §§ 15126 and 15126.2) This section presents the assessment of the potential direct, indirect, short-term and long-term impacts of the proposed project. Prior to mitigation, one of the following determinations regarding the extent of a particular impact will be made:

- ***No impact*** – this indicates that the construction, operation, and maintenance of the project would not have any direct or indirect effects on the environment. This conclusion means no change from existing conditions.
- ***Less-than-significant impact*** – this indicates that the impact would not result in a substantial or potentially substantial adverse change in the physical environment.
- ***Potentially significant impact*** – this indicates that the impact that, if it were to occur, would be considered a significant impact; however, the occurrence of the impact cannot be



❖ SECTION 3.0 – ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES ❖

immediately determined with certainty. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact.

- ***Significant impact*** – this indicates that the impact would cause “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project.”

EIRs are also required to assess the potential cumulative impacts of proposed project. Cumulative impacts are those that would result when the incremental impact of the proposed project is either combined with, or added to those associated with other past, present, and reasonably foreseeable future projects in the project vicinity. Cumulative effects are discussed separately in **Section 4.0, *Cumulative Impacts***, of this Draft EIR.

Mitigation Measures

This section presents the mitigation measures to avoid, minimize, rectify, reduce, or compensate for each significant and potentially significant impact identified for the project.

Level of Significance after Mitigation

This section describes the effectiveness of the mitigation measures at reducing the identified potentially significant and/or significant impacts.

SECTION 3.1 – AESTHETICS

3.1 Aesthetics

3.1.1 Relevant Policies and Regulations

Federal

There are no federal regulations that pertain to this issue area.

State

There are no state regulations that pertain to this issue area.

Local

Bradbury Municipal Code, Title IX, Part VI, Chapter 97, Hillside Development Standards.

This Chapter of the City’s Development Code includes requirements and standards, prohibitions and allowances associated with the development of hillsides within the City. As articulated therein, “It is the City’s position that its hillsides are a valuable resource to the community providing a visible geographical boundary to the City and aesthetic relief to the view-scape from virtually every location in the City.” The site of the proposed project is subject to hillside development standards.

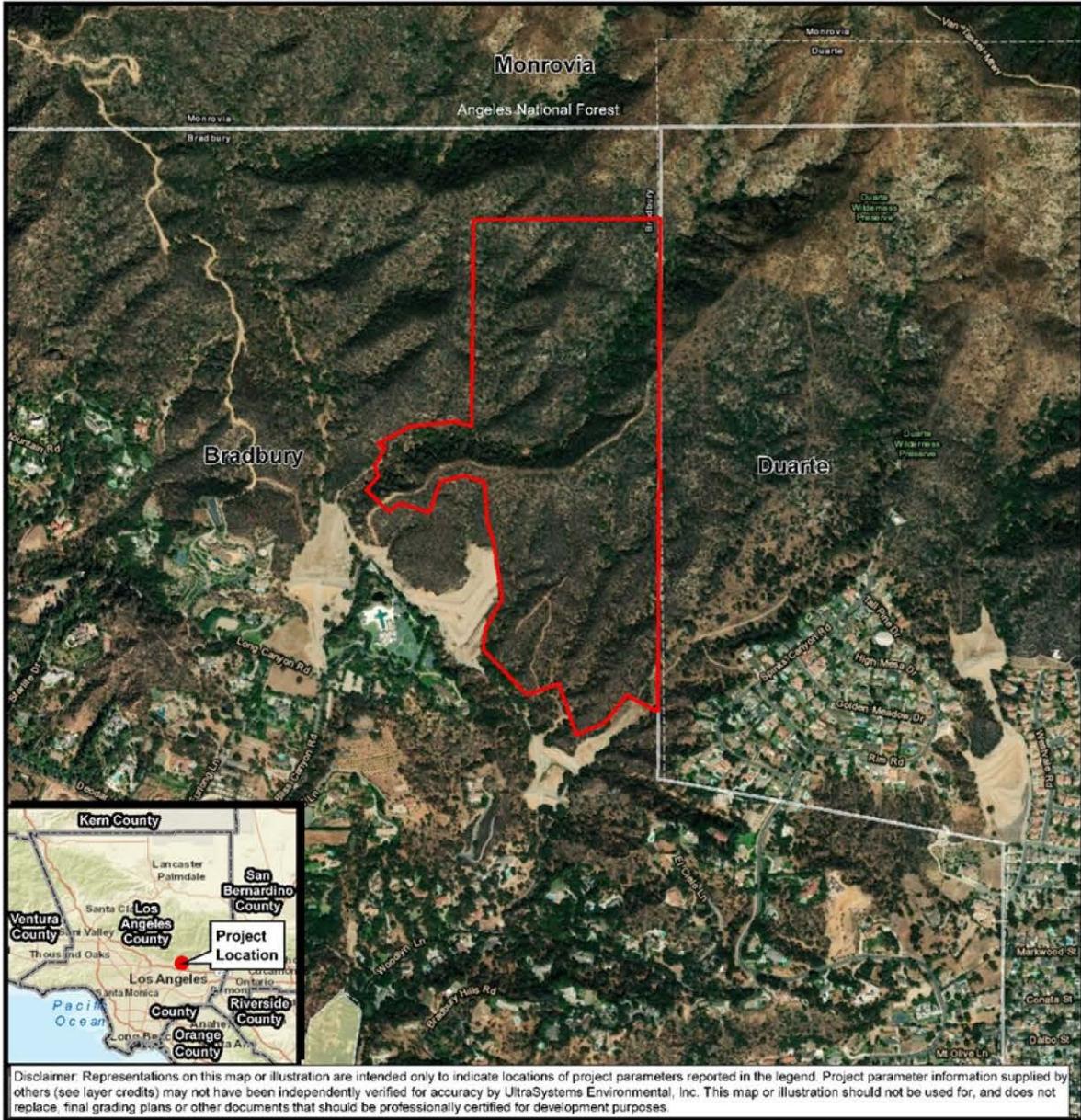
City of Bradbury Design Guidelines, August 1995

This document provides guidance to the City and the private sector in employing creative design solutions to ensure “Quality Development” as it relates to the creation of design for new dwellings. These guidelines are part of the City’s formal framework to maintain the scenic rural hillside atmosphere of the community. As stated therein, “Preservation of the natural hillsides, existing ridge-lines, open spaces and vistas are of primary importance.” Ultimate development of the proposed project will be subject to the provisions of the City’s design guidelines, except as superseded by the CRESP.

3.1.2 Existing Setting

The 111.8-acre project site is vacant, devoid of man-made improvements and heavily vegetated with trees and shrubs. Adjacent lands include vacant, undeveloped land to the west; open space to the east (Duarte Wilderness Preserve); open space, including the Angeles National Forest, to the north; and open space managed by LACFCD to the south. The topographic expression of the project site is highly varied with elevations ranging from 790 to 1,790 feet above mean sea level (amsl). The following exhibits graphically depict the overall visual character of the project site and vicinity and specific on-site elements contributing thereto. **Figure 3.1-1, *Aerial View of the Project site and Vicinity***, illustrates the topographic variation of the site and the predominance of on-site vegetation. **Figure 3.1-2, *Site Imagery One***, and **Figure 3.1-3, *Site Imagery Two***, contain photos taken both toward and from the site of the proposed project. **Figure 3.1-4, *Site Imagery Location Key***, depicts the locations and directions from which the photos in **Figures 3.1-2 and 3.1-3** were taken.

Figure 3.1-1
AERIAL VIEW OF THE PROJECT SITE AND VICINITY



Path: J:\Projects\0681_Lake_Hughes_MM_2_47\UEI_Data\Land_Cover_Type\0725_Bradbury_3.1-2_Project_Site_Aerial_2019_09_26.mxd, Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Geomatics, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, Swisstopo, and the GIS User Community, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community, Teale Data Center GIS Solutions Group, 2003; CA Dept. of Conservation, March 2013; UltraSystems

September 26, 2019

Scale: 1:12,000



0 500 1,000 Feet

0 180 360 Meters

Legend

Project Boundary

Chadwick Ranch Estates Project

Aerial View of Project Site and Vicinity



Figure 3.1-2
SITE IMAGERY ONE



VIEW 1



VIEW 2



VIEW 3

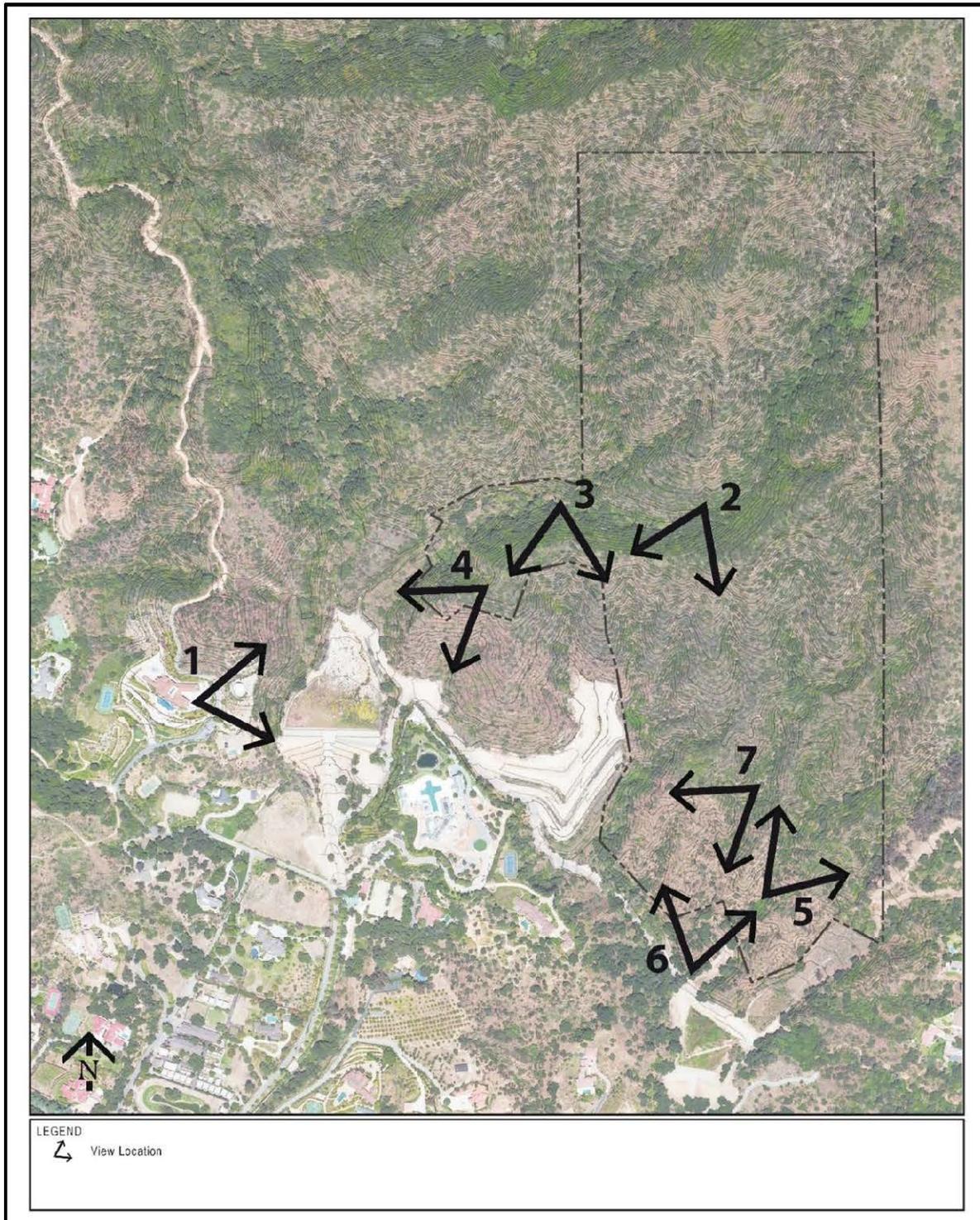
Sources: Nevis Capital LLC, 2019

Figure 3.1-3
SITE IMAGERY TWO



Sources: Nevis Capital LLC, 2019

Figure 3.1-4
SITE IMAGERY LOCATION KEY



Sources: Nevis Capital LLC, 2019

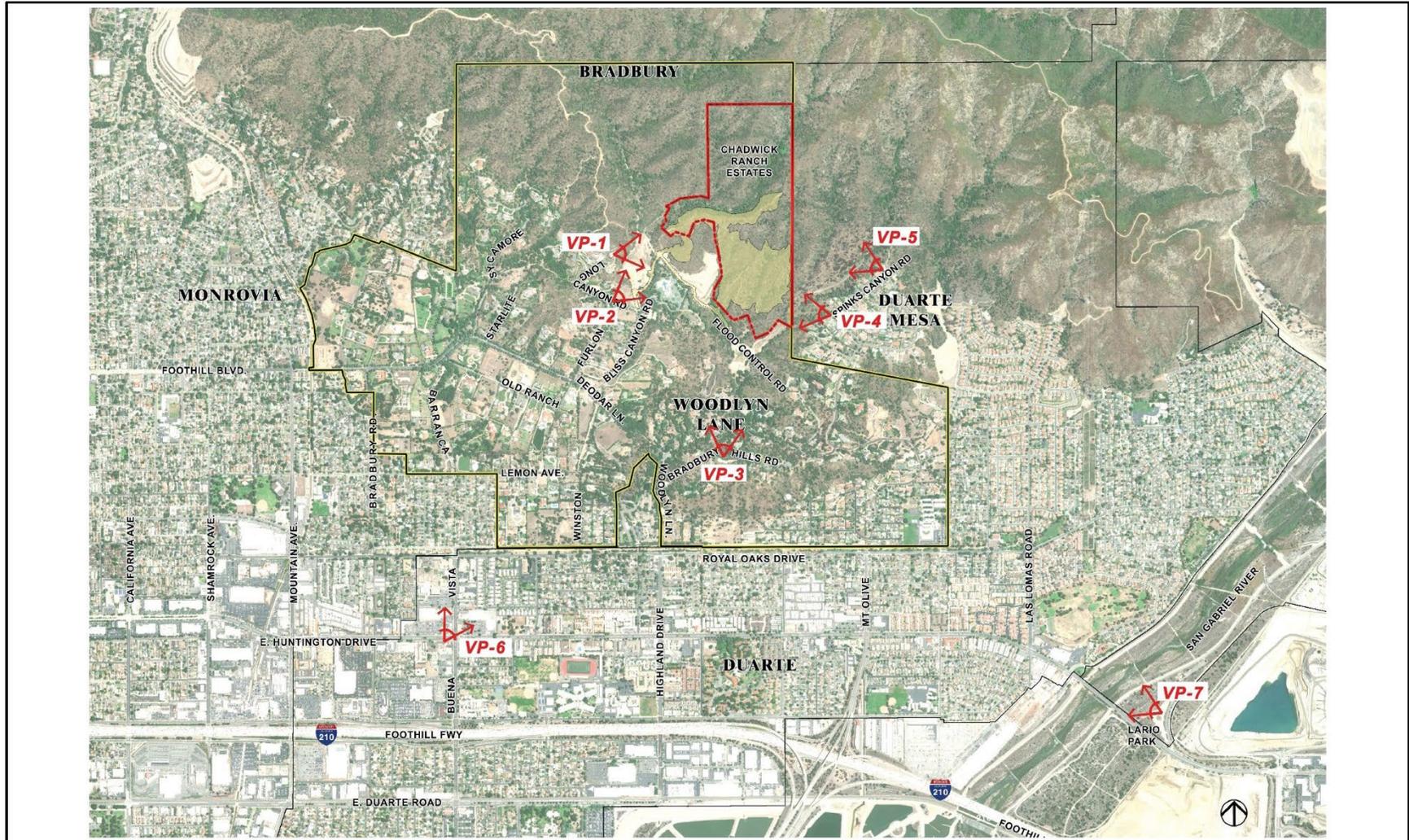
The City of Bradbury values its large lot hillside residential character which includes premier views of the surrounding valley and the backdrop of the San Gabriel Mountains as resources worthy of preservation. As such, the City has formalized a development process aimed at sustaining and preserving the value of this character to which the citizens ascribe such importance. In this regard, the City of Bradbury has adopted formal Design Guidelines and codified hillside development standards which articulate what aspects of the visual aesthetic environment are considered most important and against which all proposed hillside development projects, including the proposed project considered herein, are evaluated. While there are numerous factors encompassed by this evaluation, key among them are:

- **View Corridors:** The preservation of views is a major factor in the review of all development applications.
- **Existing View:** Care should be taken in the planning for any new dwelling or structure to ensure that it will not obstruct the near and far views as identified by the Bradbury Development Code.
- **View Preservation – Near View and Far View Definitions:** Bradbury Development Code Title IX, Part VI, Chapter 97, Hillside Development Standards, defines a significant *Near View* as a scene located within the City, including, but not limited to, a valley, ravine, equestrian trail, pastoral environment, or any natural setting. A *Far View* is defined as a scene located out of the City, including, but not limited to, the Los Angeles Basin, City lights at night, mountains and distant valleys.
- **Prominent Landforms:** Prominent landforms, including but not limited to, knolls, significant ridgelines and water courses shall be preserved in their natural condition to the maximum extent possible. All structures shall be constructed sufficiently below the crest of the hillside so that the crest is not obscured or dominated by the structure. Whenever possible, dwellings should be staggered with respect to the building pad elevations on which they are to be located.
- **Major Hillside Viewscapes:** Significant hillsides and ridgelines visible from locations beyond the subject property shall not be altered by highly visible cut and/or fill slopes, building lines and/or road surfaces.

In addition to the Far View criteria specified by the City's Development Code, scenic vistas may also include extensive panoramic views of natural features, unusual terrain, or unique urban or historic features, for which the field of view can be wide and extend into the distance. The project site exhibits highly varied topography with onsite elevations ranging approximately between 790 and 1,790 feet above mean sea level (amsl). Residential land uses in the vicinity of the proposed project site within the City of Bradbury are located to the south and west. Southeast of the project site are residential land uses in the City of Duarte.

A field reconnaissance was conducted by TRG Land Inc. and UltraSystems to identify several locations with views of the project site considered representative of views available to other similar land uses in the area. Five proximal viewpoint locations (VP1 through VP5) were selected for the aesthetics-related impact evaluation. Two additional distal viewpoints (VP6 and VP7) considered representative of locations on the San Gabriel Valley floor ae included in this impact analysis. The locations and directional orientations of the views toward the project site available from each of the seven viewpoints are depicted on **Figure 3.1-5, Viewpoint Location Reference Map**. **Figures 3.1-6, View Point 1 (VP1)**, through **3.1-12, View Point 7 (VP7)**, present the current views of the project site available from each viewpoint (**Viewpoint 1** through **Viewpoint 7**, respectively). These figures portray the type and composition of the viewshed available to observers at each of the viewpoints. **Table 3.1-1, Viewpoint Characteristics**, describes each viewpoint in tabular form.

Figure 3.1-5
VIEW POINT LOCATION REFERENCE MAP



Source: TRG Land, July 17, 2020.

Figure 3.1-6
VIEW POINT 1 (VP1)



Source: TRG Land, July 17, 2020.

Figure 3.1-7
VIEW POINT 2 (VP2)

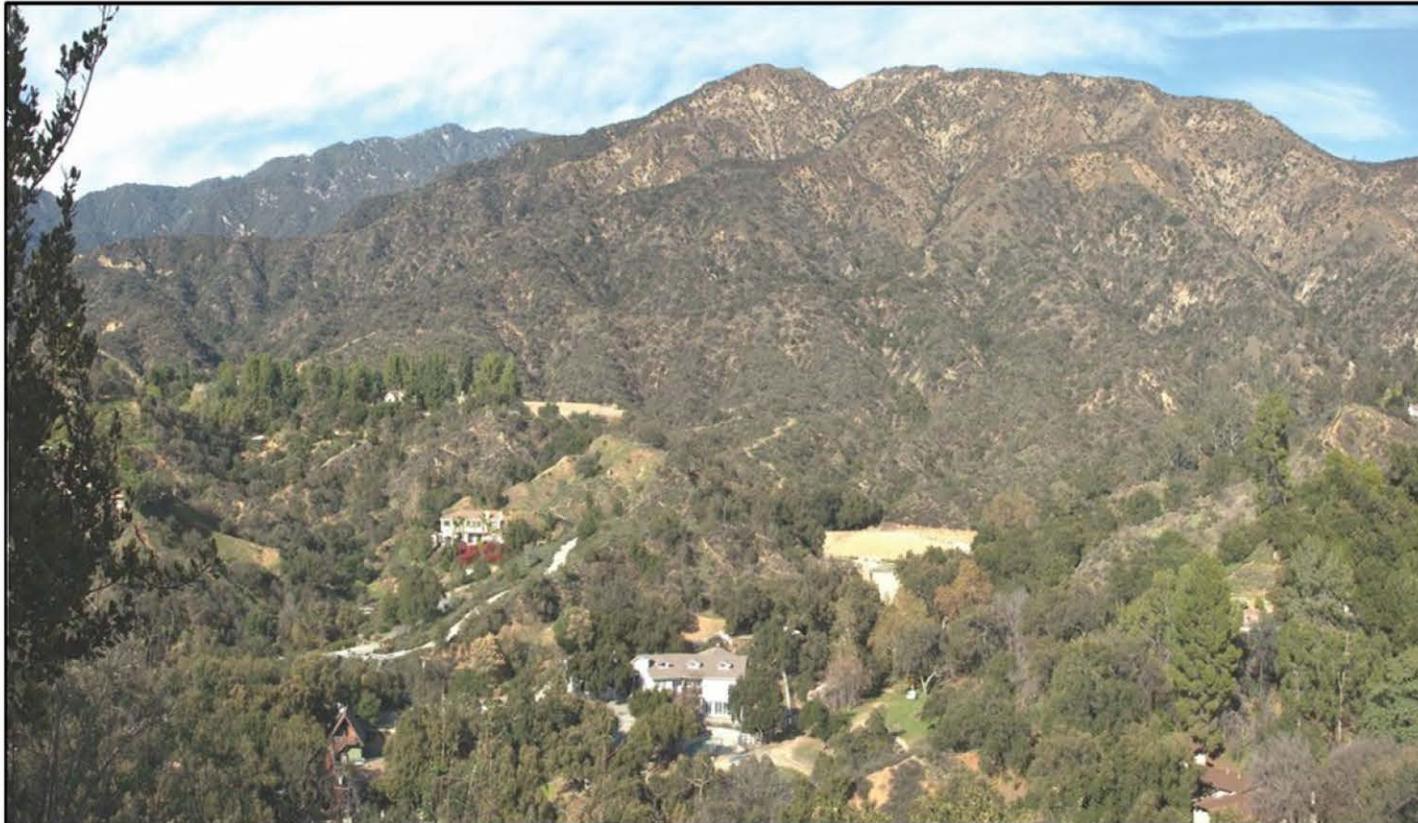


Source: TRG Lanc, July 17, 2020.



Chadwick Ranch Estates Project
View Point 2

Figure 3.1-8
VIEW POINT 3 (VP3)



Disclaimer: Illustration provided by TRG Land, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Sources: TRG Land, July 2020



Chadwick Ranch Estates

View Point 3

Figure 3.1-9
VIEW POINT 4 (VP4)



Source: TRG Lanc, July 17, 2020.

Figure 3.1-10
VIEW POINT 5 (VP5)



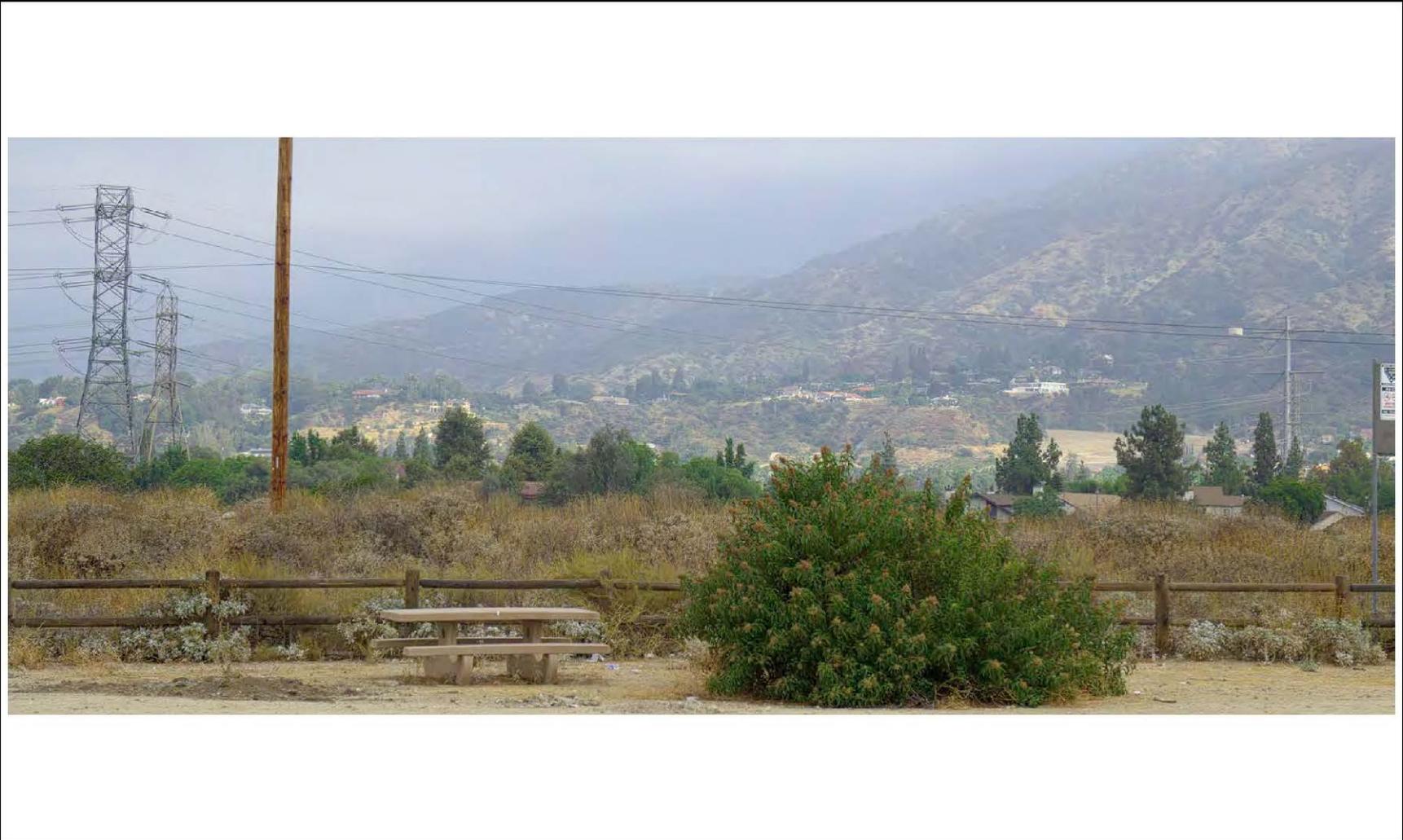
Source: TRG Land, July 17, 2020.

Figure 3.1-11
VIEW POINT 6 (VP6)



Source: TRG Land, July 17, 2020.

Figure 3.1-12
VIEW POINT 7 (VP7)



Source: IRG Land, July 17, 2020.

**Table 3.1-1
VIEWPOINT CHARACTERISTICS**

Viewpoint Identifier	Jurisdiction	Viewpoint Location and Directional Orientation	Predominant Viewshed Features
VP1	Bradbury	Just west of the project site looking due east across the project site and beyond to Duarte Mesa and further west along the foothills flanking the San Gabriel Mountains.	<ul style="list-style-type: none"> • Left to right (north to south) foothill down gradient. • Project site is beyond foreground features including a fire road trending due north. • Estate residential development with associated mature trees and vegetation near Long Canyon Road in the center right portion of the viewshed; • Distal views of foothills further west of the project site, intermittent vegetation and trees throughout.
VP2	Bradbury	Southwest of the project site looking northeast across the project site and beyond toward the foothills flanking the San Gabriel Mountains	<ul style="list-style-type: none"> • Foreground fairly level ground with grasses and sparsely distributed mature trees. • Existing estate residential Long Canyon Road neighborhood to the extreme left of the viewshed. • Distal views of the San Gabriel Mountains/Foothills
VP3	Bradbury	At elevation due south of the project site in the Woodlyn Lane neighborhood looking due north across the project site and mostly uphill to elements of the San Gabriel Mountains.	<ul style="list-style-type: none"> • Foreground half of the viewshed comprises existing estate residences amidst mature trees and vegetation at lower elevation. • Beyond is the site of the proposed project. • Further north, beyond the site of proposed project are portions of the San Gabriel Mountains and Angeles National Forest.
VP4	Duarte	Immediately east of the project site at the western edge of residential development on Duarte Mesa looking due west across the southernmost portion of the site of the proposed project.	<ul style="list-style-type: none"> • Viewshed is dominated by mature vegetation and trees. • The center of the viewshed shows a manufactured slope constructed by LACFCD with debris basin materials. • The project site is in the center right portion of the viewshed and somewhat obscured by vegetation. • In the distal west at the top of the viewshed are portions of the San Gabriel Mountains.
VP5	Duarte	A little further east of the project site than VP4 but also at the western edge of residential development on Duarte Mesa looking northwesterly west across the southern half of the proposed project site.	<ul style="list-style-type: none"> • Viewshed exhibits more sky but the ground is dominated by the presence of mature vegetation and trees. • The center of the viewshed shows a manufactured slope constructed by LACFCD with debris basin materials,

Viewpoint Identifier	Jurisdiction	Viewpoint Location and Directional Orientation	Predominant Viewshed Features
			<p>albeit from a viewpoint further away than VP4.</p> <ul style="list-style-type: none"> • The project site is in the center right portion of the view somewhat obscured by vegetation. • The viewshed affords panoramic views of the Los Angeles Basin urban area.
VP6	Duarte	Southwest of the project site in Duarte near the intersection of E. Huntington Drive and Buena Vista looking northeast to the project site	<ul style="list-style-type: none"> • Viewshed is comprised of commercial buildings in the foreground against a backdrop of the San Gabriel Mountains. • The project site is generally located in the center of the viewshed but cannot be seen from this vantage point.
VP7	Irwindale	Southeast of the project site near the San Gabriel River and Lario Park looking northwest to the project site.	<ul style="list-style-type: none"> • Viewshed is comprised of scrub vegetation in the immediate foreground, mature trees and residential development in the intermediate foreground, against a backdrop of the Duarte Mesa and Woodlyn Lane neighborhoods at the lower elevations and the San Gabriel Mountains at the higher elevations.

Source(s): TRG Land, City of Bradbury, UltraSystems

3.1.3 Methods

A field reconnaissance was conducted to identify several locations with views of the project site considered representative of views available to other similar land uses in the area.

3.1.4 Thresholds of Significance

Pursuant to Appendix G of the State CEQA Guidelines, except as provided in Public Resources Code §21099, a project could have a potentially significant or significant effect on aesthetics if it would:

- a) **Have a substantial adverse effect on a scenic vista;**
- b) **Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;**
- c) **In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (Public views are those that are experienced from publicly accessible vantage point); and/or**
- d) **Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.**

Appendix G to this DEIR contains the Initial Study prepared for the proposed project. Section 4.1 of the Initial Study concluded that the proposed project would not result in a significant effect on aesthetics with regard to item d) above. As a consequence, no assessment of impacts related to item d) is provided in this Draft EIR. What is assessed is if the proposed project causes a substantial

adverse effect on a scenic vista or substantially degrades the existing visual character or quality of public views of the site and its surroundings.

3.1.5 Impact Analysis

- a) **Would the project have a substantial adverse effect on a scenic vista?**
- b) **Except as provided in Public Resources Code Section 21099, would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?**

and

- c) **In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?**

Temporary Significant and Unavoidable Impact

The project site is in a rural area as defined by California Public Resources Code Section 21071. An urbanized incorporated city is one with a population of 100,000 or more; or, if its population is under 100,000, the population of that city and not more than two contiguous incorporated cities combined equals at least 100,000 persons. The population of the City of Bradbury in January 2020 was 1,056. The City of Bradbury abuts two incorporated cities, Duarte and Monrovia. The total population of the three cities combined in January 2020 was 60,551 (CDF, 2021). Therefore, the portion of the following analysis pertaining to threshold (c) applies to a rural area. The following provides an assessment of the extent to which the proposed project has the potential to substantially adversely affect scenic vistas and/or substantially degrade the existing visual character or quality of public views of the site and surroundings. Since these two issue areas are closely related (i.e. scenic vistas and visual character/public views), both will be evaluated by comparing how and to what extent the existing visual resources on and off the project site would be modified by the proposed project. This will be accomplished via the use of photo simulations. As described in **Section 3.1.2** above, seven viewpoints were selected for evaluation. Of these, five (viewpoints VP1 thru VP5) were determined to adequately represent views available from nearby residential uses (VP3 in Bradbury and VP2 on Duarte Mesa). The remaining two (viewpoints VP6 and VP7) represent more distant views from the San Gabriel Valley floor. Of these one is located in Duarte (VP6) and the other in Irwindale (VP7). It is noted Monrovia was also considered for inclusion in the evaluation and while two viewpoint locations were identified it was determined that due to the distances involved (two or more miles from the project site boundaries), intervening structures, and mature vegetation that visibility of the project site from these two locations would be nominal.

Five exhibits were prepared for each viewpoint. The first exhibit displays the current viewshed (existing condition) from each location toward the project site (those exhibits were provided earlier in this section as **Figures 3.7-5** through **3.7-12**). The next exhibit depicts how elements of the viewshed would change at the completion of site grading. The estimated duration of grading from start to finish is approximately one year. **Figures 3.1-13** through **3.1-19** depict changes that would occur to each viewshed upon completion of site grading. The third exhibit assumes no homes, only what installed landscaping and trees would look like at five years old. The fourth exhibit adds homes



and five-year old landscaping and trees. The fifth exhibit demonstrates the appearance of all homes with mature landscaping. Since the third and fourth exhibits depict only interim conditions and would not contribute significantly to determining the extent and significance of the aesthetic impacts of the proposed project, we have not provided them here but have provided them in this Draft EIR as **Appendix K** for informational purposes. However, **Figures 3.1-20** through **3.1-26** depict the ultimate character of the viewshed from each viewpoint.

Trees, Ridgelines, and Valleys

Trees, ridgelines, and valleys onsite are considered scenic resources. Project development would impact a total of 1,463 trees as shown below in **Table 3.1-2, Project Impact on Trees**. Impacted trees are identified by species in **Section 3.3, Biological Resources**, below. Mitigation measure **BIO-4** set forth in **Section 3.3** below, requires planting 831 trees to replace 403 protected native trees and 25 significant non-native trees (subtotal 428 trees) that would be removed out of the 1,463 total trees that would be removed or encroached on by project construction. Project construction and operation would involve planting and growing of additional trees (see Specific Plan landscaping regulations at Sections 6.6 and 7.13; and the project Fire Protection Plan). Aesthetics impacts involving trees would be less than significant after implementation of the referenced Specific Plan sections; the Fire Protection Plan, and Mitigation Measure **BIO-4**.

Specific Plan Section 7.3 requires preservation of views of ridgelines and valleys, and project development would not substantially degrade views of ridgelines.

Table 3.1-2
PROJECT IMPACTS ON TREES

	Removals	Encroachments	Total Number of Impacted Trees
Trees protected under Bradbury Development Code Chapter 9.118, Tree Preservation and Protection Ordinance	362	66	428
Trees not protected under Bradbury Development Code	995	40	1,035
Total Trees	1,357	106	1,463

Source: Glenn Lukos Associates, 2020

Figure 3.1-13
VIEW POINT 1 (VP1) – EXISTING CONDITION



Source: TRG Land, July 17, 2020.

Figure 3.1-14
VIEW POINT 1 (VP1) – GRADED CONDITION



Source: TRG Land, July 17, 2020.

Figure 3.1-15
VIEW POINT 1 (VP1) – FULL BUILDOUT



Source: TRG Land, July 17, 2020.

Figure 3.1-16
VIEW POINT 2 (VP2) – EXISTING CONDITION



Source: TRG Land, July 17, 2020.

Figure 3.1-17
VIEW POINT 2 (VP2) – GRADED CONDITION



Source: TRG Land, July 17, 2020.

Figure 3.1-18
VIEW POINT 2 (VP2) – FULL BUILDOUT



Source: TRG Land, July 17, 2020.

Figure 3.1-19
VIEW POINT 3 (VP3) – EXISTING CONDITION



Source: TRG Land, July 17, 2020.

Figure 3.1-20
VIEW POINT 3 (VP3) – GRADED CONDITION



Source: TRG Land, July 17, 2020.

Figure 3.1-21
VIEW POINT 3 (VP3) – FULL BUILDOUT



Source: TRG Land, July 17, 2020.

Figure 3.1-22
VIEW POINT 4 (VP4) –EXISTING CONDITION



Source: TRG Land, July 17, 2020.

Figure 3.1-23
VIEW POINT 4 (VP4) – GRADED CONDITION



Source: TRG Land, July 17, 2020.

Figure 3.1-24
VIEW POINT 4 (VP4) – FULL BUILDOUT



Source: TRG Land, July 17, 2020.

Figure 3.1-25
VIEW POINT 5 (VP5) – EXISTING CONDITION



Source: TRG Land, July 17, 2020.

Figure 3.1-26
VIEW POINT 5 (VP5) – GRADED CONDITION



Source: TRG Land, July 17, 2020.

Figure 3.1-27
VIEW POINT 5 (VP5) – FULL BUILDOUT



Source: TRG Land, July 17, 2020.

Figure 3.1-28
VIEW POINT 6 (VP6) – EXISTING CONDITION



Source: TRG Land, July 17, 2020.

Figure 3.1-29
VIEW POINT 6 (VP6) – GRADED CONDITION



Source: TRG Land, July 17, 2020.



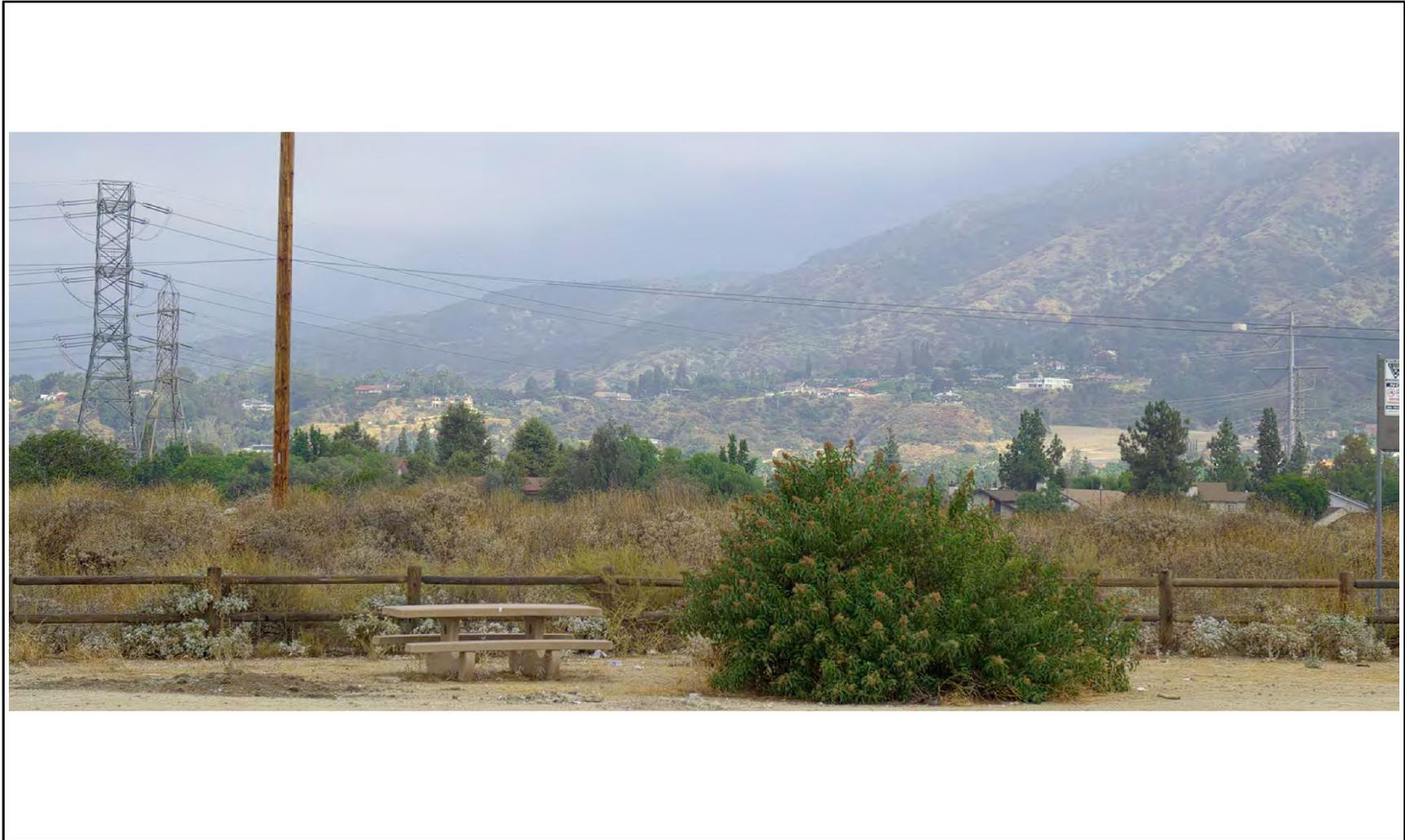
Chadwick Ranch Estates Project
View Point 6 – Graded Condition

Figure 3.1-30
VIEW POINT 6 (VP6) – FULL BUILDOUT



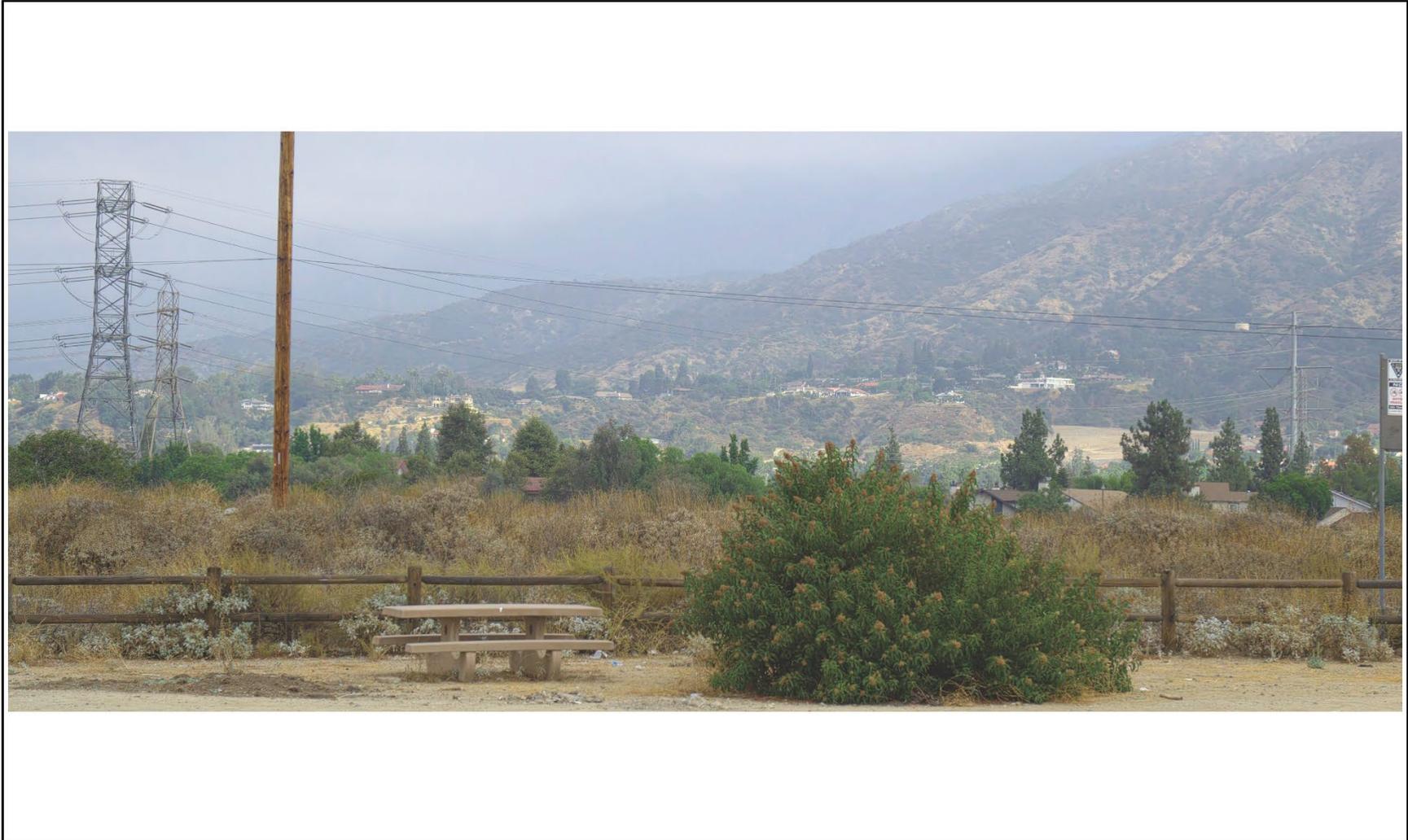
Source: TRG Land, July 17, 2020.

Figure 3.1-31
VIEW POINT 7 (VP7) – EXISTING CONDITION



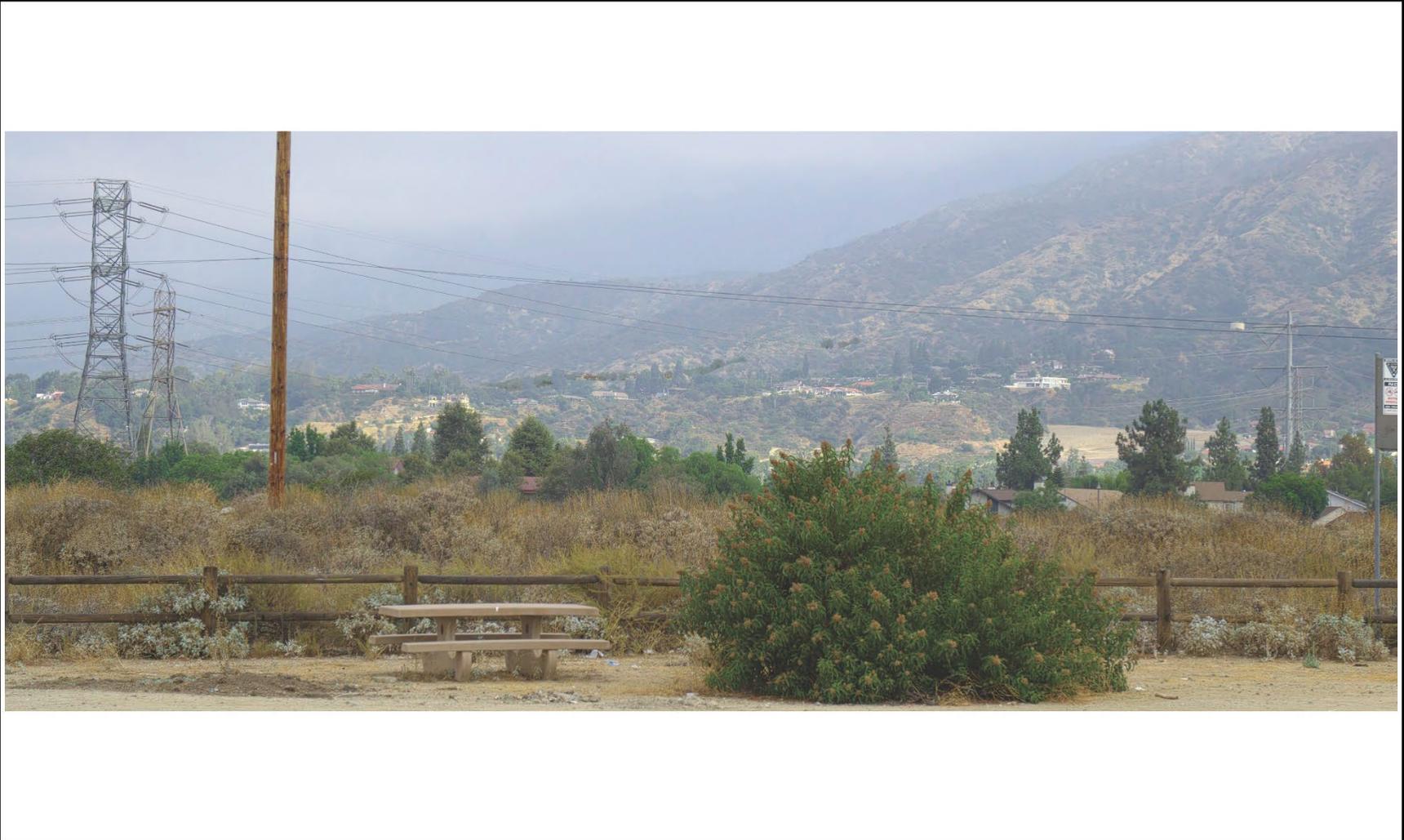
Source: TRG Land, July 17, 2020.

Figure 3.1-32
VIEW POINT 7 (VP7) – GRADED CONDITION



Source: TRG Land, July 17, 2020.

Figure 3.1-33
VIEW POINT 7 (VP7) – FULL BUILDOUT



Source: TRG Land, July 17, 2020.



The foregoing simulations convey the nature and type of impacts on visual resources that can be expected as a result of the proposed project, which are summarized in **Table 3.1-3, Summary of Impacts on Visual Resources by Viewpoint Location at the Completion of Grading and at Full Buildout**, below.

**Table 3.1-3
SUMMARY OF IMPACTS ON VISUAL RESOURCES BY VIEWPOINT LOCATION AT THE
COMPLETION OF GRADING AND AT FULL BUILDOUT**

Viewpoint Identifier	Impacts to View Corridors, Scenic Vistas, Prominent Vistas and Major Hillside Viewscapes Milestone: Completion of Site Grading	Impacts to View Corridors, Scenic Vistas, Prominent Vistas and Major Hillside Viewscapes Milestone: Full Buildout /Homes/Mature Landscaping
VP1	Significant increase in disturbed area visibility attributable to roadway and slope construction. Primarily in the left (northern) half of the viewshed. Slopes round to contours. No ridgeline encroachment. No scenic vista encroachment. At this milestone of the proposed project the impact on the view is considered significant and unavoidable .	Visibility of Site disturbed areas substantially reduced due to the maturation of vegetation. Seamless transition into natural areas. Net aesthetic impact determined to be less than significant for VP1.
VP2	The VP2 viewshed is relatively free of visible project related activities or results. No significant impacts to any visual resource are anticipated.	No significant impacts to any visual resource within the VP2 viewshed are anticipated.
VP3	Significant disturbed area in the center of the VP3 viewshed. Due to its elevation VP3 looks down onto the project site. At this milestone of the proposed project the impact on the existing prominent and scenic vistas observable within the VP3 viewshed due to grading is considered significant and unavoidable .	Under the Full Buildout with Mature Landscaping and Vegetation Scenario, none of the significant impacts associated with project grading remain. The simulations demonstrate that the proposed project at buildout with mature landscaping and vegetation, would essentially blend into the current VP3 viewshed and reflect the type and general development pattern of other estate residences in the area.
VP4	Significant disturbed area in the center right portion of the VP4 viewshed. It is associated with access roadway and slope grading and construction and the earth movement required for the creation of a large proportion of the estate residential development pads. At this milestone of the proposed project the compromise of the existing major hillside view-scape observable within the VP4 viewshed due to grading alone is considered significant and unavoidable .	Under the Full Buildout with Mature Landscaping and Vegetation Scenario, this significant impact associated with project grading no longer remains. The simulations demonstrate that the proposed project at buildout with mature landscaping and vegetation, would essentially blend into the current VP4 viewshed and reflect the type and general development pattern of other estate residences in the area.
VP5	Nominal visible surface disturbance in the central portion of the VP5 viewshed. No significant impacts to view corridors, scenic vistas, prominent vistas or major hillside view-scape.	Nominal visible surface disturbance and structures in the central portion of the VP5 viewshed. No significant impacts to view corridors, scenic vistas, prominent vistas or major hillside view-scape.
VP6	Visible but insignificant evidence of hillside grading in the in the central left portion of the	No visible surface disturbance. Nominally visible development of several hillside estate homes



Viewpoint Identifier	Impacts to View Corridors, Scenic Vistas, Prominent Vistas and Major Hillside Viewscapes Milestone: Completion of Site Grading	Impacts to View Corridors, Scenic Vistas, Prominent Vistas and Major Hillside Viewscapes Milestone: Full Buildout /Homes/Mature Landscaping
	VP6 viewshed. No significant impacts to view corridors, scenic vistas, prominent vistas or major hillside view-scape.	and attendant mature vegetation. No significant impacts to view corridors, scenic vistas, prominent vistas or major hillside view-scape.
VP7	No visible surface disturbance. No significant impacts to view corridors, scenic vistas, prominent vistas or major hillside view-scape.	No visible surface disturbance. Nominally visible development of several hillside estate homes and attendant mature vegetation. No significant impacts to view corridors, scenic vistas, prominent vistas or a major hillside view-scape.

Source(s): TRG Land (2020), City of Bradbury (1995 and 2007), UltraSystems (2020).

Temporary Impacts on Visual Character

The following conclusions regarding impacts to visual character are based on the preceding evaluation.

At the completion of site grading:

- Significant increases in visible surface disturbance can be expected within the viewsheds of VP1, VP3 and VP4;
- The foregoing increases in visible surface disturbance, taken alone, would be significant and unavoidable;
- While significant and unavoidable, the subject impacts would be temporary and of limited duration; and,
- Little, or no visible surface disturbance is anticipated to occur within the viewsheds of VP2, VP5, VP6 and VP7.

Project development would have a temporary, significant impact on the visual character of the project site and surroundings.

Long-Term Impacts on Visual Character

The temporary impact on visual character would be reduced to less than significant by maturing vegetation on both common area parcels that would be maintained by the HOA and on private residential lots. This is due primarily to the fact that site design would comply with the provisions of the City’s hillside development standards and successfully integrates the residential estates to be constructed as part of the proposed project into the general development pattern present in the surrounding area. At full buildout with mature landscaping and vegetation, the evaluation above demonstrates that the impacts on visual resources are expected to be mitigated by project design. As a consequence, it is concluded that the long-term impacts of the proposed project on aesthetics would be less than significant.



3.1.6 Mitigation Measures

Temporary Impact

The temporary impact to the visual character of the project site and its surroundings would be significant. No mitigation measures are available that would reduce this temporary impact to less than significant.

Long-Term Impact

Long-term impacts to aesthetics would be less than significant. No mitigation measures are required.

3.1.7 Level Significance after Mitigation

Temporary Impact

Temporary impacts to the visual character of the project site and its surroundings would be significant and unavoidable.

Long-Term Impact

Long-term impacts on aesthetics would be less than significant without mitigation.

SECTION 3.2 - AIR QUALITY



3.2 Air Quality

3.2.1 Relevant Policies and Regulations

Federal

Federal Clean Air Act (FCAA)

The Federal Clean Air Act (FCAA), passed in 1970, established the national air pollution control program. The basic elements of the FCAA are the National Ambient Air Quality Standards (NAAQS) for criteria air pollutants, hazardous air pollutants standards, state attainment plans, motor vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The NAAQS are the maximum allowable concentrations of criteria pollutants, over specified averaging periods, to protect human health. The FCAA requires that the United States Environmental Protection Agency (USEPA) establish NAAQS and reassess, at least every five years, whether they are adequate to protect public health, based on current scientific evidence. The NAAQS are divided into primary and secondary standards; the former standards are set to protect human health within an adequate margin of safety, and the latter to protect environmental values, such as plant and animal life.

Data collected at permanent monitoring stations are used by the USEPA to classify regions as “attainment” or “nonattainment,” depending on whether the regions have met the requirements stated in the primary NAAQS. Nonattainment areas are subject to additional restrictions, as required by the USEPA.

The FCAA Amendments in 1990 substantially revised the planning provisions for those areas not currently meeting NAAQS. The Amendments identify specific emission reduction goals that both require a demonstration of reasonable further progress and attainment and incorporate more stringent sanctions for failure to attain the NAAQS or to meet interim attainment milestones.

State

California Clean Air Act (CCAA)

The State of California began to set California ambient air quality standards (CAAQS) in 1969 under the mandate of the Mulford-Carrell Act. There were no attainment deadlines for the CAAQS originally. However, the State Legislature passed the California Clean Air Act (CCAA) in 1988 to establish air quality goals, planning mechanisms, regulatory strategies, and standards of progress to promote their attainment. The California Air Resources Board (ARB), which became part of the California Environmental Protection Agency (CalEPA) in 1991, is responsible for ensuring implementation of the CCAA, responding to the FCAA, and for regulating emissions from motor vehicles and consumer products.

The CCAA requires attainment of CAAQS by the earliest practicable date. The state standards are generally more stringent than the corresponding federal standards. Attainment plans are required for air basins in violation of the State ozone, particulate matter less than 10 micrometers (PM₁₀), particulate matter less than 2.5 micrometers (PM_{2.5}), carbon monoxide (CO), sulfur dioxide (SO₂), or nitrogen dioxide (NO₂) standards. Responsibility for achieving state standards is placed on the ARB



and local air pollution control districts. District plans for nonattainment areas must be designed to achieve a 5percent annual reduction in emissions. Preparation of and adherence to attainment plans are the responsibility of the local air pollution districts or air quality management districts.

South Coast Air Quality Management District

All projects are subject to South Coast Air Quality Management District (SCAQMD) rules and regulations in effect at the time of construction. Specific rules applicable to the construction of the project may include, but are not limited to, the following:

Rule 403 – Visible Emissions

This Rule prohibits discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines.

Rule 403 – Nuisance

This Rule prohibits 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. The provisions of this rule do not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

Rule 403 – Fugitive Dust

This rule is intended to reduce the amount of PM entrained in the ambient air from anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or man-made condition capable of generating fugitive dust. Some specific requirements of Rule 403 that apply to all construction projects, regardless of the size of their disturbed areas, are addressed below:²

- No person shall cause or allow emissions of fugitive dust to remain visible in the atmosphere beyond the property line of the emission source or to exceed 20 percent opacity if the dust emission is a result of a moving motorized vehicle.
- Apply applicable Best Available Control Measures in Table 1 of Rule 403 to minimize fugitive dust emissions during active operation.
- No person shall cause or allow PM₁₀ levels to exceed 50 micrograms per cubic meter when determined as the difference between upwind and downwind samples collected on high-volume PM samplers or other USEPA approved equivalent method for PM₁₀ monitoring at the project limits for a five-hour period during the time of Active Operations. Sampling will only occur if a complaint is reported to the SCAQMD, in which case the decision to conduct sampling will be made by SCAQMD, and SCAQMD will conduct sampling.

2 SCAQMD Rule 403(d), as Amended June 3, 2005.

- No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation, and all track-out from an active operation shall be removed at the end of each workday or evening shift.
- No person shall conduct an active operation with a disturbed surface area of five or more acres, or with a daily import or export of 100 cubic yards or more of bulk material without at least one of the measures listed under subparagraph (d)(5) of Rule 403 at each vehicle egress.

Rule 445 – Wood-burning Devices

The purpose of this rule is to reduce the emission of particulate matter (PM) from wood-burning devices. Section (d)(1) requires that no person shall permanently install a wood-burning device into any new development.³

Rule 1113 – Architectural Coatings

The purpose of this rule is to limit the VOC content of architectural coatings used in the District and applies to any person who supplies, sells, markets, offers for sale, or manufactures any architectural coating that is intended to be field applied within the District and any person who applies, stores at a worksite, or solicits the application of any architectural coating within the District.⁴

Air Quality Management Plan

The SCAQMD is required to produce plans to show how air quality will be improved in the region. The CCAA requires that these plans be updated triennially to incorporate the most recent available technical information.⁵ A multi-level partnership of governmental agencies at the federal, state, regional, and local levels implement the programs contained in these plans. Agencies involved include the USEPA, the ARB, local governments, Southern California Association of Governments (SCAG), and the SCAQMD. The SCAQMD and the SCAG are responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the Basin. The SCAQMD updates its AQMP approximately every three years.

The 2016 AQMP was adopted by the SCAQMD Board on March 3, 2017, and was submitted to the ARB on March 10, 2017 to become part of the State Implementation Plan (SIP) (SCAQMD, 2017). The ARB adopted the 2016 AQMP, and the 2016 State SIP Strategy with its complementary commitments, on March 23, 2017 and submitted them to USEPA as revisions to the California SIP on April 27, 2017 (ARB, 2017; ARB, 2018b). The 2016 AQMP focuses largely on reducing NO_x emissions as a means of attaining the 1979 1-hour ozone standard by 2022, the 1997 8-hour ozone standard by 2023, and the 2008 8-hour standard by 2031 (SCAQMD, 2017). The AQMP prescribes a variety of current and proposed new control measures, including a request to the USEPA for increased regulation of mobile source emissions. The NO_x control measures will also help the Basin attain the 24-hour standard for PM_{2.5}.

³ SCAQMD Rule 445(d), as Adopted May 3, 2013.

⁴ SCAQMD Rule 1113, as Amended February 5, 2016.

⁵ CCAA of 1988.



Local

City of Bradbury General Plan

The City of Bradbury General Plan (GP) (City of Bradbury, 2014) is a long-range policy document designed to guide future conservation, enhancement, and development in the City. It defines the framework by which the City's environmental and economic resources are managed.

Community Resources Element

The GP's Community Resources Element consists of the State required Open Space Element and Conservation Element. The Conservation Chapter is designed to protect and maintain the City's natural and cultural resources, and to prevent their exploitation and destruction, which includes Air Quality. Goals and policies related to Air Quality are listed below:

- Conservation Goal 10:** Maximize efforts to reduce air pollution from mobile sources.
- Conservation Goal 11:** Strive to achieve ambient levels of particulate matter to meet State and Federal clean air standards.
- Conservation Policy 20:** Protect and improve air quality through coordinated efforts with other public agencies and jurisdictions.

3.2.2 Existing Setting

Climate and Meteorology

Air quality is affected by both the rate and location of pollutant emissions, and by meteorological conditions that influence movement and dispersal of pollutants. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients, along with local topography, provide the link between air pollutant emissions and air quality.

The project site is in the City of Bradbury, which is in the South Coast Air Basin (Basin). The Basin includes all of Orange County and the non-desert portions of Los Angeles County, most of Riverside County, and the western portion of San Bernardino County – including some portions of what was previously known as the Southeast Desert Air Basin. The distinctive climate of the Basin is determined by its terrain and geographic location. The Basin is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the southwest and high mountains around its remaining perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The usually mild climatological pattern is interrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds.

The vertical dispersion of air pollutants in the Basin is hampered by the presence of persistent temperature inversions. An upper layer of dry air that warms as it descends characterizes high-pressure systems, such as the semi-permanent high-pressure zone in which the Basin is located. This upper layer restricts the mobility of cooler marine-influenced air near the ground surface and results in the formation of subsidence inversions. Such inversions restrict the vertical dispersion of air pollutants released into the marine layer and, together with strong sunlight, can produce worst-case conditions for the formation of photochemical smog.

The atmospheric pollution potential of an area is largely dependent on winds, atmospheric stability, solar radiation, and terrain. The combination of low wind speeds and low inversions produces the greatest concentration of air pollutants. On days without inversions, or on days of winds averaging over 15 miles per hour (mph), smog potential is greatly reduced (SCAQMD, 1993).

The nearest National Weather Service Station to the project site is in Azusa City Park, approximately 4.0 miles southeast of the project site. At the Azusa station (WRCC, 2020), the National Climatic Data Center period of record is 1901 through 1972. During the period of record, the average annual rainfall measured 18.96 inches, which occurs mostly during the winter and relatively infrequently during the summer. Monthly precipitation averages approximately 3.58 inches during the winter (December, January, and February), approximately 1.75 inches during the spring (March, April, and May), approximately 0.93 inch during the fall (September, October, and November), and approximately 0.06 inch during the summer (June, July, and August).

The average maximum and minimum monthly temperatures during the period of record were 77.8 and 47.7 degrees Fahrenheit (°F), respectively. Average winter (December, January, and February) high and low temperatures are approximately 66.3°F and 40.4°F, respectively and average summer (June, July, and August) high and low temperatures are approximately 89.7°F and 55.4°F, respectively (WRCC, 2020).

Winds in the Basin are generally light, tempered by afternoon sea breezes. Severe weather is uncommon in the Basin, but strong easterly winds known as the Santa Ana winds can reach 25 to 35 mph below the passes and canyons. During the spring and summer months, air pollution is carried out of the region through mountain passes in wind currents or is lifted by the warm vertical currents produced by the heating of the mountain slopes. From the late summer through the winter months, because of the average lower wind speeds and temperatures in the proposed project area and its vicinity, air contaminants do not readily disperse, thus trapping air pollution in the area.

Local Air Quality

The SCAQMD has divided the Basin into source receptor areas (SRAs), based on distinctive meteorological and topographical features. The proposed project site is located just inside SCAQMD's East San Gabriel Valley SRA (SRA 9). The station most representative of the site is the Azusa Station, which is located at 803 North Loren Avenue. This station is 2.6 miles northwest of the project site. It monitors NO₂, ozone, PM₁₀ and PM_{2.5}. CO has not been monitored in the Basin since 2012 and no station within a reasonable distance measures SO₂. The ambient air quality data in the proposed project vicinity as recorded at this station for 2016 to 2018 and the applicable federal and state standards are shown in **Table 3.2-1, Ambient Air Quality Monitoring Data**.

**Table 3.2-1
AMBIENT AIR QUALITY MONITORING DATA**

Air Pollutant	Standard/Exceedance	Year		
		2017	2018	2019
Ozone (O ₃)	Max. 1-hour Concentration (ppm)	0.152	0.139	0.123
	Max. 8-hour Concentration (ppm)	0.114	0.100	0.094
	# Days > Federal 8-hour Std. of 0.070 ppm	62	42	39
	# Days > State 1-hour Std. of 0.09 ppm	38	24	34
	# Days > State 8-hour Std. of 0.070 ppm	64	43	43
Respirable Particulate Matter (PM ₁₀)	State Max. 24-hour Concentration (µg/m ³)	83.9	78.3	80.3
	# Days > Fed. 24-hour Std. of 150 µg/m ³	0	0	0
	# +Estimated Days > State 24-hour Std. of 50 µg/m ³	ND	59.2	24.0
	State Annual Average (µg/m ³)	ND	32.0	27.9
Fine Particulate Matter (PM _{2.5})	Federal Max. 24-hour Concentration (µg/m ³)	24.9	41.8	70.3
	State Annual Average (µg/m ³)	ND	10.8	10.6
	# Measured Days > Fed. 24-hour Std. of 35 µg/m ³	0	3.0	3.0
	Federal Annual Average (µg/m ³)	10.4	10.8	9.6
Nitrogen Dioxide (NO ₂)	Federal Max. 1-hour Concentration (ppb)	65.6	70.8	59.7
	Annual Average (ppb)	16	15	14
	# Days > Federal 1-hour Std. of 100 ppb	0	0	0
	# Days > State 1-hour Std. of 0.18 ppm	0	0	0

Sources: <https://www.arb.ca.gov/adam/topfour/topfour1.php>. Accessed February 2020.

ND – There were insufficient (or no) data available to determine the value.

Pollutants of Concern

Criteria Pollutants

Criteria pollutants are air pollutants for which acceptable levels of exposure can be determined and an ambient air quality standard (AAQS) has been established by the USEPA and/or the ARB. The criteria air pollutants of concern are NO₂, CO, PM₁₀, PM_{2.5}, SO₂, lead, and ozone, and their precursors. Since the proposed project would not generate appreciable SO₂ or lead emissions,⁶ it is not necessary for the analysis to include those two pollutants. Federal and state AAQS are listed in **Table 3.2-2, Ambient Air Quality Standards for Criteria Air Pollutants**. Presented below is a description of the air pollutants of concern and their known health effects.

Nitrogen oxides (NO_x) serve as integral participants in the process of photochemical smog production. The two major forms of NO_x are nitric oxide (NO) and NO₂. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. NO₂ is a reddish-brown irritating gas formed by the combination of NO and oxygen. Nitrogen dioxide acts as an acute respiratory irritant and eye irritant and increases susceptibility to respiratory pathogens. NO_x is an ozone precursor. A precursor is a directly emitted air contaminant that, when released into the atmosphere, forms, causes to be formed, or contributes to the formation of a secondary air contaminant for which an AAQS has been adopted, or whose

⁶ Sulfur dioxide emissions will be about 0.09 pound per day during construction and about 0.02 pound per day during operations.



presence in the atmosphere will contribute to the violation of one or more AAQS. When NO_x and reactive organic gases (ROG) are released in the atmosphere, they can chemically react with one another in the presence of sunlight to form ozone.

Carbon monoxide (CO) is a colorless and odorless gas formed by the incomplete combustion of fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, such as the project location, automobile exhaust accounts for most CO emissions. CO is a non-reactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions; primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas between November and February. The highest levels of CO typically occur during the colder months of the year when inversion conditions are more frequent. In the body, CO competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can be dizziness, fatigue, impairment of central nervous system functions and death.

**Table 3.2-2
AMBIENT AIR QUALITY STANDARDS FOR CRITERIA AIR POLLUTANTS**

Pollutant	Averaging Time	California Standards ¹		Federal Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O₃)⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	---	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM₁₀)⁹	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		---		
Fine Particulate Matter (PM_{2.5})⁹	24 Hour	No Separate State Standard		35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12 µg/m ³		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	---	Non-Dispersive Infrared Photometry (NDIR)
	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)		---	---	---
Nitrogen Dioxide (NO₂)¹⁰	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppm (188 µg/m ³)	---	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		0.053 ppm (100 µg/m ³)		



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Pollutant	Averaging Time	California Standards ¹		Federal Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Sulfur Dioxide (SO₂)¹¹	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppm (196 µg/m ³)	---	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	---		---	0.5 ppm (1300 µg/m ³)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ¹¹	---	
	Annual Arithmetic Mean	---		0.030 ppm (for certain areas) ¹¹	---	
Lead^{12,13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	---	---	---
	Calendar Quarter	---		1.5 µg/m ³ (for certain areas) ¹²	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average	---		0.15 µg/m ³		
Visibility Reducing						
Visibility Reducing Particles¹⁴	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

1. California Standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter--PM₁₀, PM_{2.5}, and visibility reduction particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in § 70200 of Title 17 of the California Code of Regulations.
2. National Standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.



Pollutant	Averaging Time	California Standards ¹		Federal Standards ²		
		Concentration ³	Method ⁴	Primary ^{3.5}	Secondary ^{3.6}	Method ⁷
<p>6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.</p> <p>7. Reference method as described by the EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by EPA.</p> <p>8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.</p> <p>9. As of December 14, 2012, the annual primary PM_{2.5} standard changed from 15 µg/m³ to 12 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.</p> <p>10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.</p> <p>11. On June 2, 2010, a new 1-hour SO₂ standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.</p> <p>* Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.</p> <p>12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.</p> <p>13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.</p> <p>14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are “extinction of 0.23 per kilometer” and “extinction of 0.07 per kilometer” for the statewide and Lake Tahoe Air Basin standards, respectively.</p>						

Particulate matter (PM) is a general term used to describe a complex group of airborne solid, liquid, or semi-volatile materials of various size and composition. Primary PM is emitted directly into the atmosphere from activities such as agricultural operations, industrial processes, construction and demolition activities, and entrainment of road dust into the air. Secondary PM is formed in the atmosphere from predominantly gaseous combustion by-product precursors, such as sulfur oxides, NO_x, and ROG_s.

Particle size is a critical characteristic of PM that primarily determines the location of PM deposition along the respiratory system (and associated health effects) as well as the degradation of visibility through light scattering. In the United States, federal and state agencies have established two types of PM. PM₁₀ corresponds to the fraction of PM no greater than 10 micrometers in aerodynamic diameter and is commonly called respirable PM, while PM_{2.5} refers to the subset of PM₁₀ of aerodynamic diameter smaller than 2.5 micrometers, and is commonly called fine PM.

PM₁₀ and PM_{2.5} deposition in the lungs results in irritation that triggers a range of inflammation responses, such as mucus secretion and bronchoconstriction, and exacerbates pulmonary dysfunctions, such as asthma, emphysema, and chronic bronchitis. Sufficiently small particles may penetrate the bloodstream and impact functions such as blood coagulation, cardiac autonomic control, and mobilization of inflammatory cells from the bone marrow. Individuals susceptible to higher health risks from exposure to PM₁₀ airborne pollution include children, the elderly, smokers, and people of all ages with low pulmonary/cardiovascular function. For these individuals, adverse health effects of PM₁₀ pollution include coughing, wheezing, shortness of breath, phlegm, bronchitis, and aggravation of lung or heart disease, leading for example to increased risks of hospitalization and mortality from asthma attacks and heart attacks.

Reactive organic gases (ROG) are defined as any compound of carbon, excluding CO, carbon dioxide (CO₂), carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participate in atmospheric photochemical reactions. It should be noted that there are no state or national AAQS for ROG because ROG are not classified as criteria pollutants. They are regulated, however, because a reduction in ROG emissions reduces certain chemical reactions that contribute to the formation of ozone. ROG are also transformed into organic aerosols in the atmosphere, which contribute to higher PM₁₀ and lower visibility. The term “ROG” is used by the California ARB for this air quality analysis and is defined the same as the federal term “volatile organic compound” (VOC).

Ozone is a secondary pollutant produced through a series of photochemical reactions involving ROG and NO_x. Ozone creation requires ROG and NO_x to be available for approximately three hours in a stable atmosphere with strong sunlight. Because of the long reaction time, peak ozone concentrations frequently occur downwind of the sites where the precursor pollutants are emitted. Thus, ozone is considered a regional, rather than a local, pollutant. The health effects of ozone include eye and respiratory irritation, reduction of resistance to lung infection and possible aggravation of pulmonary conditions in persons with lung disease. Ozone is also damaging to vegetation and untreated rubber.

Sensitive Receptors

Some people, such as individuals with respiratory illnesses or impaired lung function because of other illnesses, persons over 65 years of age, and children under 14, are particularly sensitive to certain pollutants. Facilities and structures where these sensitive people live or spend considerable amounts of time are known as sensitive receptors. For the purposes of a CEQA analysis, the SCAQMD considers a sensitive receptor to be a receptor such as a residence, hospital, or convalescent facility where it is possible that an individual could remain for 24 hours. Commercial and industrial facilities are not included in the definition of sensitive receptor because employees typically are present for shorter periods of time, such as eight hours. Therefore, applying a 24-hour standard for PM₁₀ is appropriate not only because the averaging period for the state standard is 24 hours, but because the sensitive receptor would be present at the location for the full 24 hours.

The nearest residence to the project on the southeast, 201 Spinks Canyon Road in Duarte, is approximately 100 meters from the project boundary.⁷ No schools are within 0.5 mile of the project site.

⁷ Meters are used instead of feet in this discussion and in **Table 3.2-5** because the SCAQMD’s localized significance analysis method is based on metric units of distance.



3.2.3 Methods

Construction

Regional Emissions

The California Emissions Estimator Model® (CalEEMod) Version 2016.3.2 (CAPCOA, 2017) and onroad emission factors from EMFAC2014 (v1.0.7) for applicable calendar years in the Los Angeles County portion of the SCAB were used to estimate construction emissions for offroad equipment exhaust; onroad exhaust emissions from construction employee commute and vendor activity; and onroad exhaust emissions from hauling activity. (CalEEMod outputs are presented in **Appendix L** to this document.)

Construction activities in each project phase will be divided into six subphases. **Table 3.2-3, Construction Equipment**, shows the off-road equipment use in each subphase. The “load factor” in the rightmost column is the average operational level of an engine in each application as a fraction or percentage of the engine manufacturer’s maximum rated horsepower. Note that site preparation and grading will occur simultaneously with drainage improvements for about four months. The CalEEMod model takes this overlap into account in determining maximum daily emissions.

**Table 3.2-3
CONSTRUCTION EQUIPMENT**

Subphase	Equipment Type	No. of Pieces	Hours/Day	Horsepower	Load Factor
Site Preparation and Grading	Excavators	1	8	158	0.38
	Graders	2	8	187	0.41
	Off-Highway Trucks	2	6	402	0.38
	Plate Compactors	1	6	8	0.43
	Rubber-Tired Dozers	2	8	247	0.40
	Tractors/Loaders/Backhoes	3	8	97	0.37
Drainage Improvements	Excavators	1	8	158	0.38
	Graders	1	8	187	0.41
	Off-Highway Trucks	1	6	402	0.38
	Plate Compactors	1	8	8	0.43
	Rubber-Tired Dozers	1	8	247	0.40
	Tractors/Loaders/Backhoes	3	8	97	0.37
Paving and Utilities	Cement and Mortar Mixers	2	6	9	0.56
	Pavers	1	8	130	0.42
	Paving Equipment	2	6	132	0.36
	Rollers	2	6	80	0.38
	Tractors/Loaders/Backhoes	1	8	97	0.37
Entry Road Paving	Cement and Mortar Mixers	2	6	9	0.56
	Pavers	1	8	130	0.42
	Paving Equipment	2	6	132	0.36
	Rollers	2	6	80	0.38
	Tractors/Loaders/Backhoes	1	8	97	0.37
Building Construction	Cranes	1	7	231	0.29
	Forklifts	3	8	89	0.20
	Generator Sets	1	8	84	0.74
	Tractors/Loaders/Backhoes	3	7	97	0.37



Subphase	Equipment Type	No. of Pieces	Hours/Day	Horsepower	Load Factor
	Welders	1	8	46	0.45
Architectural Coating	Air Compressors	1	6	78	0.48

It was assumed in the modeling that all applicable provisions of SCAQMD Rule 403 would be followed. CalEEMod considers these control measures to be “mitigation,” although, being legally mandatory, they are not considered as such in this Draft EIR.

Localized Significance Analysis for Criteria Pollutants

The purpose of this analysis is to estimate whether ambient air quality standards for NO₂, CO, PM₁₀ or PM_{2.5} would be violated in the immediate vicinity of the project. To facilitate impact analysis, the SCAQMD developed a methodology for modeling for the many combinations of project footprint area, source-receptor distance, and local meteorology in the Basin (Chico and Koizumi, 2008). From the results of the analysis, SCAQMD developed mass rate look-up tables that can be used to determine whether a project’s emissions may generate significant localized air quality impacts on offsite receptors (including sensitive receptors). Based on the SRA number, the distance to the receptor and the site area, the output of the modeling is a set of pollutant-specific emission thresholds.

Toxic Air Contaminants

The chief toxic air contaminant during construction is diesel particulate matter (DPM), a carcinogen. The SCAQMD’s significance thresholds for carcinogens are based upon 30 years of continuous exposure. Since construction exposure will be a tiny fraction of that duration, the thresholds will not be reached. Risk threshold for non-cancer risks of DPM have not been established. For these reasons, the analysis of toxic air contaminants (TAC) emissions during construction was mainly qualitative.

Operation

For the operational emissions calculations, CalEEMod’s “default” assumptions were used, except for the following:

- The trip generation rate was for estate housing, as presented in San Diego’s Trip Generation Manual (San Diego, 2003). These rates are higher than for “Single Family Residential,” which is the CalEEMod default.
- CalEEMod’s default for number of fireplaces was adjusted to reflect that all estate housing would have natural gas fireplaces.

3.2.4 Thresholds of Significance

In accordance with *State CEQA Guidelines* Appendix G, implementation of the project would result in a potentially significant impact if it were to:

- Conflict with or obstruct implementation of the applicable air quality plan.**
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.**

- c) Expose sensitive receptors to substantial pollutant concentrations.
- d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the significance determinations. As will be discussed in the next section, the SCAQMD has developed a *CEQA Air Quality Handbook* to provide a protocol for air quality analyses that are prepared under the requirements of CEQA.

The Initial Study, included as Appendix G to this DEIR, determined that impacts associated with threshold (a) would be no impact and threshold (d) would be less than significant; these impacts are not analyzed below.

Emission Thresholds for Regional Air Quality Impacts

To assist in implementing the air quality plans, the SCAQMD developed criteria for determining whether emissions from a project are regionally significant. They are useful for estimating whether a project is likely to result in a violation of the NAAQS and/or whether the project is in conformity with plans to achieve attainment. The SCAQMD no longer has “indirect source” rules,⁸ e.g., rules that place restrictions on housing or commercial development, or require reductions in trip generation and/or vehicle miles traveled (VMT) to developed commercial or industrial sites. Instead, the District has published guidance on conducting air quality analyses under CEQA (SCAQMD, 1993). SCAQMD’s significance thresholds are summarized in **Table 3.2-4, SCAQMD Emissions Thresholds for Significant Regional Impacts**, for criteria pollutant emissions during construction activities and project operation. A project is considered to have a regional air quality impact if emissions from its construction and/or operational activities exceed the corresponding SCAQMD significance thresholds.

**Table 3.2-4
SCAQMD EMISSIONS THRESHOLDS FOR SIGNIFICANT REGIONAL IMPACTS**

Pollutant	Mass Daily Thresholds (Pounds/Day)	
	Construction	Operation
Nitrogen Oxides (NO _x)	100	55
Volatile Organic Compounds (VOC)	75	55
Respirable Particulate Matter (PM ₁₀)	150	150
Fine Particulate Matter (PM _{2.5})	55	55
Sulfur Oxides (SO _x)	150	150
Carbon Monoxide (CO)	550	550
Lead	3	3

Source: SCAQMD 2015. Accessed March 16, 2018.

⁸ Two indirect source rules (1501 – Work Trip Reduction Plans and 1501.1 – Alternatives to Work Trip Reduction Plans) were repealed in 1995.

Emission Thresholds for Localized Air Quality Impacts

As part of its environmental justice program to address localized air quality impacts of development projects, SCAQMD developed localized significance thresholds (LSTs) in 2003 and revised them in 2008 (Chico and Koizumi, 2008). Since the original LST Guidance didn't include PM_{2.5}, in 2006, SCAQMD published a method to calculate LSTs for PM_{2.5} (Krause and Smith, 2006). LSTs represent the maximum NO_x, CO, PM₁₀, and PM_{2.5} emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state AAQS. NO_x and CO LSTs are based on the ambient concentrations of that pollutant for each SRA and distance to the nearest offsite receptor. For PM₁₀, LSTs were based on requirements in SCAQMD Rule 403. Note that the LST analysis does not apply to VOC emissions, since there is no AAQS for VOC.

For the purposes of a CEQA analysis, the SCAQMD considers a sensitive receptor to be a receptor such as a residence, hospital, or convalescent facility where it is possible that an individual could remain for 24 hours. Commercial and industrial facilities are not included in the definition of sensitive receptor, because employees typically are present for shorter periods of time, such as eight hours.

The SCAQMD has developed mass rate look-up tables that can be used to determine whether a project may generate significant localized air quality impacts on offsite receptors (including sensitive receptors). Note that the use of LSTs is voluntary, to be implemented at the discretion of the lead agency pursuant to CEQA.

Impacts of Carbon Monoxide Hotspots

Increased local vehicle traffic may contribute to offsite air quality impacts. The traffic increases in nearby intersections may contribute to traffic congestion, which may create “pockets” of CO called hotspots. These pockets have the potential to exceed the state 1-hour standard of 20 parts per million (ppm) and/or the 8-hour standard of 9.0 ppm, thus affecting sensitive receptors that are close to these roadways or intersections. CO hotspots typically are found at busy intersections but can also occur along congested major arterials and freeways. They occur mostly in the early morning hours when winds are stagnant and ambient CO concentrations are elevated. In accordance with the California Department of Transportation (Caltrans) CO Protocol (UCD, 1997), CO hotspots are evaluated when a project degrades the level of service (LOS) at a nearby signalized intersection to “E” or worse.

3.2.5 Impact Analysis

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

Less Than Significant Impact

According to the CEQA Guidelines, a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved air quality attainment or maintenance plan.⁹ The project would not exceed any of the SCAQMD daily criteria pollutant thresholds. In general, cumulative

⁹ CEQA Guidelines, § 15064(h)(3).

regional impacts of construction and operation of all projects in the Basin at any given time are accounted for in the AQMP. The proposed project is compliant with the AQMP, so the incremental contribution of the project would not be cumulatively considerable. The only cumulative impacts with the potential for significance would be localized impacts during construction. The analysis in Section 3.2.5 c) shows that localized impacts from the project would be less than significant and therefore would not contribute to a cumulative impact.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact

Localized significance analyses were performed for the nearest residence on the southeast and the nearest residence on the southwest. Following SCAQMD LST Guidance (Chico and Koizumi, 2008), only onsite construction emissions were considered in the localized significance analysis. For the nearest residence on the southeast, the activity with the largest onsite emissions of CO, PM₁₀, and PM_{2.5} would be site preparation. The activity with the largest onsite NO_x emissions would be grading. For the nearest residence on the southwest, paving would be the only construction activity. LSTs were obtained from tables in Appendix C of the SCAQMD’s LST Guidance. **Table 3.2.5, Results of Localized Significance Analysis**, shows the results of the analysis. Emissions of no criteria pollutant would exceed their threshold for significance. Therefore, localized air pollution impacts from construction activity are less than significant.

**Table 3.2-5
RESULTS OF LOCALIZED SIGNIFICANCE ANALYSIS**

Sensitive Receptor	Maximum Onsite Emissions (lbs/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Nearest Residence on the Southeast	65.2	43.8	10.1	6.5
SCAQMD LST for 5 acres @ 100 meters ^a	286	3,680	63	17
Nearest Residence on the Southwest ^b	10.8	12.3	0.44	0.40
SCAQMD LST for 1 acres @ 25 meters ^a	89	623	14	3
Significant (Yes or No)	No	No	No	No

Source: OB-1 Air Analyses, July 2020.

^a Thresholds are for Source-Receptor Area 9 (East San Gabriel Valley)

^b Residential structure above Bliss Canyon Road.

Although sensitive receptors would be exposed to diesel exhaust from construction equipment, which has been associated with lung cancer (OEHHA, 1998), the duration of exposure would not be sufficient to result in a significant cancer risk. Carcinogenic health risk assessments are based upon an assumption of 70 years continuous exposure, while the exposure in the present case would be for about 593 eight-hour working days.¹⁰ Therefore, no cancer health risk assessment was necessary. Acute non-cancer risk assessments are based upon one-hour maximum exposures, but acute RELs

¹⁰ This constitutes about 1.4% of a 70-year continuous exposure.



for diesel exhaust and diesel particulate matter have not been established by the OEHHA (OEHHA, 2016).

3.2.6 Mitigation Measures

Project impacts were determined to be less than significant and no mitigation measures are required.

3.2.7 Level of Significance After Mitigation

Project impacts were determined to be less than significant and no mitigation measures are required.

SECTION 3.3 – BIOLOGICAL RESOURCES



3.3 Biological Resources

The information in this Section is based on the Biological Technical Report (BTR) completed by Glenn Lukos Associates in June 2021 and included as **Appendix M-1** in **Volume 2** of this DEIR.

3.3.1 Relevant Policies and Regulations

Federal

Federal Endangered Species Act (ESA)

The federal Endangered Species Act (ESA) of 1973 (Title 16, United States Code [U.S.C.] Sections [§§] 1531-1543), as amended, designates and provides for protection of listed threatened and endangered plant and animal species, and their critical habitat. The USFWS, in the Department of the Interior, and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS), in the Department of Commerce, share responsibility for administration of the ESA. These responsibilities include listing and delisting species, designating critical habitat, and formulating recovery plans. The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife.

Migratory Bird Treaty Act (MBTA)

The Migratory Bird Treaty Act (MBTA) of 1918 (Title 16, U.S.C. §§ 703-712), as amended, includes provisions for protection of migratory birds, including basic prohibitions against any take not authorized by federal regulation. The administering agency for the above authority is the United States Fish and Wildlife Service (USFWS). The law contains no requirement to prove intent to violate any of its provisions. Wording in the MBTA makes it clear that most actions that result in "take" or possession (permanent or temporary) of a protected species can be a violation of the act. The word "take" is defined as "pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect (including nests, eggs, and feathers)." The provisions of the MBTA are nearly absolute; "except as permitted by regulations" is the only exception.

Clean Water Act of 1977: § 401

Pursuant to § 401 of the Clean Water Act (CWA), a water quality certification is required from the California State Water Resources Control Board (SWRCB) for § 404 permit activities in multiple Regions. The SWRCB certifies that the discharge complies with state water quality standards and ensures that there is no net loss of wetlands through impact avoidance, minimization, and mitigation.

Clean Water Act of 1977; §§ 404 and 401

Waters of the U.S. including wetlands are subject to U.S. Army Corps of Engineers (USACE) jurisdiction under § 404 of the CWA. A § 404 permit is required for the discharge of dredged or fill material into Waters of the U.S. The Los Angeles District of the USACE would provide review and permitting services for this project. Section 401 of the CWA requires project owners or proponents to obtain a Water Quality Certification which requires their project to prevent the discharge or dredge and fill material in quantities that would violate federal water quality standards. In the State of California, the State Water Resources Control Board (SWRCB) and its 9 Regional Water Quality Control Boards (RWQCBs) have been given the authority to issue § 401 Water Quality Certifications (WQCs).



The SWRCB and its RWQCBs may, at their discretion, use the § 401 Water Quality Certification Program to also implement the California Porter-Cologne Water Quality Control Act since both § 401 and *Porter-Cologne* require that a proposed discharge will comply with water quality standards, which include numeric and narrative water quality objectives applicable to identified surface and ground waters in the State of California. These water quality objectives are designated in the Water Quality Control Plans (Basin Plan) that are prepared, updated, and implemented by each RWQCB.

Executive Order 11990, Protection of Wetlands (May 24, 1977)

This order provides for the protection of wetlands. The administering agency is the USACE. If impacts to wetlands cannot be avoided, then all practicable measures to minimize harm to those wetlands must be included and documented in the final environmental document for the proposed project or activity.

Executive Order 13112, Invasive Species (February 3, 1999)

This order requires Executive Branch agencies to work to prevent and control the introduction and spread of invasive species. Non-native flora and fauna can cause substantial changes to native ecosystems, upset native ecological balances, and have the potential to also cause economic harm. Roads and highways provide opportunities for the movement and spread of non-native, invasive species through an area, from the local to the national level.

State

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) (Public Resources Code, §§ 21000-21178), applies to discretionary projects proposed to be carried out by public agencies. CEQA defines projects broadly to include an activity which may cause either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment, and is an activity directly undertaken by a public agency, an activity undertaken by a person that is supported by a public agency, or an activity that involves the issuance to a person of a lease, permit, license, certificate, or other entitlement.

California Endangered Species Act (CESA) of 1984, California Fish and Game Code §§ 2050-2098

This act includes provisions for the protection and management of wildlife species listed by the State of California as endangered or threatened or designated as candidates for such listings. This act includes a requirement for consultation “to ensure that any action authorized by a state lead agency is not likely to jeopardize the continued existence of any endangered or threatened species...or result in the destruction or adverse modification of habitat essential to the continued existence of the species” (§ 2090). Plants of California declared to be endangered, threatened, or rare are listed under 14 CCR § 670.2. Animals of California declared to be endangered, threatened, or rare (also referred to as “sensitive” wildlife species) are listed under 14 CCR § 670.5. The administering agency for the above authority is the California Department of Fish and Wildlife (CDFW).



Native Plant Protection Act of 1977; California Fish and Game Code § 1900 et. seq.

The Native Plant Protection Act prohibits importation of rare and endangered plants into California, take of rare or endangered plants, and sale of rare and endangered plants. The California Endangered Species Act (CESA) defers to the California Native Plant Protection Act (CNPPA), which ensures that plant species listed by the State as endangered, threatened, or rare (“sensitive’ plant species) are protected when state agencies are involved in projects or activities subject to CEQA. In this instance, plants listed as rare under the CNPPA are not protected under CESA, but rather under CEQA.

California Fish and Game Code § 3503 and § 3503.5

This act provides for the protection and enhancement of birds by declaring “It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto (§ 3503), and that “It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto (§ 3503.5).

California Fish and Game Code §§ 1930-1940

These code sections provide the Significant Natural Areas program and database. The administering agency for the above authority is the CDFW.

California Fish and Game Code §§ 1600–1616 Lake or Streambed Alteration

Section 1600-1616 of the California Fish and Game Code protects the natural flow, bed, channel, and bank of any river, stream, or lake designated by the CDFW, in which there is at any time an existing fish or wildlife resource, or from which ecosystem these resources derive benefit. General project plans must be submitted to CDFW in sufficient detail to indicate the nature of a project for construction, if the project would: divert, obstruct, or change a streambed; use material from the streambed; result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a stream.

Any person or entity whose project or activity may result in any of the above must first notify CDFW in writing. CDFW will review the project or activity and decide if it may continue or if they must issue an Agreement, which would stipulate mitigation measures for the protection of the aquatic resource in question.

Local

City of Bradbury General Plan Conservation Element

As detailed in the Community Resources Element of the City of Bradbury General Plan, laws, requirements and procedures have been established for protection of natural resources. It primarily is an informational document which is designed to help readers understand the context, history and opportunities for protection and improvement of the city's natural resources (City of Bradbury Department of City Planning, 2014, p. 15).



3.3.2 Existing Setting

Vegetation Types/Land Covers

Coast Live Oak Riparian Forest

Approximately 10.50 acres of Study Area (entirely within the Specific Plan) is comprised of the *Quercus agrifolia* Woodland Alliance (Coast Live Oak Woodland) as described in the Manual of California Vegetation 2nd Edition (MCVII), but that is associated with the channel terraces and slopes of Bradbury Canyon, and so is specifically designated here is a riparian community (Coast Live Oak Riparian Forest) distinct from upland Coast Like Oak Woodland, which is derived from a Holland designation. As with the upland equivalent, the Coast Like Oak Riparian Forest is dominated by coast live oak (*Q. agrifolia*).

Coast Live Oak Woodland

Approximately 1.56 acres of the Study Area is comprised of the *Quercus agrifolia* Woodland Alliance (Coast Live Oak Woodland), as described in MCVII, in which coast live oak (*Q. agrifolia*) is the dominant tree species in the community. Approximately 0.40 acre of Coast Live Oak Woodland is associated with the Specific Plan, with another 1.16 acres associated with the offsite improvement areas, including the slopes of the adjacent property bordering the Flood Control access roads.

California Sagebrush-California Buckwheat Scrub

Approximately 1.75 acres of the Study Area is comprised of a shrubland alliance dominated by California sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*), as described in MCVII, including 1.40 acres associated with the offsite improvement areas (on a slope adjacent to the access road and Flood Control facility), and 0.35 acre associated with the “not a part” area. California sagebrush and California buckwheat are also present throughout the site, interspersed in the Scrub Oak Chaparral and Southern Mixed Chaparral communities. Additional scrub species associated with the shrubland alliance or otherwise occurring at the site, includes deerweed (*Acmispon glaber*), black sage (*Salvia mellifera*), white sage (*Salvia apiana*), sawtooth goldenbush (*Hazardia squarrosa*), and coast prickly pear (*Opuntia littoralis*).

California Sycamore/Coast Live Oak Woodland

Approximately 2.59 acres of the Study Area was mapped as supporting a riparian woodland comprised of California sycamore (*Platanus racemosa*) and coast live oak, including 0.42 acre of the Specific Plan and 2.17 acres of the offsite improvement areas. The portion within the Specific Plan consists of a grove of sycamores and oaks located in the northeastern portion of the development footprint. This vegetation community best fits into the *Platanus racemosa* Woodland Alliance, except that it has an equally dominant oak woodland component, and since this vegetation community is associated with streams, the two dominant species are combined here as one riparian alliance.

Developed

Approximately 8.53 acres of the Study Area is developed, including 6.92 acres within the offsite improvement areas and 1.61 acres within the “not a part” area. Developed areas consist of existing Flood Control facilities, including debris basins and access roads, as well as other related facilities.

Disturbed

Approximately 2.29 acres of the Study Area is disturbed, primarily consisting of a dirt access road/fire break that follows the primary ridge along the northern edge of the development footprint. Although this area is generally unvegetated due to periodic maintenance of the access, the area does become intermittently vegetated with non-native, weedy species such as black mustard (*Brassica nigra*) and tocalote (*Centaurea melitensis*). Approximately 2.12 acres of the disturbed areas are in the Specific Plan, with 0.17 acre associated with the offsite improvement area.

Ornamental

Approximately 0.97 acre of the Study Area (entirely within the offsite improvement area) consists of areas along the existing access road that have been planted with non-native, ornamental tree species. Examples include Aleppo pine (*Pinus halepensis*), Afghan pine (*Pinus eldarica*), Peruvian pepper (*Schinus molle*), Italian cypress (*Cupressus sempervirens*), American sweetgum (*Liquidambar styraciflua*), Canary Island pine (*Pinus canariensis*), Santa Rosa plum (*Prunus salicina*), Pittosporum (*Pittosporum* sp.), silk oak (*Grivellia robusta*), southern live oak (*Quercus virginiana*), river red gum (*Eucalyptus camaldulensis*), and ash (*Fraxinus* sp.).

Scrub Oak Chaparral

Approximately 41.52 acres of the Study Area has been designated specifically as the *Quercus berberidifolia* Shrubland Alliance (Scrub Oak Chaparral), as described in the Manual of California Vegetation, Second Edition (MCVII), including 35.53 acres of the Specific Plan, 5.80 acres of the offsite improvement area, and 0.19 acre of the “not a part” area. As is discussed below, approximately 41.34 acres of the northern portion of the Specific Plan (Lot L Open Space) has been characterized in this report as a combination of Scrub Oak Chaparral and Southern Mixed Chaparral since the northern open space did not necessitate being mapped with the same level of detail as the development footprint. Altogether, approximately 88 percent of the Specific Plan (80 percent of the overall Study Area) is dominated by shrubs associated with chaparral vegetation communities, with California scrub oak (*Q. berberidifolia*) being a primary component. Scrub Oak Chaparral and Mixed Chaparral are the dominant vegetation communities on the slopes and ridges of the project site. In areas identified as Scrub Oak Chaparral, California scrub oak is the dominant species in the shrub layer. Other shrubs species occurring in relatively smaller densities include laurel sumac (*Malosma laurina*), toyon (*Heteromeles arbutifolia*), hollyleaf redberry (*Rhamnus ilicifolia*), spiny redberry (*Rhamnus crocea*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), bush monkeyflower (*Mimulus aurantiacus*), chamise (*Adenostoma fasciculatum*), fragrant sumac (*Rhus aromatica*), lemonadeberry (*Rhus integrifolia*), and chaparral yucca (*Hesperoyucca whipplei*).

Southern Mixed Chaparral

Approximately 28.11 acres of the Study Area is described here as Southern Mixed Chaparral, including 21.51 acres of the Specific Plan, 4.24 acres of the offsite improvement area, and 2.36 acres of the “not a part” area. Within the Study Area, this vegetation community is dominated by laurel sumac. MCVII includes a Laurel Sumac Scrub Alliance that describes a community dominated by laurel sumac, or co-dominant with other chaparral species such as toyon, chamise, and hollyleaf redberry. However, since the chaparral mapped for the Study Area is best represented by a mix of chaparral shrubs, including laurel sumac as a dominant, then it is appropriate to designate the community as Southern Mixed Chaparral, which is derived from Holland. Characteristic species include California scrub oak, laurel sumac, toyon and chamise. Other representative species include

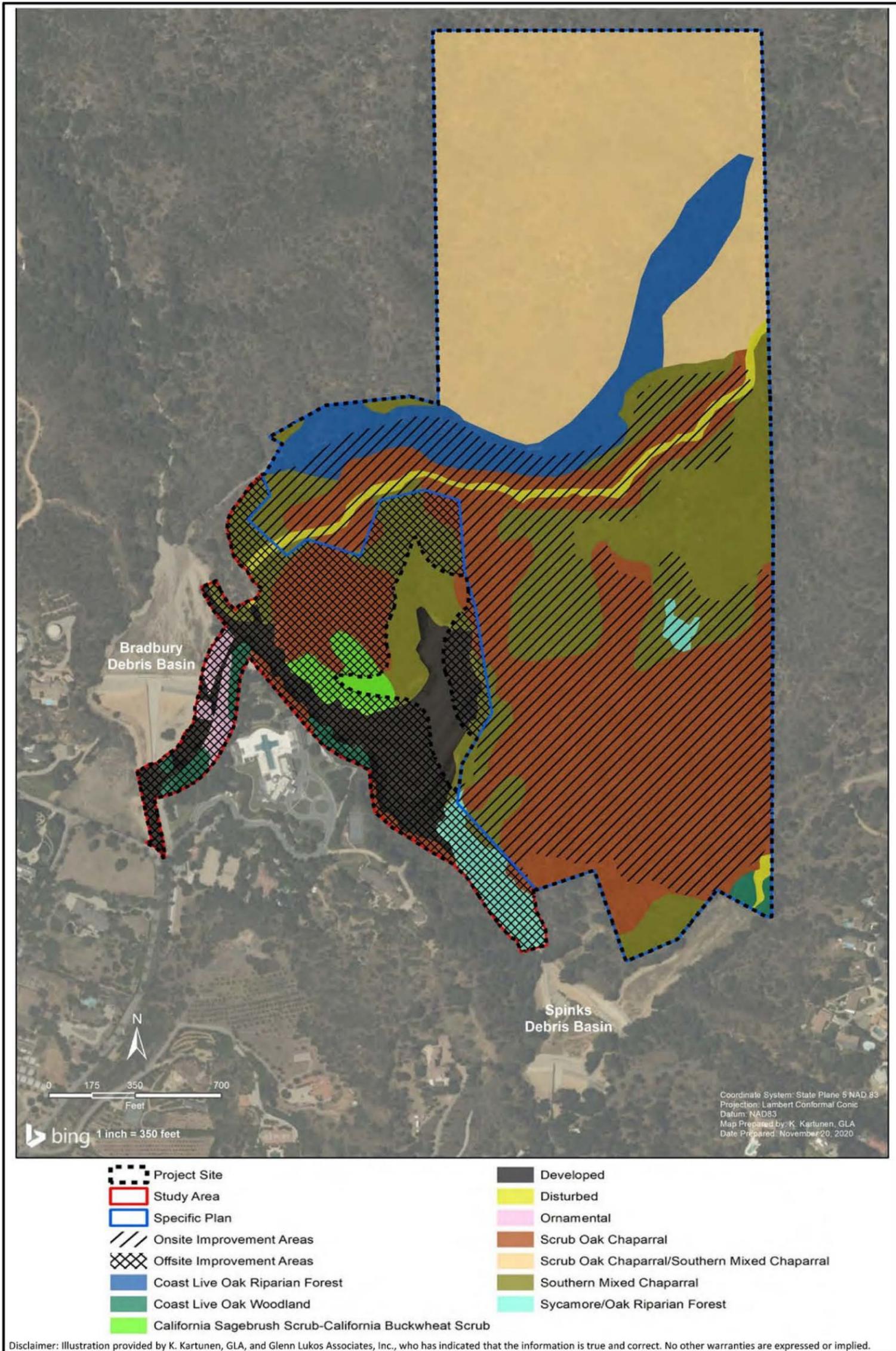


hollyleaf redberry, spiny redberry, blue elderberry, fragrant sumac, poison oak (*Toxicodendron diversilobum*), lemonadeberry, and chaparral yucca. As discussed above, Scrub Oak Chaparral is the dominant vegetation community within the Study Area, and California scrub oak is the most abundant tree/shrub species at the site.

Scrub Oak Chaparral/Southern Mixed Chaparral

As discussed above, approximately 41.52 acres and 28.60 acres of the Study Area have been specifically characterized as Scrub Oak Chaparral and Southern Mixed Chaparral, respectively. In addition, the northern portion of the Specific Plan (Lot L Open Space) contains approximately 41.34 acres of chaparral communities that did not necessitate the same level of detail in mapping as the development footprint. As such, these areas are generally characterized as supporting scrub oak and other chaparral shrubs as dominant species. **Figure 3.3-1**, *Vegetation Map*, maps vegetation and land cover types in the Study Area. **Table 3.3-1**, *Vegetation Types and Land Covers in The Study Area*, below shows the acreages per vegetation and land cover types for the Specific Plan area, the offsite improvement area, and the Not a Part area. **Table 3.3-2**, *Summary of Vegetation/Land Use Types for The Study Area*, shows the total acreages per vegetation/land cover type for the entire Study Area.

**Figure 3.3-1
VEGETATION MAP**





**Table 3.3-1
VEGETATION TYPES AND LAND COVERS IN THE STUDY AREA**

Vegetation Type/Land Cover	Acres					
	Permanent Impacts	Remedial grading impacts	Fuel Modification	Total Impacts	Avoided	Total
Specific Plan Area						
Coast Live Oak Riparian Forest (<i>Quercus agrifolia</i> Woodland Alliance)	0.91	1.48	0.91	3.30	7.20	10.50
Coast Live Oak Woodland (<i>Quercus agrifolia</i> Woodland Alliance)	0.00	0.00	0.00	0	0.40	0.40
Disturbed	1.63	0.09	0.00	1.72	0.39	2.12
Scrub Oak Chaparral (<i>Quercus berberidifolia</i> Shrubland Alliance)	27.48	4.12	1.47	33.27	2.24	35.53
Scrub Oak Chaparral/Southern Mixed Chaparral	0.00	0.00	0.00	0	41.34	41.34
Southern Mixed Chaparral (<i>Malosma laurina</i> Shrubland Alliance)	7.59	3.98	0.41	12.15	9.70	21.46
California Sycamore/Coast Live Oak Woodland (<i>Platanus racemosa-Quercus agrifolia</i> Woodland Alliance)	0.01	0.03	0.00	0.04	0.00	0.42
Subtotal	37.63	9.71	2.79	50.48	61.27	111.77
Offsite Improvement Area						
Coast Live Oak Woodland (<i>Quercus agrifolia</i> Woodland Alliance)	0.20	0.96	0.00	1.16	0	1.16
California Sagebrush-California Buckwheat Scrub (<i>Artemisia californica-Eriogonum fasciculatum</i> Shrubland Alliance)	0.42	0.97	0.00	1.40	0	1.40
Developed	3.55	2.44	0.87	6.92	0	6.92
Disturbed	0.00	0.07	0.10	0.17	0	0.17
Ornamental	0.32	0.65	0.00	0.97	0	0.97
Scrub Oak Chaparral (<i>Quercus berberidifolia</i> Shrubland Alliance)	3.03	2.51	0.21	5.80	0	5.80
Southern Mixed Chaparral (<i>Malosma laurina</i> Shrubland Alliance)	0.79	1.30	1.96	4.24	0	4.24
California Sycamore/Coast Live Oak Woodland (<i>Platanus racemosa-Quercus agrifolia</i> Woodland Alliance)	1.19	0.97	0.00	2.17	0	2.17
Subtotal	9.51	9.87	3.15	22.83	0	22.83
Not a Part Area¹						
California Sagebrush-California Buckwheat Scrub (<i>Artemisia californica-</i>	0	0	0	0	0	0.35



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Vegetation Type/Land Cover	Acres						
	Permanent Impacts	Remedial grading impacts	Fuel Modification		Total Impacts	Avoided	Total
<i>Eriogonum fasciculatum</i> Shrubland Alliance)							
Developed	0	0	0	0	0	0	1.61
Scrub Oak Chaparral (<i>Quercus berberidifolia</i> Shrubland Alliance)	0	0	0	0	0	0	0.19
Southern Mixed Chaparral (<i>Malosma laurina</i> Shrubland Alliance)	0	0	0	0	0	0	2.51
Subtotal	0	0	0	0	0	0	4.66

¹ The not a part area would not be directly impacted; thus, only total acreages were provided, not acreages by impact type.

Source: Glenn Lukos Associates, 2020

Table 3.3-2
SUMMARY OF VEGETATION/LAND USE TYPES FOR THE STUDY AREA

Vegetation/Land Use Type	Specific Plan (In Acres)	Offsite Improvement Area (Acres)	Not A Part (In Acres)	Total Acreage
Coast Live Oak Riparian Forest (<i>Quercus agrifolia</i> Woodland Alliance)	10.50	0.00	0.00	10.50
Coast Live Oak Woodland (<i>Quercus agrifolia</i> Woodland Alliance)	0.40	1.16	0.00	1.56
California Sagebrush-California Buckwheat Scrub (<i>Artemisia californica-Eriogonum fasciculatum</i> Shrubland Alliance)	0.00	1.40	0.35	1.75
California Sycamore/Coast Live Oak Woodland (<i>Platanus racemosa-Quercus agrifolia</i> Woodland Alliance)	0.42	2.17	0.00	2.59
Developed	0.00	6.92	1.61	8.53
Disturbed	2.12	0.17	0.00	2.29
Ornamental	0.00	0.97	0.00	0.97
Scrub Oak Chaparral (<i>Quercus berberidifolia</i> Shrubland Alliance)	35.53	5.80	0.19	41.52
Scrub Oak Chaparral/Southern Mixed Chaparral	41.34	0.00	0.00	41.34
Southern Mixed Chaparral (<i>Malosma laurina</i> Shrubland Alliance)	21.46	4.24	2.51	28.21
Total	111.77	22.83	4.66	139.26

Source: GLA, 2021



Special-Status Vegetation Communities

Two special-status vegetation communities are present in the project site. Approximately 2.59 acres of California Sycamore/Coast Live Oak Woodland are present in a riparian setting; and approximately 10.50 acres of Coast Live Oak Riparian Forest is associated with Bradbury Canyon.

Special Status Plants

One special-status plant species (Englemann oak, *Quercus englemannii*) was detected at the project site. No other special-status plants were detected during focused surveys. Table 3.3-3 provides a list of special-status plants evaluated for the Study Area through general biological surveys, habitat assessments, and focused surveys. Species were evaluated based on the following factors: 1) species identified by the CNDDDB and CNPS as occurring (either currently or historically) on or in the vicinity of the Study Area, and 2) any other special-status plants that are known to occur within the vicinity of the project site, or for which potentially suitable habitat occurs within the site. The table includes habitat requirement information for each species as well as the elevation range and blooming period for each species. Since the Study Area is located on the lower edge of the San Gabriel Mountains, the table includes a number of species based on the CNDDDB/CNPS review that are located at higher elevations and are associated with montane habitats that are not represented within the Study Area. As a function of occurrence at higher elevations, those species have later blooming periods (summer months), whereas the species with a potential for occurrence within the Study Area have blooming periods concentrating in the early spring to early summer. Thus, the timing of the focused surveys was appropriate relative to the species with the potential to occur. Only species with some potential to occur onsite are listed in **Table 3.3-3, Special-Status Plants Evaluated for The Project Site**, below. Species, status, and habitat requirements of those species which were determined to have no potential to occur onsite due to lack of suitable habitat are listed in **Appendix M-1, Biological Technical Report**, to this DEIR.



Table 3.3-3
SPECIAL-STATUS PLANTS EVALUATED FOR THE PROJECT SITE

Species Name	Status	Species Information	Occurrence
Abrams' alumroot <i>Heuchera abramsii</i>	Federal: None State: None CNPS: Rank 4.3	Habitat Requirements: Upper montane coniferous forest (rocky). Elevation 2800 to 3500 meters. Blooming Period: July to August	Not detected during focused surveys, and not expected to occur due to a lack of suitable habitat and the elevation range of the species.
Alkali mariposa-lily <i>Calochortus striatus</i>	Federal: None State: None CNPS: Rank 1B.2	Habitat Requirements: Alkaline and mesic soils in chaparral, chenopod scrub, Mojavean desert scrub, meadows and seeps. Elevation 70 to 1595 meters. Blooming Period: April to June	Not detected during focused surveys. The project site is located within the elevation range of the species but generally does not exhibit the soil types/habitats where the species would be expected.
Braunton's milk-vetch <i>Astragalus brauntonii</i>	Federal: FE State: None CNPS: Rank 1B.1	Habitat Requirements: Closed-cone coniferous forest, chaparral, coastal sage scrub, valley and foothill grassland. Usually carbonate soils. Recent burn or disturbed areas. Elevation 4 to 640 meters. Blooming Period: January to August	Not detected during focused surveys.
California androsace <i>Androsace elongata</i> ssp. <i>acuta</i>	Federal: None State: None CNPS: Rank 4.2	Habitat Requirements: Chaparral, cismontane woodland, coastal scrub, meadows and seeps, pinyon and juniper woodland, valley and foothill grassland. Elevation 150 to 1305 meters. Blooming Period: March to June	Not detected during focused surveys.



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Species Name	Status	Species Information	Occurrence
California muhly <i>Muhlenbergia californica</i>	Federal: None State: None CNPS: Rank 4.3	Habitat Requirements: Mesic habitats, including seeps and streambanks, in chaparral, coastal scrub, lower montane coniferous forest, and meadows. Elevation 100 to 2000 meters. Blooming Period: June to September	Not detected during focused surveys.
California satintail <i>Imperata brevifolia</i>	Federal: None State: None CNPS: Rank 2B.1	Habitat Requirements: Mesic soils in chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps (often alkali), and riparian scrub. Elevation 0 to 1215 meters. Blooming Period: September to May	Not detected during focused surveys.
California saw-grass <i>Cladium californicum</i>	Federal: None State: None CNPS: Rank 2B.2	Habitat Requirements: Meadows and seeps, and alkaline or freshwater marshes and swamps. Elevation 60 to 1600 meters. Blooming Period: June to September	Not detected during focused surveys.
Catalina mariposa lily <i>Calochortus catalinae</i>	Federal: None State: None CNPS: Rank 4.2	Habitat Requirements: Chaparral, cismontane woodland, coastal sage scrub, valley and foothill grassland. Elevation 15 to 700 meters. Blooming Period: March to June	Not detected during focused surveys.
Chaparral ragwort <i>Senecio aphanactis</i>	Federal: None State: None CNPS: Rank 2B.2	Habitat Requirements: Chaparral, cismontane woodland, coastal scrub. Sometimes associated with alkaline soils. Elevation 15 to 800 meters. Blooming Period: January to May	Not detected during focused surveys.
Coulter's matilija poppy <i>Romneya coulteri</i>	Federal: None State: None CNPS: Rank 4.2	Habitat Requirements: Often in burns in chaparral and coastal scrub. Elevation 20 to 1200 meters. Blooming Period: March to August	Not detected during focused surveys.



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Species Name	Status	Species Information	Occurrence
Engelmann oak <i>Quercus engelmannii</i>	Federal: None State: None CNPS: Rank 4.2	Habitat Requirements: Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland. Elevation 50 to 1300 meters. Blooming Period: March to June	Present. One Englemann oak individual was mapped during the tree inventory.
Fragrant pitcher sage <i>Lepechinia fragrans</i>	Federal: None State: None CNPS: Rank 4.2	Habitat Requirements: Chaparral. Elevation 20 to 1310 meters. Blooming Period: March to October	Not detected during focused surveys.
Hubby's phacelia <i>Phacelia hubbyi</i>	Federal: None State: None CNPS: Rank 4.2	Habitat Requirements: Gravelly, rocky, and talus soils in chaparral, coastal scrub, and valley and foothill grassland. Elevation 0 to 1000 meters. Blooming Period: April to July	Not detected during focused surveys.
Intermediate mariposa-lily <i>Calochortus weedii</i> var. <i>intermedius</i>	Federal: None State: None CNPS: Rank 1B.2	Habitat Requirements: Rocky soils in chaparral, coastal sage scrub, valley and foothill grassland. Elevation 105 to 855 meters. Blooming Period: May to July	Not detected during focused surveys.
Many-stemmed dudleya <i>Dudleya multicaulis</i>	Federal: None State: None CNPS: Rank 1B.2	Habitat Requirements: Chaparral, coastal sage scrub, valley and foothill grassland. Often occurring in clay soils. Elevation 15 to 790 meters. Blooming Period: April to July	Not detected during focused surveys.
Mesa horkelia <i>Horkelia cuneata</i> var. <i>puberula</i>	Federal: None State: None CNPS: Rank 1B.1	Habitat Requirements: Sandy or gravelly soils in chaparral (maritime), cismontane woodland, and coastal scrub. Elevation 70 to 810 meters. Blooming Period: February to September	Not detected during focused surveys.
Nevin's barberry <i>Berberis nevinii</i>	Federal: FE State: SE CNPS: Rank 1B.1	Habitat Requirements: Sandy or gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian scrub. Elevation 70 to 825 meters. Blooming Period: February to June	Not detected during focused surveys.



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Species Name	Status	Species Information	Occurrence
Ocellated Humboldt lily <i>Lilium humboldtii</i> ssp. <i>ocellatum</i>	Federal: None State: None CNPS: Rank 4.2	Habitat Requirements: Chaparral, cismontane woodland, coastal sage scrub, lower montane coniferous forest, riparian woodland. Occurring in openings. Elevation 30 to 1800 meters. Blooming Period: March to August	Not detected during focused surveys.
Orcutt's linanthus <i>Linanthus orcuttii</i>	Federal: None State: None CNPS: Rank 1B.3	Habitat Requirements: Openings in chaparral, lower montane coniferous forest, and pinyon and juniper woodland. Elevation 915 to 2145 meters. Blooming Period: May to June	Not detected during focused surveys.
Parish's gooseberry <i>Ribes divaricatum</i> var. <i>parishii</i>	Federal: None State: None CNPS: Rank 1A	Habitat Requirements: Riparian woodland. Elevation 65 to 300 meters. Blooming Period: February to April	Not detected during focused surveys.
Parry's spineflower <i>Chorizanthe parryi</i> var. <i>parryi</i>	Federal: None State: None CNPS: Rank 1B.1	Habitat Requirements: Sandy or rocky soils in open habitats of chaparral and coastal sage scrub. Elevation 275 to 1220 meters. Blooming Period: April to June	Not detected during focused surveys.
Peirson's spring beauty <i>Claytonia lanceolata</i> var. <i>peirsonii</i>	Federal: None State: None CNPS: Rank 3.1	Habitat Requirements: In scree within subalpine and upper montane coniferous forest. Elevation 1510 to 2745 meters. Blooming Period: March to June	Not detected during focused surveys.
Plummer's mariposa lily <i>Calochortus plummerae</i>	Federal: None State: None CNPS: Rank 4.2	Habitat Requirements: Granitic, rock soils within chaparral, cismontane woodland, coastal sage scrub, lower montane coniferous forest, valley and foothill grassland. Elevation 100 to 1700 meters. Blooming Period: May to July	Not detected during focused surveys.
Robbins' nemacladus <i>Nemacladus secundiflorus</i> var. <i>robbinsii</i>	Federal: None State: None CNPS: Rank 1B.2	Habitat Requirements: Openings in chaparral and valley and foothill grassland. Elevation 350 to 1700 meters. Blooming Period: April to June	Not detected during focused surveys.



❖ SECTION 3.3 – BIOLOGICAL RESOURCES ❖

Species Name	Status	Species Information	Occurrence
Robinson's pepper grass <i>Lepidium virginicum</i> var. <i>robinsonii</i>	Federal: None State: None CNPS: Rank 4.3	Habitat Requirements: Chaparral, coastal sage scrub. Elevation 1 to 885 meters. Blooming Period: January to July	Not detected during focused surveys.
San Bernardino aster <i>Symphotrichum</i> <i>defoliatum</i>	Federal: None State: None CNPS: Rank 1B.2	Habitat Requirements: Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic). Elevation 2 to 2040 meters. Blooming Period: July to December	Not detected during focused surveys.
San Fernando Valley spineflower <i>Chorizanthe parryi</i> var. <i>fernandina</i>	Federal: Candidate State: SE CNPS: Rank 1B.1	Habitat Requirements: Coastal sage scrub, occurring on sandy soils. Elevation 150 to 1220 meters. Blooming Period: April to July	Not detected during focused surveys.
San Gabriel bedstraw <i>Galium grande</i>	Federal: None State: None CNPS: Rank 1B.2	Habitat Requirements: Broadleaf upland forest, chaparral, cismontane woodland, and lower montane coniferous forest. Elevation 425 to 1500 meters. Blooming Period: January to July	Not detected during focused surveys.
San Gabriel manzanita <i>Arctostaphylos</i> <i>glandulosa</i> ssp. <i>gabrielensis</i>	Federal: None State: None CNPS: Rank 1B.2	Habitat Requirements: Chaparral (rocky). Elevation 595 to 1500 meters. Blooming Period: March	Not detected during focused surveys.
San Gabriel Mountains dudleya <i>Dudleya densiflora</i>	Federal: None State: None CNPS: Rank 1B.1	Habitat Requirements: Chaparral, coastal sage scrub, lower montane coniferous forest. Occurring on granitic soils, cliffs, and canyon walls. Elevation 244 to 610 meters. Blooming Period: March to June	Not detected during focused surveys.
San Gabriel ragwort <i>Senecio astephanus</i>	Federal: None State: None CNPS: Rank 4.3	Habitat Requirements: Rocky slopes, coastal bluff scrub, chaparral. Elevation 400 to 1500 meters. Blooming Period: May to July	Not detected during focused surveys.



❖ SECTION 3.3 – BIOLOGICAL RESOURCES ❖

Species Name	Status	Species Information	Occurrence
San Gabriel River dudleya <i>Dudleya cymosa ssp. crebrifolia</i>	Federal: None State: None CNPS: Rank 1B.2	Habitat Requirements: Chaparral, on granitic soils. Elevation 275 to 457 meters. Blooming Period: April to July	Not detected during focused surveys.
Short-joint beavertail <i>Opuntia basilaris var. brachyclada</i>	Federal: None State: None CNPS: Rank 1B.2	Habitat Requirements: Chaparral, Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland. Elevation 425 to 1800 meters. Blooming Period: April to August	Not detected during focused surveys.
Slender mariposa lily <i>Calochortus clavatus var. gracilis</i>	Federal: None State: None CNPS: Rank 1B.2	Habitat Requirements: Chaparral and coastal sage scrub. Elevation 320 to 1000 meters. Blooming Period: March to June	Not detected during focused surveys.
Slender silver moss <i>Anomobryum julaceum</i>	Federal: None State: None CNPS: Rank 4.2	Habitat Requirements: Damp rock and soils on outcrops, usually roadcuts. Broadleaf upland forest, lower montane coniferous forest, North Coast coniferous forest. Elevation 100 to 1000 meters. Blooming Period: N/A	Not detected during focused surveys.
Slender-horned spineflower <i>Dodecahema leptoceras</i>	Federal: FE State: SE CNPS: Rank 1B.1	Habitat Requirements: Sandy soils in alluvial scrub, chaparral, cismontane woodland. Elevation 200 to 760 meters. Blooming Period: April to June	Not detected during focused surveys.
Sonoran maiden fern <i>Thelypteris puberula var. sonorensis</i>	Federal: None State: None CNPS: Rank 2B.2	Habitat Requirements: Meadows and seeps (seeps and streams). Elevation 50 to 610 meters. Blooming Period: January to September	Not detected during focused surveys.
Southern California black walnut <i>Juglans californica</i>	Federal: None State: None CNPS: Rank 4.2	Habitat Requirements: Chaparral, cismontane woodland, coastal sage scrub, alluvial surfaces. Elevation 50 to 900 meters. Blooming Period: March to August	Not detected during focused surveys.



Species Name	Status	Species Information	Occurrence
Southern mountains skullcap <i>Scutellaria bolanderi</i> <i>ssp. austromontana</i>	Federal: None State: None CNPS: Rank 1B.2	Habitat Requirements: Mesic soils in chaparral, cismontane woodland, lower montane coniferous forest. Elevation 425 to 2000 meters. Blooming Period: June to August	Not detected during focused surveys.
Southern tarplant <i>Centromadia parryi</i> <i>ssp. australis</i>	Federal: None State: None CNPS: Rank 1B.1	Habitat Requirements: Disturbed habitats, margins of marshes and swamps, vernal mesic valley and foothill grassland, vernal pools. Elevation 0 to 480 meters. Blooming Period: May to November	Not detected during focused surveys.
Thread-leaved brodiaea <i>Brodiaea filifolia</i>	Federal: FT State: SE CNPS: Rank 1B.1	Habitat Requirements: Clay soils in chaparral (openings), cismontane woodland, coastal sage scrub, playas, valley and foothill grassland, vernal pools. Elevation 25 to 1120 meters. Blooming Period: March to June	Not detected during focused surveys.
Western spleenwort <i>Asplenium vespertinum</i>	Federal: None State: None CNPS: Rank 4.2	Habitat Requirements: Rocky soils in chaparral, cismontane woodland, and coastal scrub. Elevation 180 to 1000 meters. Blooming Period: February to June	Not detected during focused surveys.
White rabbit-tobacco <i>Pseudognaphalium leucocephalum</i>	Federal: None State: None CNPS: Rank 2B.2	Habitat Requirements: Sandy or gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian woodland. Elevation 0 to 2100 meters. Blooming Period: July to December	Not detected during focused surveys.

Source: Glenn Lukos Associates, 2020

STATUS

Federal

FE – Federally Endangered
FT – Federally Threatened
FC – Federal Candidate

State

SE – State Endangered
ST – State Threatened

CNPS

Rank 1A – Plants presumed extirpated in California and either rare or extinct elsewhere.



Rank 1B – Plants rare, threatened, or endangered in California and elsewhere.

Rank 2A – Plants presumed extirpated in California, but common elsewhere.

Rank 2B – Plants rare, threatened, or endangered in California, but more common elsewhere.

Rank 3 – Plants about which more information is needed (a review list).

Rank 4 – Plants of limited distribution (a watch list).

Threat Code extension

.1 – Seriously endangered in California (over 80% occurrences threatened)

.2 – Fairly endangered in California (20-80% occurrences threatened)

.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)



Special-Status Animals

Table 3.3-4, *Special-Status Animals Evaluated for The Project Site*, provides a list of special-status animals evaluated for the Study Area through general biological surveys, habitat assessments, and focused surveys. Species were evaluated based on the following factors, including: 1) species identified by the CNDDDB as occurring (either currently or historically) on or in the vicinity of the project site, and 2) any other special-status animals that are known to occur within the vicinity of the project site, for which potentially suitable habitat occurs on the site. Species, status, and habitat requirements of those species which were determined to have no potential to occur onsite due to lack of suitable habitat are listed in **Appendix M-1, *Biological Technical Report***, to this DEIR.

**Table 3.3-4
SPECIAL-STATUS ANIMALS EVALUATED FOR THE PROJECT SITE**

Species Name	Status	Habitat Requirements	Occurrence
Invertebrates			
Crotch bumble bee <i>Bombus crotchii</i>	Federal: None State: CE Other: S1 S2	Relatively warm and dry sites, including the inner Coast Range of California and margins of the Mojave Desert.	Potential to occur.
San Gabriel chestnut snail <i>Glyptostoma gabrielse</i>	Federal: None State: None Other: G2 S2	Rocky hillsides under plant debris and cactus, and in rock piles, wood rat nests, and spaces beneath logs, stumps and boulders.	Two empty shells of the chestnut snail were detected within Bradbury Canyon just north of the proposed impact area. Although not detected elsewhere within the project site, the snail has the potential to occur within Project footprint.
Amphibians			
Coast Range newt <i>Taricha torosa</i>	Federal: None State: SSC	Found in wet forests, oak forests, chaparral, and rolling grasslands. In southern California, drier chaparral, oak woodland, and grasslands are used.	The coast range newt was detected within flowing portions of Bradbury Canyon north of the project site. The newt was not observed within the project site but has a potential to occur.
Reptiles			
California glossy snake <i>Arizona elegans occidentalis</i>	Federal: None State: SSC	Inhabits arid scrub, rocky washes, grasslands, chaparral.	Potential to occur.
Coastal whiptail <i>Aspidoscelis tigris stejnegeri (multiscutatus)</i>	Federal: None State: SSC	Open, often rocky areas with little vegetation, or sunny microhabitats within shrub or grassland associations.	Potential to occur.



❖ SECTION 3.3 – BIOLOGICAL RESOURCES ❖

Species Name	Status	Habitat Requirements	Occurrence
Coast horned lizard <i>Phrynosoma blainvillii</i>	Federal: None State: SSC	Occurs in a variety of vegetation types including coastal sage scrub, chaparral, annual grassland, oak woodland, and riparian woodlands.	Potential to occur.
Coast patch-nosed snake <i>Salvadora hexalepis virgultea</i>	Federal: None State: SSC	Occurs in coastal chaparral, desert scrub, washes, sandy flats, and rocky areas.	Potential to occur.
Southern California legless lizard <i>Anniella stebbinsi</i>	Federal: None State: SSC	Known from throughout southern California south of the Transverse Ranges into northern Baja California. Common in several habitats but especially in coastal dune, valley-foothill, chaparral, and coastal scrub types.	Potential to occur.
Birds			
Coastal California gnatcatcher <i>Polioptila californica californica</i>	Federal: FT State: SSC	Low elevation coastal sage scrub and coastal bluff scrub.	Potential to occur but confirmed absent during focused surveys.
Yellow warbler (nesting) <i>Setophaga petechia</i>	Federal: BCC State: SSC	Breed in lowland and foothill riparian woodlands dominated by cottonwoods, alders, or willows and other small trees and shrubs typical of low, open-canopy riparian woodland. During migration, forages in woodland, forest, and shrub habitats.	Potential to occur.
Mammals			
American badger <i>Taxidea taxus</i>	Federal: None State: SSC	Most abundant in drier open stages of most scrub, forest, and herbaceous habitats, with friable soils.	Potential to occur.
Big free-tailed bat <i>Nyctinomops macrotis</i>	Federal: None State: SSC WBWG: MH	Roost mainly in crevices and rocks in cliff situations; also utilize buildings, caves, and tree cavities.	Does not occur due to a lack of suitable habitat.
Mountain Lion <i>Puma concolor</i>	Federal: None State: CE	Mountain lions use rocky areas, cliffs, and ledges that provide cover within open woodlands and chaparral, as well as riparian areas that provide protective habitat connections for movement between fragmented core habitat.	Tracks and scat were observed in the Study Area.
Pallid bat <i>Antrozous pallidus</i>	Federal: None State: SSC WBWG: H	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting.	Potential to occur.



Species Name	Status	Habitat Requirements	Occurrence
Western mastiff bat <i>Eumops perotis californicus</i>	Federal: None State: SSC WBWG: H	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	Potential to occur.
Western red bat <i>Lasiurus blossevillii</i>	Federal: None State: SSC WBWG: H	Prefers riparian areas dominated by walnuts, oaks, willows, cottonwoods, and sycamores where they roost in broad-leaved trees.	Potential to occur.
Western yellow bat <i>Lasiurus xanthinus</i>	Federal: None State: SSC WBWG: H	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	Potential to occur.

Source: GLA, 2020

STATUS

Federal

- FE – Federally Endangered
- FT – Federally Threatened
- FPT – Federally Proposed Threatened
- FC – Federal Candidate
- BGEPA– Bald and Golden Eagle Protection Act

State

- SE – State Endangered
- ST – State Threatened
- CE– Candidate Endangered
- CFP – California Fully-Protected Species
- SSC – Species of Special Concern

Western Bat Working Group (WBWG)

- H – High Priority
- LM – Low-Medium Priority
- M – Medium Priority
- MH – Medium-High Priority

OCCURRENCE

- Does not occur – The site does not contain habitat for the species and/or the site does not occur within the geographic range of the species.
- Confirmed absent – The site contains suitable habitat for the species, but the species has been confirmed absent through focused surveys.
- Not expected to occur – The species is not expected to occur onsite due to low habitat quality, however absence cannot be ruled out.
- Potential to occur – The species has a potential to occur based on suitable habitat, however its presence/absence has not been confirmed.
- Confirmed present – The species was detected onsite incidentally or through focused surveys



Descriptions including life history summaries of special-status species with potential to occur onsite are provided in the Biological Technical Report included as **Appendix M** to this DEIR.

Focused Animal Surveys

Focused surveys were conducted for coastal California gnatcatcher on six days in 2017, the first being April 11 and the last June 27. Coastal California gnatcatcher inhabits low elevation coastal sage scrub and coastal bluff scrub. Minimal suitable habitat for the gnatcatcher is present in the Specific Plan area; the offsite development area contains approximately 1.40 acres of California Sagebrush/California Buckwheat Scrub. Thus, the gnatcatcher is not expected to occur in the impact areas or open space areas onsite. No gnatcatchers were observed during the focused surveys.

Nesting Birds

The Study Area contains trees, shrubs, and ground cover that provide suitable habitat for nesting native birds. Killing native birds (including eggs) is prohibited under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code.

Wildlife Linkages/ Corridors and Nursery Sites

Habitat linkages are areas connecting two or more other habitat areas which are often larger or superior in quality to the linkage. Such linkage sites can be quite small or constricted, but may be vital to the long-term health of connected habitats. Linkage values are often addressed in terms of “gene flow” between populations, with movement taking potentially many generations.

Corridors are similar to linkages but provide specific opportunities for individual animals to disperse or migrate between areas, generally extensive but otherwise partially or wholly separated regions. Adequate cover and tolerably low levels of disturbance are common requirements for corridors. Habitat in corridors may be quite different than that in the connected areas, but if used by the wildlife species of interest, the corridor will still function as desired.

The project site is located at the southern edge of the foothills of the San Gabriel Mountains. The broader San Gabriel Mountains (including the National Forest lands) serve a large habitat block with regional connectivity to the Santa Susana Mountains, Simi Hills, Santa Monica Mountains, and Los Padres National Forest to the west, and the San Bernardino Mountains the east. The project site represents a terminus of local movement between the National Forest to the north and the urban edge to the south and is not critical to broader regional movement between habitat blocks.

The general section of the foothills/mountains containing the project site is situated between San Gabriel Canyon to the east, the West Fork San Gabriel River to the north, and Big Santa Anita Canyon to the west. A prominent east-west ridgeline generally separates the West Fork San Gabriel River from the project site, as well as numerous other smaller east-west and north-south ridgelines and several canyons. The prominent east-west ridgeline includes Pine Mountain and Monrovia Peak and continues west around the northern end of Big Santa Anita Canyon to connect with Mount Wilson. Several prominent north-south canyons are situated between Big Santa Anita Canyon and San Gabriel Canyon, including Monrovia Canyon (located northwest of project site) and Sawpit Canyon, which connects with Monrovia Canyon. Closer to the project site, a ridge rises from San Gabriel Canyon extending west and north above the project site approximately one-half mile from the northeastern edge of the development footprint. The ridge contains a dirt road (Tassel Motorway) that extends north before connecting with the Monrovia Canyon Truck Trail, which then turns west and southwest



into Monrovia Canyon. Several smaller north-south ridges and canyons come extend down from the ridge, including Bradbury Canyon and Spinks Canyon that are separated by a single main ridgeline. A local wildlife movement map is shown on **Figure 3.3-2, Local Wildlife Movement Map**.

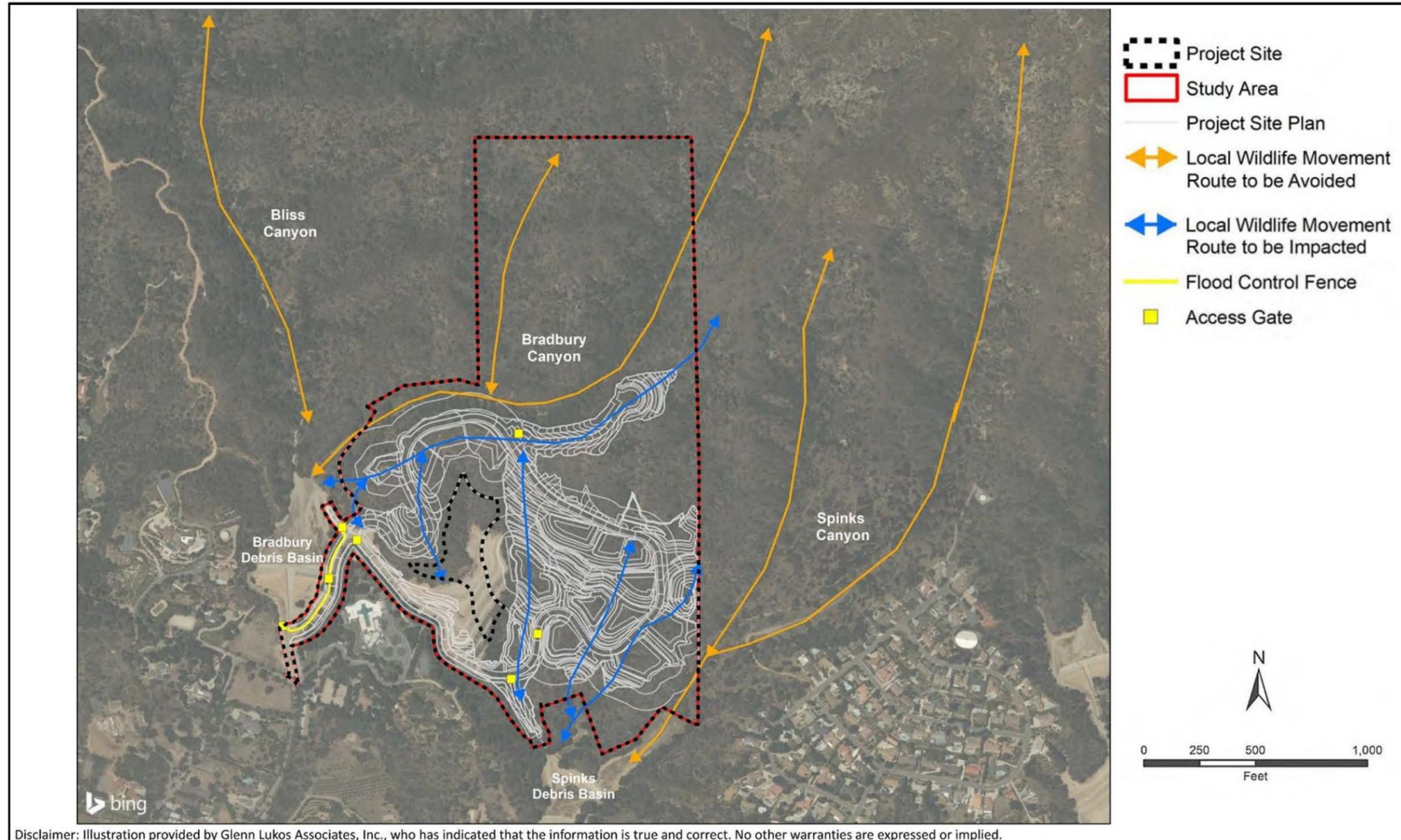
Bliss Canyon is located northwest of the Project's Study Area and also connects to the Bradbury Debris Basin. Essentially every canyon and ridgeline within the Study Area is utilized by wildlife for movement, with lateral movement between ridges and canyons. The two debris basins are connected by a single Flood Control access road that forms the southwestern boundary of the project site and is part of the Project's offsite improvements. To the southwest of the access road are the existing developed areas of the Bradbury Estates and the City of Bradbury. A portion of Bradbury Canyon is located within the proposed Lot L Open Space. A prominent ridgeline extends down from the northeast, dividing the two canyons and then forming the southern boundary of Bradbury Canyon. This prominent ridgeline generally represents the northern limits of the Development Footprint. Several smaller ridgelines extend down (to the south) from the main ridgeline, terminating at the Flood Control access road. One large estate property borders the access road with steep slopes, many of which have been modified through grading and armoring. As such, the adjacent property forms a barrier which forces wildlife either northwest to the Bradbury Debris Basin or southeast to the Spinks Debris Basin.

The smaller ridgelines are divided by three smaller canyons identified as Drainages B, C, and D. These smaller ridgelines and drainage features constitute the main portion of the Development Footprint. The larger ridgeline represents a main route for wildlife movement relative to the project site, allowing wildlife to move laterally between Bradbury Canyon and Spinks Canyon to the north, and then feeding wildlife through the project site to the south.

The Study Area, including the onsite and offsite development areas and the proposed open space, provides both live-in habitat and movement opportunities for many mammalian species, including black bear (*Ursus americanus*), mountain lion (*Puma concolor*), mule deer (*Odocoileus hemionus*), bobcat (*Lynx rufus*), coyote (*Canis latrans*), and gray fox (*Urocyon cinereoargenteus*). Black bears were detected throughout the Specific Plan area through camera detection and/or sign, including evidence of bear cubs at least in Bradbury Canyon (tracks in the Bradbury Debris Basin). A wildlife camera was set up in Bradbury Canyon (open space portion of the Study Area) north of the development footprint in 2017, and black bears were detected by the camera. Bear tracks and scat were detected both within the proposed open space in Bradbury Canyon, as well as within the development footprint. Tracks and scat were detected in a canyon in the southeastern portion of the development footprint (Drainage C), and based on the prominence of the tracks, the canyon appears to be used regularly by bears moving into Spinks Canyon to the southeast when accessing the residential communities to forage for food. Mountain lion tracks and scat were observed within proposed open space in Bradbury Canyon, and mountain lions have the potential to utilize the entire Specific Plan and offsite development area as part of a larger home range.

The larger ridgeline (discussed above as forming the northern edge of the development footprint) represents a main local route for wildlife movement relative to the project site, allowing wildlife to move laterally between Bradbury Canyon and Spinks Canyon to the north, and then feeding wildlife through the project site to the south. However, the ridgeline and the development footprint does not constitute a "wildlife corridor" critical to movement in the San Gabriel Mountains, but instead is supporting local wildlife movement at the extreme edge of a much larger block of live-in habitat and movement routes as part of regional movement to the west and east.

Figure 3.3-2
LOCAL WILDLIFE MOVEMENT MAP



Disclaimer: Illustration provided by Glenn Lukos Associates, Inc., who has indicated that the information is true and correct. No other warranties are expressed or implied.

Sources: Glenn Lukos Associates, Inc., May 29, 2021.



Chadwick Ranch Estates Project
Local Wildlife Movement Map

Wildlife nurseries are sites where wildlife concentrate for hatching and/or raising young, such as rookeries, spawning areas, and colonial wildlife such as bats. Nurseries can be important to both special-status species as well as commonly occurring species. The Study Area in general is used by wildlife for breeding, including the Specific Plan and portions of the offsite improvement area; however, the Study Area does not support bird rookeries for species such as herons, egrets, etc., and does not provide habitat for fish spawning. The Study Area is expected to support a number of bat species, including the potential for several special-status bat species (pallid bat, western mastiff bat, western red bat, and western yellow bat). The pallid bat and western mastiff bat have the potential to forage within the Study Area but are not expected to roost due to a lack of suitable habitat. The western yellow bat has limited roosting potential based on a small number of palm trees. The western red bat has a greater potential for roosting (including maternity roosting), based on an abundance of trees (oaks and sycamores) that can be utilized by red bats. However, the western red bat and western yellow bat are generally solitary roosters, and so the Study Area would not be considered as a "nursery" site for these species.

Tree Inventory

Dudek conducted a tree inventory for the Project's development footprint in compliance with the City's Tree Preservation and Protection Ordinance (Chapter 118 of Title IX of the City's Development Code), which requires that a tree report be prepared for removal of protected trees species. The inventory is set forth in **Table 3.3-5, Tree Inventory Within Project Development Area**, below.

Section 9.118.030 (Definitions):

- **Tree:** Tree means a woody perennial plant which usually has, but is not limited to, a single dominant trunk and has a mature height of 15 feet or more or has a trunk diameter of four inches or more measured at 24 inches above finished grade.
- **Native Tree:** Native tree means any woody plant species indigenous to the desert, foothills or canyons of southern California prior to the California Mission Period, provided that the plant has an expected mature trunk size of six inches DBH [diameter at breast height] and has an expected mature height of 15 feet or higher. Giant sequoias, redwoods (*Sequoiadendron sempervirens*), and dawn redwoods (*Metasequoia glyptostroboides*), evergreen native oaks (such as *Quercus agrifolia* and *engelmannii*), deciduous oaks (such as *Quercus lobata* and *kelloggii*) are to be regarded as important native trees even though they have been planted by man, introduced (or possibly reintroduced) into the Southern California foothill and canyon environments.
- **Prominent Tree:** means a woody perennial plant with a trunk DBH of six inches or more and having an expected mature height of 15 feet or higher.
- **Significant Tree:** means any non-native or exotic tree with a trunk DBH of six inches or more and having an expected mature height of 15 feet or higher and known to survive in the southern California environment.

There are 2,287 trees located within and immediately adjacent to the Chadwick Ranch tree survey area (grading footprint + fuel modification zones) and include 21 different tree species. **Figure 3.3-3** maps the locations of protected trees onsite. As **Table 3.3-5** indicates, most of the inventoried trees (96.06% or 2,197 trees) are native to California, including coast live oak, California scrub oak, Engelmann oak, western sycamore, toyon, Southern California scrub oak, and Mexican elderberry.



The coast live oak and Engelmann oak trees are considered the highest value trees on this site. Non-native tree species make up a small portion of the inventoried trees at 3.94% (90 trees). **Table 3.3-5**, provides a summary of the 21 species mapped and evaluated within the tree survey area. The Tree Location Exhibit in Appendix A of the TPPP (included as **Appendix M-1C** to this DEIR) presents the location of the individual trees mapped and assessed for the Chadwick Ranch project.

Overall, the trees exhibit growth and structural conditions that are typical of their locations as landscape and natural native trees. The trees include various trunk and branch maladies as well as varying health and structural conditions. Further information on tree health and condition is presented in the Tree Preservation and Protection Plan included in the Biological Technical Report (BTR) (see **Appendix M** to this DEIR).

Trees within the tree survey area vary in size and stature according to species and available growing space. The site's coast live oak and Engelmann oak trees are primarily single stemmed with trunk diameters (diameter at 24 inches above finished grade) ranging from 1 inch to 44 inches. Multi-stemmed oak trees with 2 to 8 stems have combined diameters up to 71 inches. Single and multi-stemmed non-native species have diameters between 1 and 44 inches. Tree heights vary from 1 foot to 75 feet. Tree canopy extents range from 1 foot to nearly 75 feet. Over 75% of the trees on site exhibit canopy spreads that are greater than 25 feet across at their widest points.

Table 3.3-5
TREE INVENTORY WITHIN PROJECT DEVELOPMENT AREA

Scientific Name	Common Name	Number of Trees
<i>Cupressus sempervirens</i> *	Italian cypress	19
<i>Eucalyptus camaldulensis</i> *	Red River gum	9
<i>Fraxinus</i> spp.*	ash	1
<i>Grevillea robusta</i> *	silkoak	1
<i>Heteromeles arbutifolia</i>	toyon	163
<i>Liquidambar styraciflua</i> *	American sweetgum	1
<i>Pinus canariensis</i> *	Canary Island pine	9
<i>Pinus eldarica</i> *	Afghan pine	1
<i>Pinus halepensis</i> *	Aleppo pine	28
<i>Pittosporum</i> spp.*	pittosporum species	1
<i>Platanus racemosa</i> +	western sycamore	49
<i>Prunus salicina</i> *	Santa Rosa plum	3
<i>Quercus agrifolia</i> +	coast live oak	501



Scientific Name	Common Name	Number of Trees
<i>Quercus berberidifolia</i> +	California scrub oak	1,382
<i>Quercus englemannii</i>	Englemann oak	1
<i>Quercus virginiana</i> *	southern live oak	1
<i>Salix lasiolepis</i> +	arroyo willow	3
<i>Sambucus mexicana</i> +	blue elderberry	100
<i>Schinus molle</i> *	Peruvian pepper	9
<i>Ulmus parvifolia</i> *	Chinese elm	1
<i>Washingtonia filifera</i> +	California fan palm	4
	TOTAL	2,287

+ = native tree; * = non-native, significant tree

Source: Glenn Lukos Associates, 2020

Critical Habitat

The project site is not located within USFWS-designated Critical Habitat, as was verified through the USFWS IPaC online planning tool and USFWS Critical Habitat GIS shapefiles. The nearest Critical Habitat is for the southwestern willow flycatcher associated with the San Gabriel River, located approximately 1.5 miles east/southeast of the project site, and for Braunton’s milkvetch, located approximately 2.0 miles west/northwest of the project site.

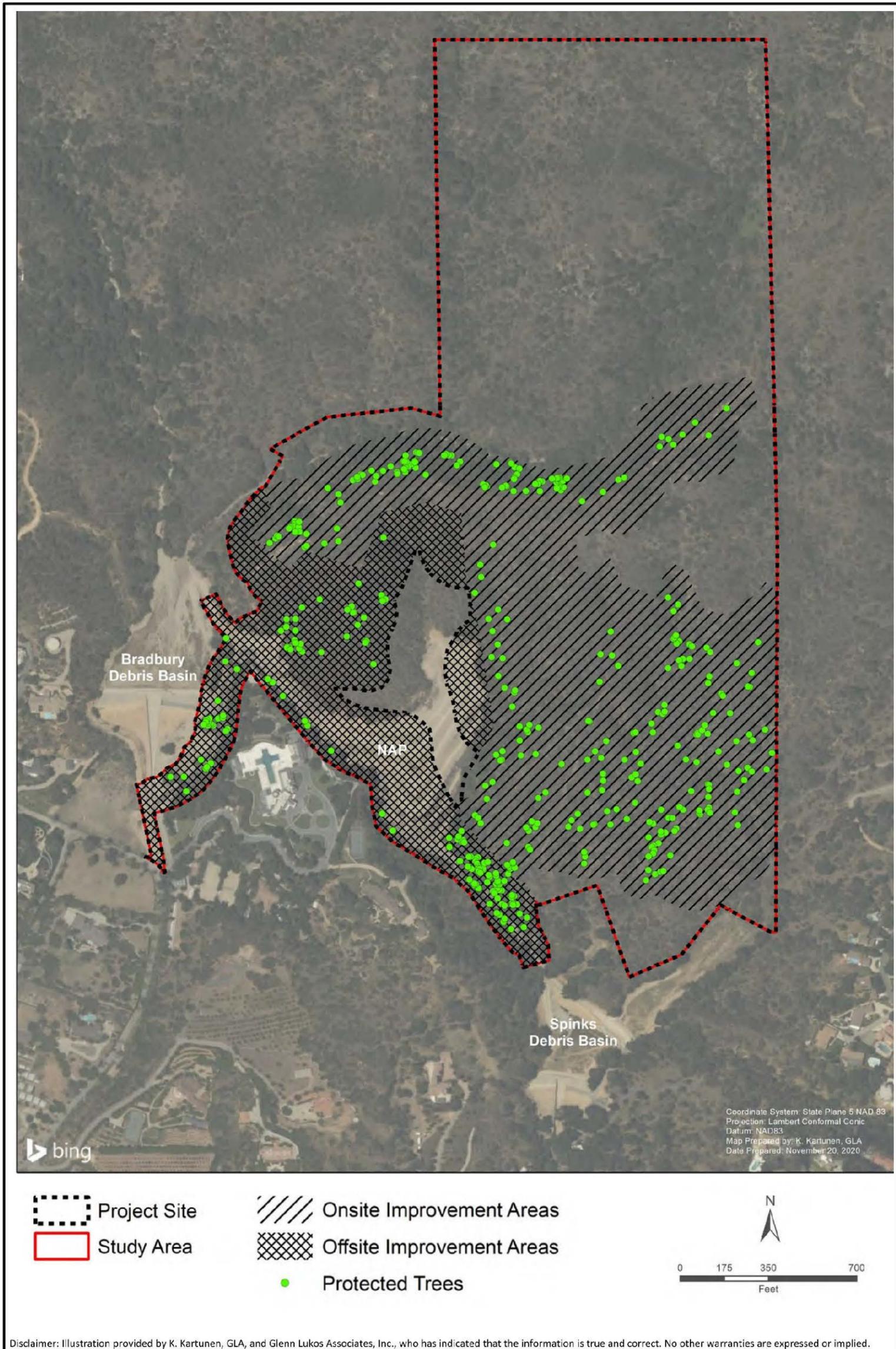
Jurisdictional Waters

The project site contains portions of six drainage features (Drainages A through F) that are subject to the jurisdictions of the Corps, Regional Board, and/or CDFW. The six drainage features are part of two separate drainage systems, Bradbury Canyon and Spinks Canyon, both of which have been modified at the downstream end for flood protection.

Determination of the presence of wetlands and other riparian habitat was made based on criteria of the Corps, Regional Board, and/or CDFW.

No jurisdictional wetlands were observed during the assessment; however, as described below, portions of Drainage Complex E (Bradbury Canyon) in the northern portion of the Study Area may support wetlands since GLA observed flowing water in upper portions of the Canyon, but was not able to access these areas during the field effort. Vegetation observed in potential jurisdictional areas is described in the BTR included as **Appendix M-1** to this DEIR.

**Figure 3.3-3
PROTECTED TREES MAP**





Potential US Army Corps of Engineers Jurisdiction

Potential US Army Corps of Engineers jurisdiction in the Study Area is mapped on **Figure 3.3-4, Potential Corps and Regional Board Jurisdiction**; listed below in **Table 3.3-6, Summary of Corps and Regional Board Jurisdictions**, and described below.

Drainage A

Potential Corps jurisdiction associated with Drainage A totals 0.01 acre, none of which is wetland waters. A total of 323 linear feet of streambed is present with widths ranging from 1 to 2 feet.

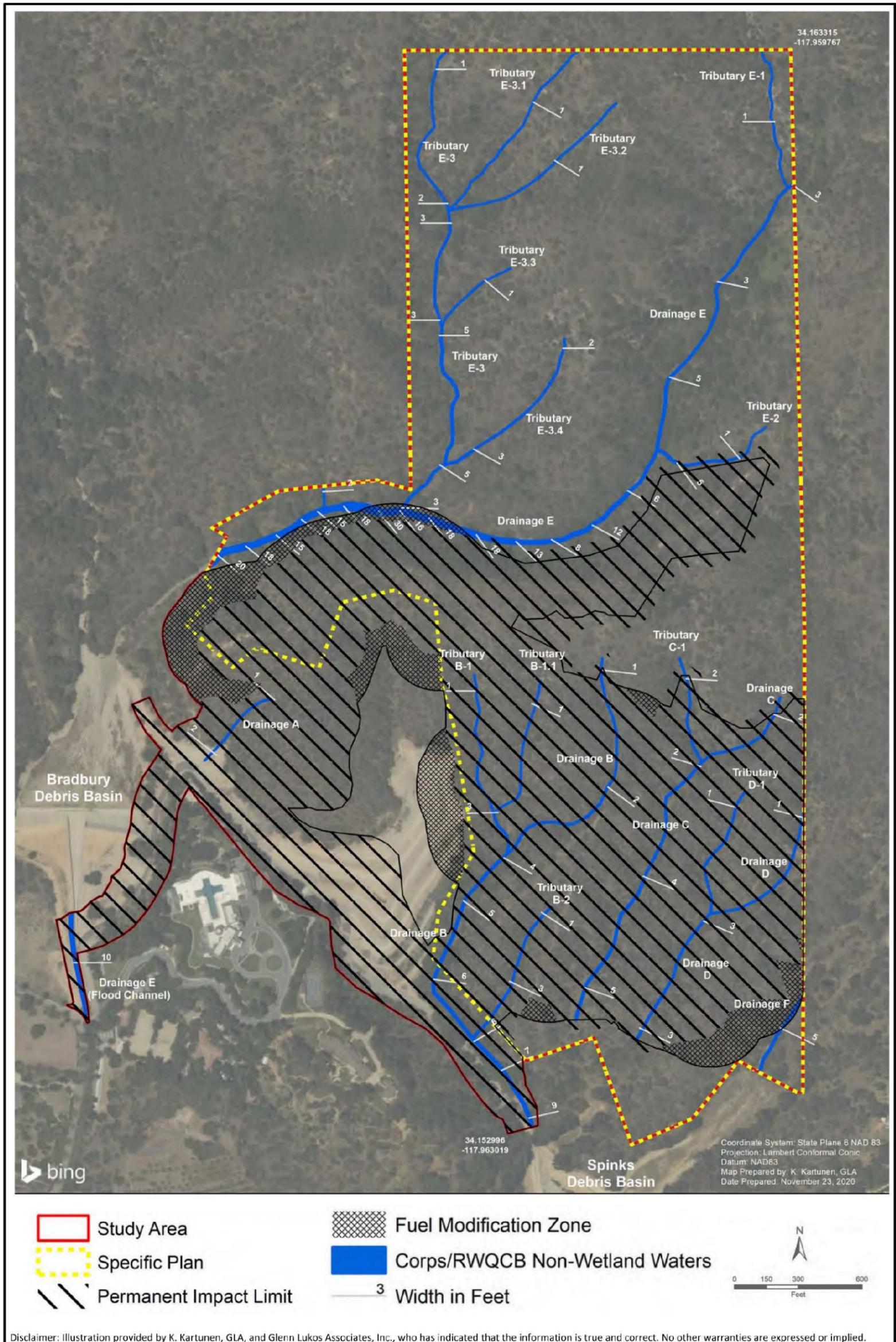
Drainage A is located within the central western portion of the Study Area, northeast of an existing paved access road. This natural earthen feature originates within the Study Area and terminates near the existing paved access road. During the site assessment, this feature was dry, but exhibited evidence of active flows (destruction of terrestrial vegetation and break in bank slope). This feature supports ephemeral flow and conveys flows from local precipitation from northeast to southwest.

Drainage Complex B

Potential Corps jurisdiction associated with Drainage Complex B totals 0.27 acre, none of which is wetland waters. A total of 3,773 linear feet of streambed is present with widths ranging from 1 to 9 feet.

Drainage Complex B consists of Drainage B and its associated tributaries: B-1, B-1.1, and B-2, and is located within the central southern portion of the Study Area, northeast of the existing paved access road. Drainage B is a historic blue line drainage, as depicted on the Azusa, California quadrangle and shown on **Figure 3.3-4**. This natural earthen feature originates within the Study Area and conveys flows from north to south, beneath the existing access road to a large debris basin located immediately south of the Study Area, off site. During the site assessment, this drainage complex was dry, but exhibited evidence of active flows (destruction of terrestrial vegetation, sediment sorting, and break in bank slope). This drainage complex supports ephemeral flow and conveys local precipitation.

Figure 3.3-4
POTENTIAL CORPS AND REGIONAL BOARD JURISDICTION





**Table 3.3-6
SUMMARY OF CORPS AND REGIONAL BOARD JURISDICTIONS**

Drainage	Area (acres)			Linear Feet
	Non-Wetland Waters	Wetlands	Total	
Drainage A	0.01	0.00	0.01	323
Drainage B	0.20	0.00	0.20	2,064
Tributary B-1	0.03	0.00	0.03	664
Tributary B-1.1	0.01	0.00	0.01	512
Tributary B-2	0.03	0.00	0.03	533
Drainage B Subtotal	0.27	0.00	0.27	3,773
Drainage C	0.20	0.00	0.20	1,780
Tributary C-1	0.02	0.00	0.02	373
Drainage C Subtotal	0.22	0.00	0.22	2,153
Drainage D	0.06	0.00	0.06	1,046
Tributary D-1	0.02	0.00	0.02	462
Drainage D Subtotal	0.08	0.00	0.08	1,508
Drainage E (Bradbury Canyon)	0.68	0.00	0.68	2,923
Drainage E-3	0.11	0.00	0.11	1,544
Tributary E-1	0.01	0.00	0.01	503
Tributary E-2	0.03	0.00	0.03	446
Tributary E-3.1	0.02	0.00	0.02	727
Tributary E-3.2	0.02	0.00	0.02	706
Tributary E-3.3	0.01	0.00	0.01	315
Tributary E-3.4	0.06	0.00	0.06	852
Drainage E Subtotal	0.94	0	0.94	8,016
Drainage F (Spinks Canyon)	0.03	0.00	0.03	301
Total	1.54	0.00	1.54	16,074

Source: Glenn Lukos Associates, 2021

Drainage Complex C

Potential Corps jurisdiction associated with Drainage Complex C totals 0.22 acre, none of which is wetland waters. A total of 2,153 linear feet of streambed is present with widths ranging from 2 to 5 feet.



Drainage Complex C consists of Drainage C and tributary C-1 and is within the southeastern portion of the Study Area, northeast of the existing paved access road. This natural earthen feature originates within the Study Area and conveys flows from northeast to southwest, where it terminates approximately 400 feet northeast of the existing paved access road. During the site assessment, this feature was dry, but exhibited evidence of active flows (destruction of terrestrial vegetation, sediment sorting, and break in bank slope). This feature supports ephemeral flow and conveys local precipitation.

Drainage Complex D

Potential Corps jurisdiction associated with Drainage Complex D totals 0.08 acre, none of which is wetland waters. A total of 1,508 linear feet of streambed is present with widths ranging from 1 to 3 feet.

Drainage Complex D consists of Drainage D and tributary D-1 and is located within the southeastern portion of the Study Area, northeast of the existing paved access road. This natural earthen feature originates within the Study Area and conveys flows from northeast to southwest, where it terminates approximately 500 feet northeast of the existing paved access road. During the site assessment, this feature was dry, but exhibited evidence of active flows (destruction of terrestrial vegetation, sediment sorting, and break in bank slope). This feature supports ephemeral flow and conveys local precipitation.

Drainage Complex E [Bradbury Canyon]

Potential Corps jurisdiction associated with Drainage Complex E totals 0.94 acre. A total of 8,016 linear feet of streambed is present with widths ranging from 1 to 30 feet.

Drainage Complex E (Bradbury Canyon) consists of Drainage E and its associated tributaries: E-1, E-2, E-3, E-3.1, E-3.2, E-3.3, and E-3.4, and is located within the northern and extreme southwestern portions of the Study Area. Drainage Complex E is a historic blue line drainage, as depicted on the Azusa, California quadrangle (Exhibit 2). During the site assessment, surface flows were observed within the upper reaches of this drainage complex. Additional evidence of active flows included destruction of terrestrial vegetation, water staining, sediment sorting, and break in bank slope. This feature supports intermittent flow and conveys precipitation and base flows associated with Bradbury Canyon.

Drainage Complex E originates off site to the northeast, flowing generally southwest before entering a large debris basin. Flows from the basin enter the concrete-lined flood control channel via a standpipe and spillway before exiting the study area as a concrete-lined, vertical-walled flood control channel. The upstream approximately 1,800 linear feet of Drainage E and all of Tributary E-3 were inaccessible during the assessment due to extremely steep terrain, thick vegetation, and the lack of access roads; therefore, this delineation report extrapolates the potential jurisdictional areas for these portions of Drainage Complex E based on observed stream characteristics in the downstream segments, supported by review of aerial photographs.

Drainage F [Spinks Canyon]

Potential Corps jurisdiction associated with Drainage F (Spinks Canyon) totals 0.03 acre, none of which is wetland waters. A total of 301 linear feet of streambed is present with an average width of 5 feet.



Drainage F is located within the southeastern corner of the Study Area. This natural earthen feature originates off site before entering the Study Area and flows to the southwest where flows are detained off site by a large debris basin. During the site assessment, this feature was dry, but exhibited evidence of active flows (destruction of terrestrial vegetation, sediment sorting, and break in bank slope). This feature supports an intermittent flow regime and conveys precipitation and base flow associated with Spinks Canyon. Potential Corps jurisdictional areas in the Study Area are listed below in **Table 3.3-6**.

Regional Board Jurisdiction

The same areas identified as potential waters of the U.S. (i.e., Corps jurisdiction) would be regulated by the Regional Board either pursuant to CWA Section 401 or §13050[e] of the California Water Code, depending on the status of drainage features as waters of the U.S. Regardless, the Study Area contains approximately 1.54 acres of waters regulated by the Regional Board. **Table 3.3-6** above summarizes Regional Board jurisdiction for the Study Area. **Figure 3.3-4** above maps potential Regional Board jurisdiction in the Study Area.

CDFW Jurisdiction

The Study Area contains approximately 13.93 acres of CDFW jurisdiction, of which 13.09 acres consist of riparian vegetation shown on **Figure 3.3-5**. **Table 3.3-7** a few pages down summarizes CDFW jurisdiction within the Study Area. Vegetation observed in potential CDFW jurisdictional areas in the Study Area is described in the BTR included as **Appendix M-1** to this DEIR.

Drainage A

CDFW jurisdiction associated with Drainage A totals 0.01 acre, none of which consists of jurisdictional riparian habitat. A total of 323 linear feet of streambed is present with streambed widths ranging from 1 to 2 feet.

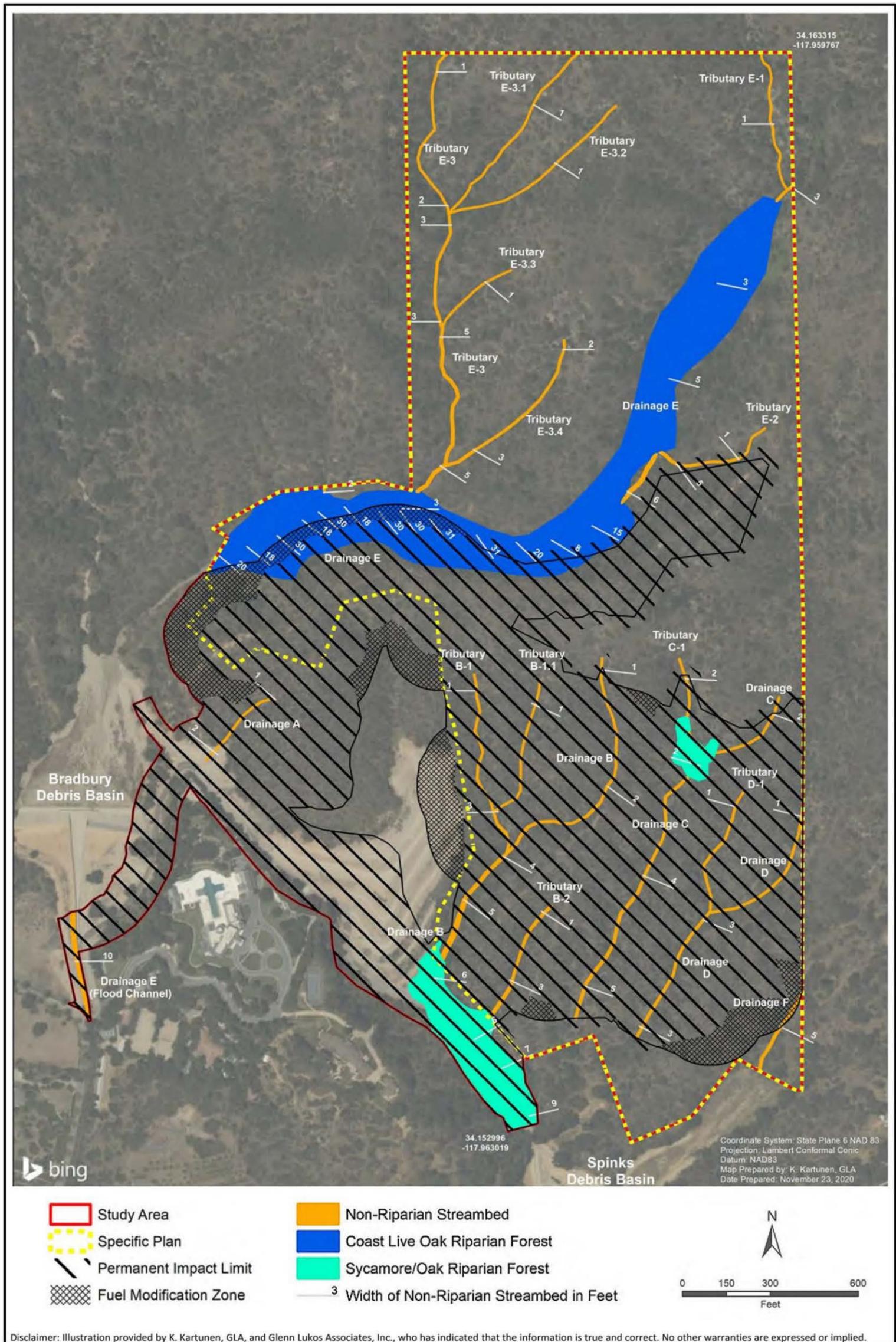
Drainage A is located within the central western portion of the Study Area, northeast of an existing paved access road. This natural earthen feature originates within the Study Area and terminates near the existing paved access road. During the site assessment, this feature was dry, but exhibited evidence of active flows (destruction of terrestrial vegetation and break in bank slope). This feature supports ephemeral flow and conveys local precipitation flows from northeast to southwest.

Drainage Complex B

CDFW jurisdiction associated with Drainage Complex B totals 2.43 acres, of which 2.21 acres are jurisdictional riparian habitat. A total of 3,773 linear feet of streambed is present with streambed widths ranging from 1 to 9 feet.

Drainage Complex B consists of Drainage B and its associated tributaries: B-1, B-1.1, and B-2, and is located within the central southern portion of the Study Area, northeast of the existing paved access road. Drainage B is a historic blue line drainage, as depicted on the Azusa, California quadrangle (Exhibit 2). This natural earthen feature originates within the Study Area and conveys flows from north to south, beneath the existing access road to a large debris basin located immediately south of the Study Area, off site. During the site assessment, this drainage complex was dry, but exhibited evidence of active flows (destruction of terrestrial vegetation, sediment sorting, and break in bank slope). This drainage complex and supports ephemeral flow and conveys local precipitation.

Figure 3.3-5
CDFW JURISDICTION MAP



Disclaimer: Illustration provided by K. Kartunen, GLA, and Glenn Lukos Associates, Inc., who has indicated that the information is true and correct. No other warranties are expressed or implied.

Sources: K. Kartunen, GLA, November 23, 2020; Glenn Lukos Associates, Inc., May 29, 2021.



Drainage Complex C

CDFW jurisdiction associated with Drainage Complex C totals 0.49 acre, of which 0.38 acre is jurisdictional riparian habitat. A total of 2,153 linear feet of streambed is present with streambed widths ranging from 2 to 5 feet.

Drainage Complex C consists of Drainage C and tributary C-1, and is located within the southeastern portion of the Study Area, northeast of the existing paved access road. This natural earthen feature originates within the Study Area and conveys flows from northeast to southwest, where it terminates approximately 400 feet northeast of the existing paved access road. During the site assessment, this feature was dry, but exhibited evidence of active flows (destruction of terrestrial vegetation, sediment sorting, and break in bank slope). This feature supports ephemeral flow and conveys local precipitation.

Drainage Complex D

CDFW jurisdiction associated with Drainage Complex D totals 0.08 acre, none of which is jurisdictional riparian habitat. A total of 1,508 linear feet of streambed is present with streambed widths ranging from 1 to 3 feet.

Drainage Complex D consists of Drainage D and tributary D-1 and is located within the southeastern portion of the Study Area, northeast of the existing paved access road. This natural earthen feature originates within the Study Area and conveys flows from northeast to southwest, where it terminates approximately 500 feet northeast of the existing paved access road. During the site assessment, this feature was dry, but exhibited evidence of active flows (destruction of terrestrial vegetation, sediment sorting, and break in bank slope). This feature supports ephemeral flow and conveys local precipitation.

Drainage Complex E [Bradbury Canyon]

CDFW jurisdiction associated with Drainage Complex E totals 10.89 acres, of which, 10.50 acres consist of jurisdictional riparian habitat. A total of 8,016 linear feet of streambed is present with streambed widths ranging from 1 to 30 feet.

Drainage Complex E (Bradbury Canyon) consists of Drainage E and its associated tributaries: E-1, E-2, E-3, E-3.1, E-3.2, E-3.3, and E-3.4, and is located within the northern and extreme southwestern portions of the Study Area. Drainage Complex E is a historic blue line drainage, as depicted on the Azusa, California quadrangle (Exhibit 2). During the site assessment, surface flows were observed within the upper reaches of this drainage complex. Additional evidence of active flows included destruction of terrestrial vegetation, water staining, sediment sorting, and break in bank slope. This feature supports intermittent flow and conveys precipitation and base flows associated with Bradbury Canyon.

Drainage Complex E originates off site to the northeast, flowing generally southwest before entering a large debris basin. Flows from the basin enter the concrete-lined flood control channel via a standpipe and spillway before exiting the study area as a concrete-lined, vertical-walled flood control channel. The upstream approximately 1,800 linear feet of Drainage E and all of Tributary E-3 were inaccessible during the assessment due to extremely steep terrain, thick vegetation, and the lack of access roads; therefore, this delineation report extrapolates the potential jurisdictional areas for



these portions of Drainage Complex E based on observed stream characteristics in the downstream segments, supported by review of aerial photographs.

Drainage F [Spinks Canyon]

CDFW jurisdiction associated with Drainage F (Spinks Canyon) totals 0.03 acre, none of which is wetland waters. A total of 301 linear feet of streambed is present with an average streambed width of 5 feet.

Drainage F is located within the southeastern corner of the Study Area. This natural earthen feature originates off site before entering the Study Area and flows to the southwest where flows are detained off site by a large debris basin. During the site assessment, this feature was dry, but exhibited evidence of active flows (destruction of terrestrial vegetation, sediment sorting, and break in bank slope). This feature supports intermittent flow and conveys precipitation and base flow associated with Spinks Canyon. **Table 3.3-7, Summary of CDFW Jurisdiction**, summarizes potential CDFW jurisdiction for the Study Area.

**Table 3.3-7
SUMMARY OF CDFW JURISDICTION**

Drainage	Unvegetated Streambed (acres)	Riparian Vegetation (acres)	Total (acres)
Drainage A	0.01	0.00	0.01
Drainage B	0.14	2.21	2.35
Tributary B-1	0.03	0.00	0.03
Tributary B-1.1	0.01	0.00	0.01
Tributary B-2	0.04	0.00	0.04
Drainage B Subtotal	0.22	2.21	2.43
Drainage C	0.10	0.14	0.24
Tributary C-1	0.01	0.24	0.25
Drainage C Subtotal	0.11	0.38	0.49
Drainage D	0.06	0.00	0.06
Tributary D-1	0.02	0.00	0.02
Drainage D Subtotal	0.08	0	0.08
Drainage E (Bradbury Canyon)	0.13	10.50	10.63
Drainage E-3	0.01	0.00	0.01



Drainage	Unvegetated Streambed (acres)	Riparian Vegetation (acres)	Total (acres)
Tributary E-1	0.03	0.00	0.03
Tributary E-2	0.11	0.00	0.11
Tributary E-3.1	0.02	0.00	0.02
Tributary E-3.2	0.02	0.00	0.02
Tributary E-3.3	0.01	0.00	0.01
Tributary E-3.4	0.06	0.00	0.06
Drainage E Subtotal	0.39	10.5	10.89
Drainage F (Spinks Canyon)	0.03	0.00	0.03
Total	0.84	13.09	13.93

Source: Glenn Lukos Associates, 2021

3.3.3 Methods

Biological technical report preparation included a literature survey; a general biological survey and habitat assessments; vegetation mapping; botanical surveys including focused plant surveys; focused surveys for one animal species, coastal California gnatcatcher; and a jurisdictional delineation.

A literature survey was conducted using the following resources: California Native Plant Society Inventory of Rare and Endangered Plants of California (CDFW, 2020); CDFW California Natural Diversity Database (CDFW, 2020b); USFWS Information for Planning and Consultation (IPaC) system (USFWS, 2020a); USFWS National Wetland Inventory map (USFWS, 2020b); and County of Los Angeles Significant Ecological Area (SEA) map (Los Angeles County, 2014).

A general biological survey and habitat assessments were conducted on April 11 and 15, 2017. Vegetation was mapped directly onto a 200-scale (1 inch equals 200 feet) aerial photograph. Botanical surveys were conducted on 10 days in 2017, the earliest being April 11 and the latest June 27.

Focused surveys were conducted for coastal California gnatcatcher on six days in 2017, the first being April 11 and the last June 27. A jurisdictional delineation of the Study Area was performed. Additional information on methods of the biological technical report is provided in Appendix M-1 to this DEIR

3.3.4 Thresholds of Significance

- a) **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.

- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service.
- c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- d) 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.
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Appendix G to this DEIR contains the Initial Study prepared for the proposed project. Section 4.4 of the Initial Study concluded that the proposed project would not result in a significant effect on biological resources with regard to item f) above. As a consequence, no assessment of impacts related to item f) is provided in this Draft EIR.

3.3.5 Impact Analysis

- a) 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?

Less Than Significant Impact with Mitigation Incorporated (Nesting Birds and Bats)

Special-Status Plants

The proposed project will not directly impact any special-status plants. The project site contains a single Englemann oak tree, which is designated by CNPS as a CRPR 4.2 species. The tree might be impacted indirectly by the Project but is not identified for removal. If impacted, the tree will be replaced pursuant to the City of Bradbury's Tree Preservation and Protection Ordinance; however, the loss of the single tree would not be considered significant under CEQA. This impact would be less than significant.

Special-Status Animals

Project development would cause the loss of habitat that could support a number of special-status animals.



Invertebrates

Project development would remove habitat that could support two special-status invertebrate species, Crotch bumble bee and the San Gabriel chestnut snail.

San Gabriel Chestnut Snail

Two empty shells of the chestnut snail were detected within the Bradbury Canyon portion of the Specific Plan (proposed as open space) outside of the development footprint. The chestnut snail was not detected within the development footprint, although its absolute presence cannot be ruled out. However, based on the lack of detection, if the chestnut snail is present within the development footprint, then it is expected to occur in a low density. Since the majority of the Project site has steep terrain and is densely vegetated with scrub oak chaparral and other scrub vegetation, the potential for occurrence of the chestnut snail based on the habitat descriptions is likely limited to the downslope areas of the canyons, including within both the development footprint and the proposed open space. Due to the modification of the lower portions of the canyons for flood control purposes, the extent of the chestnut snail within the development footprint may be further limited. As such, impact to the species (if present within the development footprint) is expected to be minimal. Furthermore, since the Project will conserve the northern portion of the Specific Plan where the snail was detected, including the majority of Bradbury Canyon and its tributary canyons associated with the proposed open space, the loss of additional potential habitat within the Project footprint would be less than significant without mitigation.

Amphibians

The Project might disturb habitat with the potential to support one special-status amphibian species (Coast Range newt). The newt was detected in the upper portion of Bradbury Canyon where flowing water persists late into the season. Habitat for the newt within the Specific Plan consists of the upper portion of Bradbury Canyon, including adjacent slopes. However, given the absence of suitable hydrology within the development footprint to support the newt, the newt is not expected to occur within the majority of the Development Footprint. The potential for occurrence within the Development Footprint would likely be limited to lower portion of the southern slope of Bradbury Canyon within the Zone C fuel modification area. The loss of habitat (if any) for the newt would be minimal and limited to the removal of shading and potential reduction of organic litter due to fuel modification. Fuel modification activities would cut back vegetation without removing the root structure. All areas impacted by grading would slope back towards the development footprint and so increased sedimentation is not expected in Bradbury Canyon due to the Project. Thus, the Project is not expected to change the water quality or water temperatures in Bradbury Canyon that could otherwise potentially affect the newt. Furthermore, the Project would preserve the northern portion of the Specific Plan where the newt was detected, including the majority of Bradbury Canyon and its tributary canyons associated with the proposed open space. The loss of potential habitat would be less than significant without mitigation.

Reptiles

Project development would remove habitat that could support several special-status reptile species, including the California glossy snake, coastal whiptail, coast horned lizard, coast patch-nosed snake, red-diamond rattlesnake, and California legless lizard. The Project would impact approximately 63.55 acres of native vegetation communities, including 56.50 acres of scrub communities (scrub oak chaparral, mixed chaparral, and sage scrub), 5.89 acres of riparian communities, and 1.56 acres of

oak woodland (non-riparian). However, of the 63.55 acres of total impacts to native communities, not all of 63.55 acres is potentially suitable habitat for each of the reptile species with a potential to occur at the site. Each species based on their varying habitat requirements would, if present, occupy a subset of habitat for the site. As discussed above in **Section 4.5.1**, the glossy snake, patch-nosed snake, and legless lizard would primarily utilize the bottoms of the canyons, whereas the whiptail and horned lizard would utilize the ridgelines and open areas in the scrub vegetation. In addition, with the flood control modifications in the bottoms of Bradbury Canyon and Spinks Canyon, and the flood control access road that connects both debris basins along the Spinks Disposal Area, the use of the majority of the site by two snakes and legless lizard is expected to be limited, with the greater potential for occurrence of these species in the proposed Bradbury Canyon open space. Given the relatively broad range/distribution of each species, the relatively small size of the project site and the limited habitat for each species, the loss of habitat for the special-status reptiles would not constitute a substantial adverse effect for each species across its range.

The Project proposes to conserve 64.42 acres of open space that also has a potential to support each of the above-referenced special-status reptiles. In addition, the 5.89 acres of riparian habitat to be impacted by the Project would be replaced at a minimum 1:1 ratio through offsite mitigation. Lastly, biological construction monitoring is proposed to ensure that impacts are minimized to the maximum extent practicable, and as feasible to move out of harm's way any special-status species that are detected during the monitoring. Impacts to special-status reptiles would be less than significant without any species-specific mitigation requirements.

Birds

The Project would remove habitat that could support one special-status bird species (yellow warbler); however, the riparian habitat to be impacted by the Project generally does not provide suitable structure for breeding and so the potential presence of the yellow warbler is likely limited to migration. Furthermore, the loss of habitat would be limited to a smaller portion of riparian habitat that is a subset of the California Sycamore/Oak Woodland vegetation community within Drainage B in the offsite improvement area shown on **Figure 3.3-1, Vegetation Map**. Thus, the loss of potential habitat for the yellow warbler would not constitute a significant adverse effect to the species across its range.

The Project would preserve riparian habitat in the proposed open space that represents suitable habitat in the same capacity as within the Development Footprint. In addition, the Project would offset impacts to 5.89 acres of riparian habitat through the purchase of credits from an offsite mitigation bank as a part of regulatory compliance with CDFW. The potential impact to yellow warbler would be less than significant without species-specific mitigation¹¹.

Mammals

The Project would remove habitat that could support special-status animals, including the American badger and several bat species (pallid bat, western mastiff bat, western red bat, and western yellow bat).

¹¹ Avian species protected by the MBTA are not considered "special-status species."

American Badger

The badger has some potential to occur within the project site, although badger burrows were not observed within the development footprint and therefore the loss of habitat, if badgers were present, would be limited. The proposed open space generally contains scrub habitat that could support the badger, although no burrows of a size that would indicate badger presence were observed. However, it is possible that badgers could use habitat within open space areas that were not surveyed. Given the minimal potential for the badger to occur at the site and the broad distribution of the American badger, the proposed impacts would not constitute a substantial adverse effect to the species across its range and the impacts would be less than significant without species-specific mitigation.

Bats

Four special-status bat species have some potential to occur at the project site or in the vicinity for roosting and/or foraging, including the pallid bat, western mastiff bat, western red bat, and western yellow bat. Pallid bats generally utilize rocky areas for roosting, such areas are absent onsite. Thus, the use of the site by pallid bats would be for foraging only, which would not constitute a substantial adverse effect of the Project. Roost habitat for the western mastiff bat would be similarly limited since the site does not contain cliff crevices or structures with a higher likelihood of use, but the onsite trees could provide roosting opportunities. Based on the broader distribution of the western mastiff bat and the limited opportunity for use at the project site, and the avoidance of similar habitat in the Lot L open space, potential impacts to the western mastiff bat would be less than significant without additional mitigation. The western red bat would generally be limited to the riparian areas onsite, particularly the western sycamore trees in the lower portion of Drainage B and the upper portion of Drainage C. However, since red bats are typically solitary breeders, the Project is not expected to impact colonial maternity roosting associated with the western red bat. The western yellow bat would have limited roosting potential at the project site, including several palm trees in the riparian area and potentially other trees. As with red bat, the western yellow bat is typically a solitary breeder, and so the Project is not expected to impact colonial roosting associated with the yellow bat. The limited impacts to special-status bats would not constitute a substantial adverse effect to any of the species across their ranges, and the loss of potential habitat for special-status bats would be less than significant without any species-specific mitigation.

Although limited for the special-status species, the project site has the potential to support bat maternity roosting including the potential for some common species. There is no specific regulation that protects impacts to individual bats for an otherwise authorized development activity, including breeding bats. However, CDFW is likely to require through the Lake and Streambed Alteration Agreement process that any bat maternity roosts located within CDFW jurisdiction be avoided during the bat maternity season.

Mountain Lion

Evidence of mountain lion was detected at the project site. The proposed project will impact areas with the potential to support the local movement of mountain lions and will remove habitat that supports mountain lion prey. However, the project site does not by itself support mountain lions, and the project site is part of much larger territory associated with the San Gabriel Mountains. As discussed above in **Section 4.7** and below in **Section 5.5**, the project site is not part of a “wildlife corridor” for mammals, including mountain lions, instead supporting local movement. Regardless, the Project will not impact lands in Bradbury Canyon where evidence of mountain lion was detected, and post-project wildlife movement will still be facilitated through the adjacent canyons. Given the



context of the project site relative to the broader area of the San Gabriel Mountains, the loss of potential habitat supporting mountain lions would not be considered a substantial adverse effect and impacts would be less than significant without species-specific mitigation. However, if the mountain lion is still designated as a Candidate species or has been formally listed by the time of the construction, then an Incidental Take Permit (ITP) may be required from CDFW. Thus, it is recommended that the Project proponent consult with CDFW well in advance of construction to determine if an ITP would be required.

Indirect Impacts

indirect effects are those effects associated with developing areas adjacent to adjacent native open space. The development footprint is located west of the Duarte Wilderness Preserve (which is part of the San Gabriel Canyon SEA) and south of Bradbury Canyon and other open space proposed for conservation as part of the Specific Plan. The northern edge of the open space is near the Angeles National Forest but based on the distance between the development footprint from the National Forest (which is upslope from the development footprint), the Project will not indirectly affect resources on the National Forest lands. The Project is not expected to result in significant indirect impacts to special-status biological resources, with the implementation of Project design features to avoid/minimize impacts attributed to the following:

- Drainage;
- Toxics;
- Lighting;
- Noise;
- Invasives; and
- Barriers.

Drainage

All runoff generated by the proposed project will drain away from sensitive habitat areas and protected open space. Runoff will be directed to an onsite water quality basin for treatment. The treated water will then discharge via a storm drain that will connect to the offsite portion of Drainage B (within the Offsite Improvement Area), which connects to the Spinks Canyon Debris Basin. The water quality basin will not be constructed within a jurisdictional drainage feature, i.e. it will not be an “in-line” basin. The Project will also construct two debris/desilting basins in Lots E and G that will collect existing runoff from upslope areas outside of the development footprint. Water entering the debris basins will be directed through the development footprint via a separate storm drain system that will outlet into the downstream portions of Drainages C and D within Lot H. The Project’s contractor will develop a Stormwater Pollution Prevention Plan (SWPPP) to address runoff and water quality during construction.

The project site is adjacent to the San Gabriel Canyon SEA, which is located to the east. There are some upstream hydrologic connections from the SEA to the project site, but the project site does not drain to the SEA. Part of Drainage E (Bradbury Canyon) originates offsite to the northeast in the SEA; however, Project development would not alter the hydrology of Bradbury Canyon. A small portion of the northeastern (upper) part of the Drainage D watershed originates offsite from the SEA. The Project would not hydrologically impact any of these offsite areas through grading and therefore will not affect the SEA. Furthermore, onsite grading will not adversely affect the watershed of the offsite areas since all impacts will occur downstream of the SEA. Lastly, Spinks Canyon is located within the

SEA and a small segment of the jurisdictional portion of Spinks Canyon (Drainage F) extends through the southeastern portion of the project site (Lot H and Lot N Open Space). However, this specific portion is not within the SEA, and the Project would not hydrologically alter any portion of Drainage F through grading.

Toxics

Land uses proposed in proximity to sensitive areas that use chemicals or generate bioproducts such as manure that are potentially toxic or may adversely affect wildlife species, habitat or water quality shall incorporate measures to ensure that application of such chemicals does not result in discharge to the sensitive areas. In the case of a residential development, examples of chemicals could include pesticides and herbicides applied to landscape areas or used by residents, or any other chemicals that could enter natural areas through runoff. The proposed project would implement a SWPPP that will address runoff during construction. Post-construction, all runoff will be directed to an onsite water quality basin for treatment prior to release towards the Spinks Canyon Debris Basin.

Lighting

Artificial lighting generated by development projects has the potential to adversely affect wildlife and plants located within adjacent natural open space. Lighting can alter the general rhythm of species, whether adapted to daytime or night-time activities. Artificial lighting can affect the nocturnal movement of wildlife and can interfere with predator/prey interactions. The night lighting within the development footprint would use low intensity fixtures and will be down shielded. In addition, all lighting will be directed away from the Duarte Wilderness Preserve/SEA to the east and the proposed open space to the north within the Specific Plan. The intent through the type, intensity and direction of the lighting is to ensure that there will not be any light spillage into the adjacent open space such that there will be no change in ambient lighting in the adjacent areas.

Noise

Like artificial lighting, noise levels that exceed typical levels for natural areas have the potential to adversely affect wildlife. Animals use natural sound in many ways, including to navigate through their environment, to find food, attract mates, and avoid predators. Increased levels due to external sources has the potential to disrupt animal behavior by interfering with the natural noises that animals rely on. In general, projects can incorporate setbacks, berms and/or walls to minimize the effects of noise on adjacent sensitive areas pursuant to applicable rules, regulations and guidelines related to land use noise standards. For planning purposes, wildlife within adjacent open space should not be subject to noise that would exceed residential noise standards. The Project is designed to minimize noise effects on adjacent open space in several ways. The Project is generally designed so that most of the noise generation will be to the interior of the Project and not facing open space to the north and east. Project development would involve construction of one street that would circulate through most of the property along most of the developed edge, with 10 of the 14 home pads positioned to the inside of the street; four of those pads would face the Spinks Debris Disposal Area and not with the backyards facing the northern open space of Lot L or the offsite Duarte Wilderness Preserve. Instead, the Project components facing the open space mostly consists of the street and maintained open space such as vegetated slopes and debris/detention basins that will buffer the home pads from the open space. Of the four home pads that are positioned to outside of the street, two of them (#9 and #10) are located within the southeastern portion of the development footprint generally facing the Spinks Debris Basin. Pad #13 is in the southern portion of the property facing away from the Lot L open space and the Duarte Wilderness Preserve. Pad (#1) is located



within the northwestern portion of the development footprint generally facing the Bradbury debris basin. Pad #1 also will have nearly 200 feet of maintained open space between the pad edge and the nearest open space. All the home pads will have a 5-foot wall or fence constructed around the entirety of the backyard that will help to attenuate noise from the yards.

Invasive Species

The Project would not include invasive plant species in common landscaping areas throughout the Specific Plan or the Offsite Improvement Area. A list of plant materials for use in both the HOA common area and on private lots is provided as an Exhibit to the Specific Plan.

Barriers

Adjacent to the sensitive open space, the Project will incorporate barriers where appropriate to minimize unauthorized public access, domestic animal predation, or illegal trespass. Such barriers may include native landscaping, rocks/boulders, fencing, walls, signage and/or other appropriate mechanisms. The Project proposes fencing and gates to prevent/deter the public from accessing the Flood Control facilities, including the Bradbury Debris Basin, the Spinks Debris Basin, and Spinks Debris Disposal Area, which will therefore restrict access to the Lot L open space via Bradbury Canyon and to the Duarte Wilderness Preserve via Spinks Canyon. The northern and eastern edges of the development footprint will consist mostly of the street, landscaping areas, and debris/detention basins facing the open space areas. Public access will not be provided to open space and the general design of the Project would not be conducive to public access as a result of steep slopes and landscaping. Furthermore, there are no public use areas such as parks, etc. that would feed into the open space areas. The backyards of the 14 home pads would be enclosed with a 5-foot wall or fence restricting access beyond the home pads.

Conclusion

Impacts to nesting birds and bats would be significant without mitigation. Implementation of mitigation measures BIO-1 and BIO-2, set forth below in **Section 3.3.6**, would reduce this impact to less than significant.

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

Less than Significant Impact with Mitigation Incorporated

Vegetation impacts would occur as a result of permanent grading, remedial grading, and fuel modification. The Project will maintain three fuel modification zones (A, B, and C). Zones A and B will both result in complete removal of existing vegetation, with Zone A consisting of a 20-foot setback zone from structures, and Zone B consisting of an irrigated zone extending an additional 80 feet from the limits of Zone A (total of 100 feet from structures). Zone C consists of a native brush thinning zone that extends up to 200 feet from structures. All of Zone A and the majority of Zone B overlap with the grading limits, and so impacts resulting in the removal of vegetation within these zones are attributed to grading activities, and not separately to the category of “fuel modification”. For those portions of Zone B and C that exceed the grading limits, vegetation impacts are allocated to “fuel modification”. **Figure 3.3-1** shows a vegetation community overlay with the impact footprint.

Tables 3.3-1 and 3.3-2 above summarize Project impacts to vegetation/land use types for the Specific Plan and offsite improvement area.

Development of the proposed project would impact six native vegetation types, including Coast Live Oak Riparian Forest, Coast Live Oak Woodland, California Sagebrush/California Buckwheat Scrub, Scrub Oak Chaparral, Southern Mixed Chaparral, and California Sycamore/Coast Live Oak Woodland. The onsite portion of the proposed development will impact approximately 3.30 acres of Coast Live Oak Riparian Forest (0.91 acres of permanent grading, 1.48 acres of remedial grading, and 0.91 acre of fuel modification), 33.27 acres of Scrub Oak Chaparral (27.48 acres of permanent grading, 4.12 acres of remedial grading, and 1.67 acres of fuel modification), 11.79 acres of Southern Mixed Chaparral (7.21 acres of permanent grading, 3.98 acres of remedial grading, and 0.60 acres of fuel modification), and 0.42 acre of California Sycamore/Coast Live Oak Woodland (0.39 acre of permanent grading and 0.03 acre of remedial grading).

Development within the offsite improvement area would impact 1.16 acres of Coast Live Oak Woodland (0.20 acre of permanent grading and 0.96 acre of remedial grading), 1.40 acres of California Sagebrush/California Buckwheat Scrub (0.42 acres of permanent grading and 0.97 acres of remedial grading), 5.80 acres of Scrub Oak Chaparral (3.03 acres of permanent grading, 2.51 acres of remedial grading, and 0.26 acres of fuel modification), 4.24 acres of Southern Mixed Chaparral (0.79 acre of permanent grading, 1.30 acres of remedial grading, and 2.15 acres of fuel modification), and 2.17 acres of California Sycamore/Coast Live Oak Woodland (1.19 acres permanent grading and 0.97 acres of remedial grading).

The Coast Live Oak Riparian Forest (3.30 acres total impact) and California Sycamore/Coast Live Oak Woodland (2.59 acres total impact) are considered riparian communities and are therefore sensitive pursuant CEQA. Impacts to 5.89 acres of riparian communities would be potentially significant prior to mitigation. However, the California Sagebrush-California Buckwheat Scrub, Scrub Oak Chaparral, Southern Mixed Chaparral, and the non-riparian Coast Live Oak Woodland are not considered sensitive under CEQA and would not require mitigation simply based on the vegetation type.

Jurisdictional Waters

Project development would impact jurisdictional waters, including riparian habitat. All impacts to jurisdictional waters are treated as permanent. The Project's "remedial" grading areas correspond to grading beyond the daylight line for various purposes, but that would not have any permanent structures, roads, facilities, etc. The remedial grading areas would be re-vegetated at least to address erosion control, and some of the upland areas outside of the fuel modification zones would be restored to native and protected by conservation easement. However, there is no intent to restore jurisdictional waters within the remedial grading areas and therefore none of the impacts to jurisdictional waters within the "remedial" areas are being treated as temporary. Actual streambed areas within the remedial limits represent very short segments of the upper reaches of drainage features that are ephemeral, where the remainder of those drainage features would be filled. Therefore, it would be impracticable to restore these areas and those impacts will be treated as permanent. One exception might be with Drainage E-2, which is a small tributary to the main part of Bradbury Canyon (Drainage E). The remedial grading limits impact the majority of Drainage E-2, and the Project proponent is committing to "restoring" that portion of the remedial limits to native conditions for purposes of conservation. If the remedial limits will ultimately extend across the topographic bottom of that drainage feature, then the streambed area would likely be restored to contours, and the impacts might be considered temporary by the regulatory agencies. However, whether that small area can be restored to the satisfaction of the agencies is hypothetical at this point



and so the impact to waters should be treated as permanent for now. Whether that specific drainage feature can be restored will be determined later during the permitting process. In another example, proposed remedial grading along the southern slope of Bradbury Canyon would remove coast live-oak trees that have been identified as part of the riparian canopy associated with Bradbury Canyon. Even if it is feasible to plant oak trees within the narrow band of remedial limits post-construction, these areas are not located in open space proposed for conservation, and so there is no intent to officially restore this area as part of the riparian canopy, and therefore this area is considered a permanent impact as it applies to CDFW riparian habitat.

Corps Jurisdiction

The proposed project will impact up to 0.54 acre of Corps jurisdiction (7,712 linear feet), none of which support wetlands, of which 0.41 acre (6,622 linear feet) is associated with the Onsite Improvement Area and 0.13 acre (1,090 linear feet) is located within the Offsite Improvement Area. The impacts are summarized in Table 3.3-8 below. An additional 0.16 acre of Corps jurisdiction is located within Fuel Modification Zone C. However, since activities in these areas would consist of the cutting away of trees/shrubs without removing the root structure, the activities would not be expected to result in the discharge of dredge or fill material into areas of Corps jurisdiction, and therefore the fuel modification activities would not result in a loss of waters. The project site includes additional areas of potential Corps jurisdiction where impacts would not occur, including approximately 0.74 acre associated with Bradbury Canyon within the Lot L Open Space, and a portion of a flood control channel from the Bradbury Canyon debris basin where a bridge is proposed to span the channel. The CEQA impact thresholds only address wetlands with regards to federal waters, and the Project will not impact wetlands. However, impacts to Corps jurisdiction will require a CWA Section 404 permit from the Corps and a CWA Section 401 Water Quality Certification from the Regional Board, and mitigation will be required through the permitting process. In addition, some of the drainage features may not be considered as waters of the U.S. pursuant to the new *Navigable Waters Protection Rule*. The final determination of the features would be made through coordination with the Corps during the permitting process.

**Table 3.3-8
IMPACTS ON CORPS JURISDICTION**

Drainage	Grading Impacts Non-Wetland Waters (acres)	Linear Feet
Onsite Improvement Area		
Drainage B	0.10	1379
Tributary B-1	0.03	664
Tributary B-1.1	0.01	512
Tributary B-2	0.02	451
Drainage C	0.11	1401
Tributary C-1	0.02	373
Drainage D	0.06	999
Tributary D-1	0.02	509
Drainage E	0.02	60
Tributary E-2	0.02	274
Total	0.41	6622
Offsite Improvement Areas		
Drainage A	0.01	323



Drainage	Grading Impacts Non-Wetland Waters (acres)	Linear Feet
Drainage B	0.11	685
Tributary B-2	0.01	82
Total	0.13	1090

Source: Glenn Lukos Associates, 2020

Regional Board Jurisdiction

Project development would impact up to 0.54 acre of Regional Board jurisdiction (7,712 linear feet), none of which support wetlands, of which 0.41 acre (6,622 linear feet) is associated with the Onsite Improvement Area and 0.13 acre (1,090 linear feet) is located within the Offsite Improvement Area. The impacts are summarized in **Table 3.3-8** above. As was described above in **Section 5.8.1** for Corps jurisdiction, an additional 0.16 acre of Regional Board jurisdiction is located within Fuel Modification Zone C. However, since activities in these areas would consist of the cutting away of trees/shrubs without removing the root structure, the activities would not be expected to result in a discharge into waters of the U.S./waters of the State, and therefore the fuel modification activities would not result in a loss of waters. The project site includes additional areas of Regional Board jurisdiction where impacts would not occur, including approximately 0.74 acre associated with Bradbury Canyon within the Lot L Open Space, and a portion of a flood control channel from the Bradbury Canyon debris basin where a bridge is proposed to span the channel.

Impacts to areas of Regional Board jurisdiction that are considered waters of the U.S. would require Water Quality Certification pursuant to CWA Section 401. However, as noted above, it is possible that some of the drainage features may not be considered as waters of the U.S. pursuant to the new *Navigable Waters Protection Rule*. If applicable, those features would be regulated by the Regional Board under the Porter-Cologne Water Quality Control Act whereby the Regional Board must issue Waste Discharge Requirements (WDRs).

CDFW Jurisdiction

The proposed project would impact approximately 6.33 acres of CDFW jurisdiction, of which 5.89 acres support riparian vegetation. Approximately 4.15 acres of CDFW impacts (3.72 acres of riparian) are in the Onsite Improvement Area and 2.18 acres of CDFW impacts (2.17 acres of riparian) are in the Offsite Improvement Area. Of the 5.89 acres of riparian habitat impacts, approximately 4.98 acres of impact would be attributed to grading. The remaining 0.91 acre of riparian habitat is within fuel modification areas (Zone C) in Bradbury Canyon. Since Zone C is a thinning zone, it is unclear the extent of tree removal that will be required in this area and the ultimate impact to riparian habitat. This analysis assumes that all 0.91 acre would be removed by the Project for fuel modification purposes. Impacts to CDFW jurisdiction would require a Lake and Streambed Alteration Agreement from CDFW. Impacts to riparian habitat are considered potentially significant as a sensitive vegetation community. Impacts to both riparian and non-riparian CDFW jurisdiction would be subject to mitigation through the permitting process. **Table 3.3-9, Impacts on CDFW Jurisdiction**, summarizes impacts to CDFW jurisdiction.

**Table 3.3-9
IMPACTS ON CDFW JURISDICTION**

Drainage	Grading Impacts (acres)		Fuel Modification Impacts (acres)		Total
	Unvegetated Streambed	Riparian Vegetation	Unvegetated Streambed	Riparian Vegetation	
Onsite Improvement Area					
Drainage B	0.14	0.04	0	0	0.18
Tributary B-1	0.03	0.00	0	0	0.03
Tributary B-1.1	0.01	0.00	0	0	0.01
Tributary B-2	0.04	0.00	0	0	0.04
Drainage C	0.10	0.14	0	0	0.24
Tributary C-1	0.01	0.24	0	0	0.25
Drainage D	0.06	0.00	0	0	0.06
Tributary D-1	0.02	0.00	0	0	0.02
Drainage E	0.00	2.39	0	0.91	3.30
Tributary E-2	0.02	0.00	0	0	0.02
Total	0.43	2.81	0	0.91	4.15
Offsite Improvement Areas					
Drainage A	0	0.01			0.01
Drainage B	2.17	0			2.17
Total	2.17	0.01			2.18

Source: Glenn Lukos Associates, 2020

Conclusion

Impacts to sensitive natural communities and riparian habitats would be significant without mitigation. Implementation of mitigation measure BIO-3, set forth below in **Section 3.3.6**, would reduce this impact to less than significant.

- c) Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

No Impact

No state or federally protected wetlands are present onsite, and no impact would occur.

- d) Would the project interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?**

Less Than Significant Impact

The project site provides both live-in habitat and movement opportunities for many mammalian species, including black bear, mountain lion, mule deer, bobcat, coyote, and gray fox. However, the project site is not part of a broader “wildlife corridor”. Project development would remove live-in habitat for these and other wildlife species within the Development Footprint and would restrict the



movement of wildlife through the site. However, the Project would not interfere substantially with movement within Bradbury Canyon and Spinks Canyon, and wildlife moving along ridge routes between the canyons would still be able to access those canyons to the west (Bradbury Canyon) and to the east (Spinks Canyon) from ridgelines north of the project site. A water tank site is proposed for Lot C in the northeastern part of the site, as shown on **Figure 2.3-1**. An access road would be constructed from the main road to the water tank, and the entire tank site (including the access road) would be fenced to prevent unauthorized access. In addition, the access road would be gated. However, wildlife descending the ridge from the northeast would have immediate access to Bradbury Canyon to the west and Spinks Canyon to the east. To the southwest of the proposed development, wildlife would still be able to move back and forth from the Bradbury Canyon Debris Basin and Spinks Canyon Debris Basin via the Flood Control access road.

The Project proposes fencing and gates to prevent/deter the public from accessing the Flood Control facilities, including the Bradbury Debris Basin, the Spinks Disposal Area, and the Spinks Debris Basin. The existing Flood Control access road coming in from Bliss Canyon Road is currently used to access the Bradbury Debris Basin (west of the access road) but also turns south, extending past the Spinks Disposal Area and then connecting to the Spinks Debris Basin. The Project would construct a primary access road to the development area (Street “A”) that would extend up the ridge from near the Bradbury Debris Basin. Access would be maintained to the Bradbury Debris Basin as well as the extended road down to the Spinks Debris Basin. However, a fence would be constructed along the Bradbury Debris Basin¹² and a gate would be installed at the ramp down to the debris basin, excluding the public from that area. An additional gate would be installed on the opposite side of Street A preventing public vehicle access down the Flood Control road to the Spinks Debris Basin. Both gates would be constructed to allow wildlife to pass through, allowing continued connectivity from Bradbury Canyon to Spinks Canyon via the access road. Since the connecting access road would be used only for Flood Control access and for emergency secondary access to the development area, traffic on the road would not increase from residential use. Lighting would not be constructed along the Flood Control access road, so as not to deter wildlife at night from using the road.

The additional fencing and gate proposed along the Bradbury Debris Basin is not expected to impede the movement of mammals out of the basin to the southwest any more than under current conditions; however, the Project might improve movement to and from the southwest because of the updated entry point. Access to and from the southwest is currently obstructed by fencing along the western and southern edges of the basin. The only theoretical access for wildlife to the southwest is via the concrete channel that comes off the basin’s spillway. Otherwise, access is restricted by the fencing and a Flood Control entry gate at the end of Bliss Canyon Road. Although new fencing is proposed along the southeastern edge of the basin adjacent to the new access street, the Flood Control entry gate at Bliss Canyon would be removed and the new entry to the Project from Bliss Canyon Road would not be gated. As noted above, a swing gate would be constructed at the ramp to the Bradbury Debris Basin that would be prevent unauthorized vehicle access and deter pedestrian access. However, wildlife would be able to pass through/under the gate allowing access out of the basin connecting to both the southwest and southeast via the improved access road.

The project site is used by numerous species of vertebrate wildlife for breeding and/or rearing of young, including reptiles, birds and mammals. As examples, fawns were observed with adult deer on more than one occasion, and bear cubs are at least expected to accompany adults at the site, although

¹² The Bradbury Canyon Debris Basin facility is currently fenced to the west and south. The new proposed fence will be constructed at the immediate edge of the basin in order to prevent unauthorized access to the basin from the adjacent access road, which will be used by the public to access the residential development.

nothing was observed within the development footprint to suggest the presence of a bear den. Besides the larger mammals, numerous other animal species are expected to occupy the site for breeding. The project site is expected to support the nesting of many birds, and the project could impact active bird nests if vegetation is removed during the nesting season (February 1 to August 31). Impacts to nesting birds are prohibited by the MBTA and California Fish and Game Code. Mitigation measure BIO-1 addressing impacts to nesting birds is included below. However, this general breeding use does not constitute a “nursery” site in the context of CEQA. Nursery sites in that context refer to bird rookeries and other types of colonial breeding, or otherwise containing areas recognized as significant breeding sites for specific wildlife. The project site could support colonial breeding for bats, and therefore might constitute a nursery site, but otherwise the project site does not support these nursery sites. However, given the relatively small size of the project site and limited habitat for bat maternity roosting, the loss of habitat as a potential nursery site would not be considered a significant impact to a nursery site.

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

Less Than Significant Impact with Mitigation Incorporated

The City of Bradbury has a Tree Preservation and Protection Ordinance (Bradbury Development Code Chapter 9.118) that regulates the removal of protected trees species.

Direct impacts are those associated with tree removal or encroachment within the tree protection zone (canopy drip line plus 5 feet or 15 feet from trunk, whichever is greater). Tree removal is expected to be required when the trunk is located inside or within 2 feet of the proposed limits of grading. Encroachment is expected when soil and roots are disturbed within the tree protection zone. In total for protected trees, it is estimated that 362 trees will require removal, including 346 native trees and 16 non-native (significant) trees. Another 66 trees will be directly impacted due to encroachment, including 57 native trees and 9 non-native (significant) trees. Table 3.3-10 summarizes the total number of trees by species that would be directly impacted by project construction. The locations of impacted trees, by impact type, are presented in **Figure 3.3-3**.

Of the protected trees to be impacted by the Project, approximately 102 trees are considered riparian vegetation associated with jurisdictional drainage features. This was determined by overlaying the trees mapped by Dudek with the riparian vegetation polygons identified in the biological technical report. These include 23 western sycamores, 78 coast live oaks, and 1 arroyo willow. **Figure 3.3-3**, which depicts the trees requiring replacement, also depicts the areas of riparian vegetation to be impacted by the Project. Impacts to riparian habitat are expected to be mitigated offsite through the purchase of credits from a mitigation bank, although some credit for the loss of riparian habitat may be obtained through avoidance with the Project’s open space. Regardless, the loss of riparian habitat is to be mitigated on an acreage basis through a combination of offsite mitigation bank credits and onsite avoidance and is not intended to satisfy individual tree replacement pursuant to the City’s Municipal Code. Tree replacement for all protected tree impacts is intended to be achieved through individual tree plantings within the Project’s development footprint. However, if it is not feasible to accommodate all replacement trees onsite, then the balance of tree replacement would be accomplished offsite. If the offsite mitigation for jurisdictional riparian habitat is appropriate to satisfy some of the individual tree replacement, then the riparian habitat mitigation might be able to offset some of the tree replacement requirement.

**Table 3.3-10
TREE INVENTORY WITHIN PROJECT DEVELOPMENT AREA**

Scientific Name	Common Name	Removal-Protected	Removal-Not Protected	Encroachment-Protected	Encroachment-Not Protected	Total Trees
<i>Cupressus sempervirens*</i>	Italian cypress	—	—	3	—	3
<i>Fraxinus spp.</i>	ash species	—	1	—	—	1
<i>Grevillea robusta*</i>	silk oak	—	1	—	—	1
<i>Heteromeles arbutifolia</i>	toyon	20	60	2	2	84
<i>Liquidambar styraciflua*</i>	American sweetgum	1	—	—	—	1
<i>Pinus canariensis*</i>	Canary Island pine	1	—	—	—	1
<i>Pinus eldarica*</i>	Afghan pine	1	—	—	—	1
<i>Pinus halepensis*</i>	Aleppo pine	6	—	4	—	6
<i>Platanus racemosa+</i>	western sycamore	26	2	2	—	30
<i>Quercus agrifolia+</i>	coast live oak	142	55	36	6	239
<i>Quercus berberidifolia+</i>	California scrub oak	139	854	13	28	1,034
<i>Quercus englemannii+</i>	Englemann oak	—	—	1	—	1
<i>Salix lasiolepis+</i>	arroyo willow	1	—	—	—	1
<i>Sambucus mexicana+</i>	blue elderberry	18	22	3	3	46
<i>Schinus molle*</i>	Peruvian pepper	2	—	2	1	5
<i>Washingtonia filifera+</i>	California fan palm	1	—	—	—	1
	TOTAL	362	995	66	40	1,463

+ = native tree; * = non-native, significant tree

Source: Glenn Lukos Associates, 2020

3.3.6 Mitigation Measures

Impacts to special-status species, including indirect impacts through habitat modifications (Threshold BIO-a).

Impacts to nesting birds (threshold BIO-a)

MM BIO-1 Project development could impact nesting birds. As feasible, Project activities that could disturb active nests or otherwise disrupt nesting activities, including but not limited to the removal or trimming of vegetation, the removal of structures, and the general disturbance of the ground surface, should be conducted outside of the nesting season, which is generally identified as February 1 through September 15. If avoidance of the nesting season is not feasible, then a qualified biologist shall conduct a nesting bird survey within seven days prior to any disturbance of the site. Since some raptor species can begin nesting as early as January 1, trees with the potential to support raptors should be surveyed if the habitat is to be removed after January 1. If active nests are identified, the biologist shall establish suitable buffers around the nests, and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests. The buffer size should vary as a function of the type of bird that is nesting (raptor versus non-raptor), the level of disturbance, and other factors such as the terrain and other vegetation separating the construction activity from the active nest.

Impacts to bats (threshold BIO-a)

MM BIO-2 Project development could impact bat roosting habitat. As feasible, the removal of potential bat roosting habitat (i.e., trees) shall be avoided during the bat maternity season (April 1 through July 31). If avoidance of the maternity season is infeasible, then pre-construction bat surveys shall be performed prior to the removal of any trees with the potential to support bats. If individual trees are determined to be maternity roosts, then those trees shall be avoided until after July 31.

Impacts to jurisdictional waters (threshold BIO-b)

MM BIO-3 Project development would impact potential jurisdictional waters including riparian habitat. Prior to the disturbance of jurisdictional waters, the Project proponent shall obtain a CWA Section 404 permit from the Corps and a Section 401 Water Quality Certification from the Regional Board, as well as a Lake and Streambed Alteration Agreement from CDFW. The Project proponent shall purchase mitigation credits from an approved mitigation bank to offset impacts at a minimum 1:1 ratio. The actual mitigation ratio will be determined through coordination with the Corps, Regional Board, and CDFW during the permitting process. The final replacement ratio may be offset through the preservation of existing jurisdictional waters within the Project's open space.

Impacts to trees protected by City of Bradbury Municipal Code (threshold BIO-e)

MM BIO-4 To mitigate the removal to 346 protected native trees and the encroachment of 57 protected native oak trees the project applicant shall have 806 trees or shrubs planted within and/or adjacent to the project site. To mitigate direct impacts to 25

non-native (significant) trees (16 due to removal and 9 due to encroachment), the Project shall plant another 25 native trees, for a total of 831 replacement trees.

Based on the current Landscape Plan a total of 472 trees (269 coast live oak, 197 scrub oak, and 6 sycamores) can be accommodated within the project site, and within portions of the offsite improvement areas. Most coast live oak trees would be planted along the entry road and the main road through the Specific Plan; however, a number of oak trees will be planted around some of the housing pads in HOA maintained areas, which will provide more of a clustered appearance. The scrub oak individuals will be planted in slope re-vegetation areas along the access roads but will also be planted on revegetated slopes within HOA maintained areas. In addition to the specific tree/shrub locations identified on the Landscape Plan, the Project will also restore approximately 7.66 acres, including 4.30 acres identified on the Landscape Plan as Habitat Restoration Area and 3.36 acres of remedial grading areas to be restored within Lots L, M, and N. It is likely that the balance of replacement trees/shrubs can be accommodated in these additional restoration areas. However, it should be noted that mitigation for the trees that cannot be replanted on site will be replaced through off-site mitigation (project proponent owned/deeded, mitigation bank, or other in-lieu fee with available lands), as determined by the City Arborist. Furthermore, it should be noted, that all mitigation requirements (species, location, ratio, and size) are at the discretion of the City Arborist. Thus, the applicant shall work with the City to identify off-site mitigation (project proponent owned/deeded, mitigation bank, or other in-lieu fee with available lands) in case the 831 replacement trees cannot all be sufficiently accommodated within the project site. **Table 3.3-11, Summary of Impacts And Recommended Mitigation For Protected Trees**, presents the number of trees impacted by type and recommended mitigation.

Table 3.3-11
SUMMARY OF IMPACTS AND RECOMMENDED MITIGATION FOR PROTECTED TREES

Tree Type	Removal	Encroachment	Total Direct Impacts	Replacement Trees
Native	346	57	403	806 (2:1 ratio)
Non-native (significant)	16	9	25	25 (1:1 ratio)
Total	362	66	428	831

Source: GLA, 2021

3.3.7 Level of Significance After Mitigation

Impacts to special-status species, including indirect impacts through habitat modification (threshold BIO-a): implementation of Mitigation Measures **BIO-1**, pertaining to nesting birds; and **BIO-2**, respecting bat roosting habitat, would reduce impacts to special-status species to less than significant.



❖ SECTION 3.3 – BIOLOGICAL RESOURCES ❖

Impacts to sensitive natural communities including riparian habitats (threshold BIO-b): implementation of Mitigation Measure **BIO-3** would reduce impacts to sensitive natural communities including riparian habitats to less than significant.

Impacts to trees protected by City of Bradbury Municipal Code (threshold BIO-e): implementation of Mitigation Measure **BIO-4** would reduce impacts to trees protected by the City of Bradbury Municipal Code to less than significant.

SECTION 3.4 – CULTURAL RESOURCES

3.4 Cultural Resources

3.4.1 Relevant Policies and Regulations

The treatment of cultural resources is governed by federal, state, and local laws and guidelines. There are specific criteria for determining whether prehistoric sites or objects are significant and thus protected by law. Federal and state significance criteria generally focus on the integrity and uniqueness of the resource, its relationship to similar resources, and its potential to contribute information important to scholarly research. Some resources that do not meet federal significance criteria may be considered significant by state criteria. The laws and regulations seek to mitigate project impacts on significant prehistoric and historical-period resources.

Federal

National Historic Preservation Act (NHPA) of 1966

The NHPA of 1966 authorized the National Register of Historic Places (NRHP) and coordinates public and private efforts to identify, evaluate, and protect the nation's historic and archaeological resources. The NRHP includes districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture. Section 106 (Protection of Historic Properties) of the NHPA requires federal agencies to take into account the effects of projects on historic properties.

National Register of Historic Places

The NRHP is “an authoritative guide to be used by Federal, State, and local governments, private groups and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment.” (Code of Federal Regulations, Title 36, Part 60.2)

Criteria

The NHPA, enacted in 1966, established the NRHP program under the Secretary of the Interior. The National Register established four criteria to evaluate significance and eligibility for listing. They are:

1. Property is associated with events that have made a significant contribution to the broad patterns of our history.
2. Property is associated with the lives of persons significant in our past.
3. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
4. Property has yielded, or is likely to yield, information important in prehistory or history. (National Register Bulletin #15, 1997:4).

Context

To qualify for the NRHP, “a property must be significant; that is, it must represent a significant part of the history, architecture, archaeology, engineering, or culture of an area, and it must have the characteristics that make it a good representative of properties associated with that aspect of the



past” (National Register Bulletin #15, 1997:7). Additionally, National Register Bulletin #15 states that the significance of a historic property can be judged and explained only when it is evaluated within its historic context. The Bulletin defines historic contexts as: “...historical patterns that can be identified through consideration of the history of the property and the history of the surrounding area” (National Register Bulletin #15, 1997:7).

Integrity

In addition to context, a property must have integrity, which is defined as: “...the ability of a property to convey its significance” (National Register Bulletin #15, 1997:44). The seven aspects of integrity include; location, design, setting, materials, workmanship, feeling, and association. “To retain historic integrity a property will always possess several, and usually most, of the aspects” (National Register Bulletin #15, 1997:44).

State

California Register of Historical Resources (Public Resource Code § 5024.10 et seq.)

State law protects cultural resources by requiring evaluations of the significance of historical resources in CEQA documents. A cultural resource is an important historical resource if it meets any of the criteria found in § 15064.5(a) of the *State CEQA Guidelines*. These criteria are similar to those used in federal law. The California Register of Historical Resources (CRHR) is maintained by the state Office of Historic Preservation.

As detailed in California Public Resources Code (PRC) § 5024.1, the California Register is an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state’s historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change.

For purposes of CEQA, a historical resource is any object, building, structure, site, area, place, record, or manuscript listed in or eligible for listing in the CRHR (PRC § 21084.1). A resource is eligible for listing in the CRHR if it meets any of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values;
4. Has yielded, or may be likely to yield, information important in prehistory or history.

Properties listed, or formally designated eligible for listing, on the NRHP are automatically listed on the CRHR, as are state historical landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys. The California Code of Regulations (CCR) further provides that cultural resources of local significance are CRHR-eligible (Title 14 CCR, § 4852).

California Environmental Quality Act (CEQA)

CEQA requires the lead agency to consider whether the project will have a significant effect on unique archaeological resources and to avoid unique archaeological resources when feasible or mitigate any effects to less-than-significant levels per PRC § 21083.2. PRC § 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

CEQA Guidelines (Title 14 of the CCR § 15064.5) states that historical resources include:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (PRC § 5024.1, Title 14 CCR, §4850 et seq.);
2. A resource included in a local register of historical resources, as defined in § 5020.1(k) of the PRC or identified as significant in an historical resource survey meeting the requirements of § 5024.1(g) of the Public Resources Code; and
3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historic resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

The fact that a resource is not listed in or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources, or identified in an historical resources survey does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC §§ 5020.12(j) or 5024.1.

Local

City of Bradbury General Plan

The Community Resources Elements of the City of Bradbury's General Plan 2012-2030 Update contains elements on "Cultural and Historical Natural Resources" and on "Native American Indians."

The Cultural and Historical Natural Resources element (City of Bradbury 2014:24) states:

Cultural resources can be regarded as symbols of a people and their civilization, and can represent human activity in pre-history, as well as the present. Cultural resources

can provide a sense of place, history, and pride of residents for a region. The Los Angeles Basin has a rich cultural history that dates back to the early settlement by American Indians. The Gabrielino Indians, also known as the Tongva, occupied an extensive region stretching from the San Gabriel Mountains to the Pacific Ocean.

Water was the natural resources [sic] that attracted the first settlers and succeeding generations to the Arroyo Seco. The Arroyo Seco, meaning “dry stream” in Spanish, is a 25-mile-long seasonal river and canyon located in Los Angeles County. The Arroyo Seco has been called the most celebrated canyon in Southern California. While the Spaniards dubbed the watershed Arroyo Seco or “dry riverbed,” the Gabrielino/Tongva Native American Indians referred to the region between the Los Angeles and San Gabriel Rivers as Hahamogna, “the land of flowing waters, and fruitful valley.” They settled on bluffs overlooking the stream that linked the San Gabriel Mountains to the Los Angeles River. Gabrielino/Tongva villages extended as far as the City of San Bernardino.

The Native American Indians element (City of Bradbury 2014:26-27) states:

California Government Code § 65352.3 requires that prior to adoption of any General Plan, the local jurisdiction shall consult with the California Native American tribes that are on the contact list maintained by the Native American Heritage Commission for the purpose of preserving or mitigating impacts to places, features, and objects of historical significance as described in Sections 5097.9 and 5097.993 of the Public Resources Code. No significant archeological [sic] or historic resources have been found in the city. Yet, due to the documentation of early settlers in the region, the activity associated with new development may lead to the discovery of cultural resources. Investigation of site-specific developments for possible cultural resources would occur prior to clearing or grading.

The California Environmental Quality Act (CEQA) requires that investigation be conducted if there is a possibility of uncovering archaeological, paleontological, or historical resources. Protection of these resources during construction activities typically involves some method of salvaging material discovered on site.

This narrative in the General Plan is followed by “Exhibit CR Conservation No. 5: Historical Tribal Lands,” a map from the Gabrielino-Tongva Tribe showing the City of Bradbury to be situated within the tribe’s traditional territory.

There is no mention of cultural resources in the Cultural Resources Element in Conservation Goals, Conservation Objectives, Conservation Policies or Conservation Action Programs (City of Bradbury, 2014:32-35). There is no discussion of preservation of cultural resources beyond the CEQA requirement to conduct an investigation when a proposed development may uncover archaeological, paleontological or historical resources.

The potential impacts and mitigation for the project site are discussed in **Section 4.4.3**.

Human Remains

According to § 15064.5 of the *State CEQA Guidelines*, all human remains are a significant resource. Section 15064.5 of the *State CEQA Guidelines* also assigns special importance to human remains and

specifies procedures to be used when Native American remains are discovered. These procedures are discussed within PRC § 5097. Per PRC § 5.97.98(a), “Whenever the commission receives notification of a discovery of Native American human remains from a county coroner pursuant to subdivision (c) of § 7050.5 of the Health and Safety Code, it shall immediately notify those persons it believes to be most likely descended from the deceased Native American. The decedents may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The descendants shall complete their inspection and make their recommendation within 24 hours of their notification by the Native American Heritage Commission. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials.”

California Public Resources Code § 5097.98

California Senate Bill 297 (1982) addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction, establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project, and establishes the Native American Heritage Commission to resolve disputes regarding the disposition of such remains. It has been incorporated into § 15064.5(e) of the *State CEQA Guidelines* (Native American Heritage Commission, 2020).

California Health and Safety Code

California Health and Safety Code § 7050.5 states that if human remains are discovered during construction on a project’s site, no further disturbance shall occur until a county coroner makes a determination of origin and disposition of the remains. If the county coroner determines the remains are not subject to his or her authority and recognizes the remains to be those of Native American, the county coroner must contact the Native American Heritage Commission within 24 hours.

3.4.2 Existing Setting

Natural Setting

The project lies within the City of Bradbury, Los Angeles County, in southern California. Bradbury is located in the San Gabriel Valley, which is separated from the Los Angeles Basin to the south by the Puente Hills. Bradbury is located at the base of the foothills of the San Gabriel Mountains and borders the Angeles National Forest to the north. The valley itself consists primarily of grasslands. Much of the city is zoned for agriculture and maintains open space in the foothill portion of the city through the presence of two- and five-acre minimum residential lots. Numerous canyons and valleys characterize the region, making it an area of diverse micro climates. The native vegetation here is predominantly chaparral (chamise or mixed chaparral) and southern coastal scrub with occasional woodlands (coast live oak or California walnut), riparian communities (California sycamore or mixed riparian woodlands), and grasslands (native bunchgrass in valley and southern coastal grassland). The project area itself is in a landscape of chaparral vegetation, and includes several different shrubland community types (Pratt, 2011).

The predominant weather influence in the Los Angeles area is the warm, moist Pacific Ocean air, keeping temperatures mild throughout the year. Summers are dry and sunny with most of the precipitation falling during winter, receiving on average 17 inches of rain per year. At 1.96 square

miles and averaging only 676 feet above mean sea level, the city of Bradbury is among the smallest of Los Angeles County cities.

Prior to urbanization, creeks flowed across the Los Angeles Basin (better identified as a plain) from the San Gabriel Mountains to the ocean with little hindrance. These water courses often meandered across the plain to different physical locations over time.

Archaeological Setting

Prehistoric Overview

The term "prehistoric period" refers to the period of Native California lifeways and traditions prior to the arrival of Euro-Americans.

It is widely acknowledged that human occupation in the Americas began about 13,000 or more years ago (all dates presented here are calibrated radiocarbon ages or calendar dates). However, recent discoveries in areas outside of California have pushed that age back several thousand years more to about 15,000 or even perhaps up to nearly 20,000 years ago (Smith and Barker, 2017).

To describe and understand the cultural processes that occurred during prehistory, archaeologists have routinely developed a number of chronological frameworks to correlate technological and cultural changes recognized in the archaeological record. These summaries bracket certain time spans into distinct archaeological horizons, traditions, complexes, and phases.

There are many such models even for the various sub-regions of Southern California (cf. Grayson, 2011; Warren, 1984; Jones and Klar, 2007). Given the variety of environments and the mosaic of diverse cultures within California, prehistory is typically divided into specific sub-regions that include: The interior of southeastern California and the Mojave Desert (Warren and Crabtree, 1986); and San Diego and the Colorado Desert (Meighan, 1954; True, 1958, 1970).

Many archaeologists tend to follow the regional syntheses adapted from a scheme developed by William J. Wallace in 1955 and modified by others (Chartkoff and Chartkoff, 1984; Moratto, 1984; Sutton 2008a, 2008b; Wallace, 1978; Warren, 1968 and others). Although the beginning and ending dates vary, the general framework of prehistory in the Southern California area consists of the following four periods:

- **Paleoindian and Lake Mojave Periods** [Pleistocene and Early Holocene] (ca. 11000 B.C. to 6000 B.C.). This time period is characterized by highly mobile foraging strategies and a broad spectrum of subsistence pursuits. These earliest expressions of aboriginal occupation in America were marked by the use of large dart or spear points that are an element of the Western Clovis expression. Following the earliest portions of this time span there was a change in climate coincident with the retreat of the glaciers. Large bodies of water existed and lakeside aboriginal adaptations were common. Large stemmed points were accompanied by a wide variety of formalized stone tools and were employed with the aid of atlatls (dart throwing boards). The latter archaeological materials are thought to be representative of an adaptation that was in part focused on lacustrine and riverine environments.
- **Millingstone Horizon** [Middle Holocene] (ca. 6000 B.C. to A.D. 1000). During this time span mobile hunter-gatherers evolved and became more sedentary. Certain plant foods and small game animals came to the forefront of indigenous subsistence strategies. This prehistoric

cultural expression is often notable for its large assemblage of millingstones. These are especially well-made, deep-basin metates accompanied by formalized, portable handstones (manos). Additionally, the prehistoric cultural assemblage of this time period is dominated by an abundance of scraping tools (including scraper planes and pounding/pulping implements), with only a slight representation of dart tipped - projectile points.

- **Late Prehistoric Period** (ca. A.D. 1000 to 1500). Following the Millingstone Horizon were cultures that appeared to have a much more complex sociopolitical organization, more diversified subsistence base and exhibited an extensive use of the bow and arrow. Small, light arrow points, and, later, pottery mark this period along with the full development of regional Native cultures and tribal territories.
- **Protohistoric Period** (ca. A.D. 1500 to 1700s). This final cultural period ushered in long-distance contacts with Europeans, and thereby led to the Historic Period (ca. A.D. 1700 to contemporary times). Small arrow points recognized as Desert Side-notched and Cottonwood forms are a hallmark of this time period.

Ethnohistoric Overview

The project area lies within the area of the Gabrielino/*Tongva* ethnolinguistic group (Bean and Smith, 1978:538), who speak a language classified as a member of the Uto-Aztecan language stock family. This language is further affiliated as an element of the Takic Branch of that linguistic group (Golla, 2011:179).

The Gabrielino, with the Chumash, were considered the most populous, wealthiest, and therefore most powerful ethnic nationalities in aboriginal Southern California (Bean and Smith, 1978:538). Unfortunately, most Gabrielino cultural practices had declined long before systematic ethnographic studies were conducted. Today, the leading sources on Gabrielino culture are Bean and Smith (1978) and McCawley (1996).

According to the recent research of several prehistorians, Takic groups were not the first inhabitants of the region. Archeologists suggest that the Takic in-migration may have occurred as early as the Middle Holocene (the Late Prehistoric cultural tradition described above). They would have replaced or intermarried with indigenous Hokan speakers (Howard and Raab, 1993; Porcasi, 1998). By the time of European contact, the Gabrielino territory included the southern Channel Islands and the Los Angeles Basin. Their territory reached east into the present-day San Bernardino-Riverside area and south to the San Joaquin Hills in central Orange County.

Different groups of the Gabrielino adopted varied subsistence strategies, based on gathering, hunting, and/or fishing. Because of the similarities to other Southern California tribes in economic activities, inland Gabrielino groups' industrial arts, exemplified by basket weaving, established an affinity with those of their neighbors (Kroeber, 1925:620-633). Coastal Gabrielino material culture, on the other hand, reflected an elaborately developed artisanship most recognized through the medium of steatite, which was rivaled by few other groups in Southern California.

The intricacies of Gabrielino social organization are not well known. There appeared to have been at least three hierarchically ordered social classes, topped with an elite consisting of the chiefs, their immediate families, and the very rich (Bean and Smith, 1978:543-544). Some individuals owned land, and property boundaries were marked by the owner's personalized symbol. Villages were politically autonomous, composed of non-localized lineages, each with its own leader. The dominant lineage's

leader was usually the village chief, whose office was generally hereditary through the male line. Often several villages were allied under the leadership of a single chief. The villages frequently engaged in warfare against one another, resulting in what some consider to be a state of constant enmity between coastal and inland Gabrielino groups.

The first Franciscan establishment in Gabrielino territory and the broader region was Mission San Gabriel, founded in 1772. Priests from here proselytized the Tongva throughout the Los Angeles Basin region. As early as 1542, however, the Gabrielino were in contact with the Spanish as a result of the coastal sea expedition of Juan Rodríguez Cabrillo, but it was not until 1769 that the Spaniards took steps to colonize Gabrielino territory. Shortly afterwards, most of the Gabrielino people were incorporated into Mission San Gabriel and other missions in Southern California (Engelhardt, 1931). Due to the impacts of introduced diseases, dietary deficiencies, and forceful *reduccion* (removal of non-agrarian Native populations to the mission compound), Gabrielino population dwindled rapidly. By 1900, the Gabrielino Native community had almost ceased to exist as a culturally identifiable group. In the late 20th century, however, a renaissance of Native American activism and cultural revitalization among a number of groups of Gabrielino descendants took place. Among the results of this movement has been a return to a traditional name for the tribe, the *Tongva*, which is employed by several of the bands and organizations representing tribal members. Many of the bands focus on maintaining and teaching traditional knowledge, with special focus on language, place names and natural resources, as well as preservation of ancestral sites.

The San Gabriel Valley, situated among a foothill transition zone and several streams traversing it on their way to the San Gabriel River, was an ideal location for Native settlements (McCawley, 1996:42). The villages of *Shevaanga* and *Sonaanga*, *Sheshiikwanonga* and *'Akuuronga* were in “a fertile, well-watered region that was eventually chosen as the permanent site of Mission San Gabriel” (McCawley 1996:41), approximately eight miles to the west of Bradbury. The Tongva community of *'Ashuukshanga* was set at the base of the foothills, near the current city of Azusa 2.5 miles east of Bradbury, while the village of *'Ahwiinga* was located within the Puente Hills (McCawley, 1996:45-46) to the south. The Gabrielino village of *Guinibit*, a smaller ranchería, was located approximately five miles to the south, in the area of south Glendora. These villages were situated in a landscape particularly rich in water and other natural resources, inhabited by a populous hunting and gathering people. These Tongva communities would have made extensive economic use of the Bradbury region for the gathering of both plant and animal resources.

Historic-Period Overview

Spanish/Mexican Era

Spanish occupation of California began in 1769, in San Diego. The first Europeans to explore the area that would become the state of California were members of the A.D. 1542 expedition of Juan Rodriguez Cabrillo. Cabrillo sailed along the coast of California, but did not explore the interior. Europeans did not attempt inland exploration until 1769, when Lieutenant Colonel Gaspar de Portolá led an overland expedition from San Diego to Monterey. This expedition of 62 people passed west and north of the current study area in August 1769 (Brown, 2001), and may have encountered the Tongva village of *Koruuvunga* in the Santa Monica region (Brown, 2001:347; McCawley, 1996:61). The Expedition camped at the village’s water supply, near a spring which still flows to this day on the grounds of University High School. The name was said to mean “we are in the warmth, it says we are in the sun now...” (Harrington, 1986; in McCawley, 1996:61).



Mission San Gabriel was established in the Los Angeles Basin in 1771, 16 miles to the southwest of the study area. The Los Angeles Pueblo, the Pueblo of *Nuestra Señora de la Reina de Los Angeles de Porciuncula*, was founded September 4, 1781 by the Spanish government. The new pueblo was granted a large tract of land by the Spanish crown for the colonists' (or *pobladores*) dwellings and small gardens, and a large outlying area as a common. The first structures there are described as “a dozen or so adobe structures surrounded by wooden palisades.” This village housed 44 people, with a military guard of four soldiers (Dillon, 1994). This was in the midst of Tongva territory, and only a few of the indigenous peoples had been converted to the nearby Mission San Gabriel by this time. The government's plan was to start settling the new territory with a mix of missionaries, military and civilian institutions, with the colonists providing grain and other food stuffs to the presidios. Soon, retired soldiers were seeking land for cattle raising following retirement, and portions of the Los Angeles Basin were chosen. Both the *rancheros* and *pobladores* had local Native Americans working their land, much to the dismay of the missionaries.

Mexico rebelled against Spain in 1810, and by 1821 Mexico, including California, achieved independence. Until then the Mission San Gabriel lands were used for the support of the mission and provided for the large population of *Tongva* Native Americans. The mission lands were held in trust for Native peoples by the Franciscan missionaries for eventual redistribution. The lands along the coast, however, were open for early settlement by the colonists from New Spain.

In 1833, however, the Mexico Republic secularized the Franciscan missions and opened lands previously held in trust for the Indian population to ownership by ranchers. The California territorial government began to grant private land to citizens to encourage emigration to California. With this action, huge land grant ranchos started to take up large sections of land in California. This included the Rancho Azusa bordering the Angeles National Forest to the south, just three miles from the project site.

Cattle ranching rapidly came to overshadow the agricultural economy in this region during the Mexican Period, and minor industries and trade grew around this shift. San Pedro, south of Los Angeles, became a port for export of tallow and hides to Boston and Europe. At that time, the pueblo of Los Angeles was also the largest town in California. Shipments to San Pedro from Los Angeles proceeded south across the open plain of the Los Angeles Basin. This early trail system was situated along the west side of the river, in the area that would become the Alameda Corridor. In 1836, Los Angeles was elevated from a pueblo to a *ciudad*, or municipality.

The 6,596-acre Rancho Azusa (de Duarte) was granted in 1841 to Andres Avelino Duarte by Governor Juan Alvarado. Duarte was the son of an Army colonial family, baptized in 1805 at Mission San Juan Capistrano. He joined the Mexican Army at the age of 16 where he rose to the rank of corporal, married Maria Gertrudes Valenzuela and raised a family. He served much of his career at Mission San Gabriel and so knew the Los Angeles region well. Upon retiring from the Army after twenty years he petitioned for the rancho and settled there. His rancho lies adjacent to the west of the Rancho Azusa (de Dalton), where the village of *Ashuukshanga* was located and gave its name to the area. The original name for Rancho Azusa Dalton was Rancho El Susa (a mispronunciation of the *Tongva* place name), and Rancho Azusa Duarte, as a smaller adjunct, was often called Susitna in a diminutive Hispanicized version of the term. It includes all of what are now the towns of Arcadia, Bradbury, Duarte, and portions of the cities of Monrovia, Irwindale and Azusa. Regarding Bradbury, the southern half of the city was Rancho Azusa (Duarte) land while the northern half was never officially part of a rancho.

The Mexican-American War of 1846 saw the invasion of California from both land and sea. Following several skirmishes in the San Diego and Los Angeles areas, and the capture of the territorial capital in Monterey, United States rule was firmly established. Following the rapid influx of population to the north because of the Gold Rush of 1849, California was made a state in 1850. The economic and social order was slow to change in the southern portion of the state, however, and rancheros were left in control of their vast estates through the 1860s. Los Angeles was a part of the “Cow Counties” and had little representation in the state legislature because of the sparse population. This allowed the predominantly Anglo population of the north to pass laws aimed at breaking up the ranches for settlement by Eastern farmers and, coupled with devastating droughts that crippled many livestock raisers, their dismemberment soon came. This helped pave the way for the “Boom of the Eighties” which saw an influx of people from the rest of the United States and the beginning of many of the towns we see today (Dumke, 1944). This was the first spurt of growth for Los Angeles, and satellite communities started to form around the city to the east, south and west, and much of the plains between these areas came to be filled with farms and orchards.

The American Ranch Period to the Founding of Bradbury

Like other Mexican ranchers, Duarte had to defend the title to his land grant in the United States Land Claim Commission following dominion by the U.S. This process took place over years, and sometimes decades, of litigation and testimony, during which Duarte incurred legal expenses and other debts. Also, like many of his compatriots, Duarte covered these costs by selling portions of his rancho to the very willing Anglos moving to California in large numbers. “His first sale was a 225-acre parcel at the southern end of the rancho to Michael Whistler. Whistler later sold the entire parcel to Dr. Nehemiah Beardsley, who started the first school in [the town of] Duarte and laid out the first section of Duarte’s water lines” (Rancho Azusa de Duarte, 2019); the city of Duarte borders Bradbury to the east and south. Duarte himself continued to sell portions of his land in an organized manner, dividing it into 40-acre lots and selling them individually to farmers and land speculators. A patent for the rancho was awarded in 1878, over 20 years after the process had started – but Andres Duarte had already died in 1863, so this possibly would have been received by his son Santiago. By then, however, he had been forced to sell off his entire land grant, but his patent did make a clear title for all of its subsequent owners.

The rancho would have been used predominantly for cattle ranching through the 1870s, though the smaller lots purchased by Anglos were likely turned to agricultural use during the late 1800s. The northern portion of the Rancho Azusa (de Duarte) consisting of 2,750 acres was eventually purchased by Lewis Bradbury in 1892. Bradbury had already made his fortune in gold and silver mining, mostly in Mexico. This joined his other local land holdings such as a smaller ranch in the city of San Moreno to the west. He also invested in real estate in downtown Los Angeles, constructing the famous Bradbury Building in 1893 at 304 South Broadway, opening several months following Lewis Bradbury’s death in 1892; this five-story structure still exists and is on the National Register of Historic Places. He made the Rancho Azusa property his home, building here “an elegant home on his land and surrounded it by a notable garden that is now the site of the Royal Oaks Manor” (City of Bradbury, 2019). As evidence of his influence, the Pacific Electric Railroad placed a line through the towns of Duarte and Bradbury that passed by his residence in an otherwise unpopulated region at the time.

Lewis Bradbury died in 1892, his wife Simona in 1903, and by the 1930s his holdings soon passed out of control of his heirs. “Prolonged legal battle between family members resulted in foreclosure proceedings by the Security National Bank against most of the Bradbury Estate” (City of Bradbury,



2019). Soon the cloud of World War II came over the southland and then passed, and the Post War boom started. Large tracts of land in what had been the Bradbury Estate “were sold to people seeking spacious building sites, which afforded privacy and country living in the foothills of the San Gabriel Mountains” (City of Bradbury, 2019), while southern portions of the Rancho Azusa de Duarte in the flat lands were subdivided into more modest tract homes available at affordable costs to the returning servicemen and their families. By the late 1950s the Bradbury Estate Property Owners Association joined with other adjacent property owners in the area surrounded by Woodlyn Lane, Bradbury Hills Road, Royal Oaks Drive North, Mount Olive Drive and Lemon Avenue to seek incorporation which was approved by the Los Angeles County Board of Supervisors, becoming a municipal corporation on July 26, 1957. This sudden drive had been spurred due to the action of residents in what would become the City of Duarte to incorporate, and the Bradbury Estate Association were fearful that the tract home craze may spread into their foothills and losing control of “their vision for the future” of their unique foothills (City of Bradbury, 2019).

The City of Bradbury has remained little developed over the decades since. Comprised of 1.9 square miles and with only 3.2 miles of public streets, there are just two small neighborhoods in the southeast and southwest corners of the city that are open, with the overwhelmingly greater portion of the city, upwards of 80percent, being comprised of various gated neighborhoods. Much of the City is zoned for agriculture, resulting in large amounts of open space, and further open space is maintained through rules requiring two to five-acre minimum residential lots in the foothill area.

The project site abuts the Angeles National Forest (ANF) on the north side. During the Spanish period the local mountains were regarded more as a source of water and timber than as a place to settle. Irrigation ditches were dug from the canyon mouths to transport water to mission fields. In the valleys below the San Gabriel Mountains were Ranchos San Jose and Cucamonga, and the two Azusa Ranchos, Duarte and Dalton segments, directly south of the San Gabriel River and Dalton Canyon. Dalton Canyon was named to “commemorate Henry Dalton, an English trader from Lima” Peru and claimant of the Azusa and Santa Anita Ranchos below (Gudde, 2004:101). Gold miners were the first to explore the mountains in detail following the Gold Rush; prospecting along the rivers started in San Gabriel Canyon in 1854. The town of Eldoradoville was established there and then washed away in the flood of 1862. After the gold miners came the water seekers. Drainages within the San Gabriel Canyon and San Antonio Canyons were tapped to supply domestic and irrigation water for the towns and cities in the valley below that came with the “Boom of the ‘80s.” Robinson (1991:35) notes that the San Gabriel Mountains were slow to be surveyed, mapped and explored by scientists. The first reconnaissance was conducted for possible railroad grades in 1853. This was the Pacific Railroad Survey conducted by the Army Corps of Topographic Engineers. In the latter part of the 1880s, as increasing numbers of people ventured into the San Gabriel Mountains for recreational activities, primarily fishing and hunting, several mountain resorts were established. By 1900, however, over-hunting had seriously depleted the mountain wildlife. Nevertheless, hunting continued unrestricted until 1915 when most of the ANF was declared a game preserve (Robinson, 1991:26).

Civic and agricultural concerns about watershed destruction were major concerns that led to federal protection of forests and brushlands in the San Gabriel Mountains. President Benjamin Harrison signed the 555,520-acre San Gabriel Timberland Reserve into law on December 20, 1892. In 1907, the San Gabriel Forest Reserve became the San Gabriel National Forest. In July of 1908, President Theodore Roosevelt combined the San Gabriel and San Bernardino forests as the Angeles National Forest. They were administered as a single unit until 1925. In October 2014, President Barack Obama designated 346,177 acres within central and northern portions of the Angeles National Forest as the San Gabriel National Monument (Sahagun, 2014). “This area is also rich in cultural and scientific history. More than 600 archaeologically and culturally significant sites are found within the new

monument...” (Obama White House, 2019). The Monument does not encompass the entire Angeles National Forest, however, and does not include a band along the southwest border of the Forest adjacent to the City of Bradbury’s corporate boundary and, therefore, is not adjacent to the project site.

Results of Database/Records Search

A cultural resources records search for the proposed project was conducted by Mrs. Megan B. Doukakis, M.A., on August 29, 2019. The purpose of the records search was to identify previously recorded cultural resources (prehistoric and historic archaeological sites, historic buildings, structures, objects, or districts) within the project area and a half-mile radius. The research was conducted at the SCCIC at California State University, Fullerton, which is the regional repository for the California Historical Resources Information System (CHRIS). Based on the cultural resources records search, no prehistoric cultural resource sites or isolates have been recorded within the APE (coterminous with the project boundary), or within the half-mile buffer surrounding the APE.

The records search did show the presence of three historic properties within the half-mile buffer, as detailed below and summarized in **Table 3.4-1, *Known Cultural Resource Sites Within A Half Mile Buffer of The Ape.***

1. The Spanish Canyon Motorway (19-004717) extends along ridgelines from north Bradbury through ANF land and into Monrovia; it appears to have been constructed between 1946 and 1952, likely as a firebreak (Garcia 2016:3). The road travels north/south along the western ridgeline overlooking Bree Canyon just west of the project site.
2. The Rincon-Red Box-Sawpit Roads Complex (19-186917), Forest Service Number 05-01-52-102, is a set of dirt roads that extends through the ANF east to west (Vance, 2001:1). The Sawpit Road (2N30.2) spur runs from the middle south of the road complex out of the ANF, and the east branch (Van Tassel Truck Trail [1N36]) of this south spur road passes just north of the heads of Bradbury and Spinks Canyons into the cities of Duarte and Azusa, passing approximately 2,000 feet to the northeast of the project site. The north half of Van Tassel Truck Trail is shown as a trail in 1924, and was improved to a good motor road to the head of Spanish Canyon by 1942; the southern portion, Van Tassel Road, first appears on the *Azusa, Calif.* USGS topo map in 1939 as an unimproved dirt road and as a good motor road on a Forest Service map in 1942 (Vance, 2005:2).
3. The Bradbury Debris Basin and Flood Control Channel (19-192459), located at the conjunction of Bradbury and Bliss Canyons in the City of Bradbury (Chasteen, 2015:1), is the third locally recorded historical property. These were constructed in 1954 and designed by the Los Angeles County Flood Control District. These were built to prevent flooding out of the Bree and Bradbury Canyons of the San Gabriel Mountains foothills into the Bradbury, Duarte and surrounding communities of the San Gabriel Valley. The bowl-shaped basin was cut from the hillside. Features of the basin include a large vent within the basin; the southern end is fortified with a small, cast concrete dam approximately 450 feet by 65 feet wide. A central spillway reinforced with steel I-beams connects the basin with the channel, and there is a pumping station east of the dam (Chasteen, 2015:1).

Records at the SCCIC indicated that there have been no previous cultural resource surveys that included a portion of the project site, and no surveys were conducted within the 0.5-mile radius project buffer of the project site boundary. One survey record (LA-03528) was indicated on the



SCCIC’s Azusa, Calif. USGS topo map as within the project buffer zone, but a search of the report indicated that the survey location was “undefinable” and the report title indicated it actually covered an area in Ventura County.

Table 3.4-1
KNOWN CULTURAL RESOURCE SITES WITHIN A HALF-MILE BUFFER OF THE APE

Site Number	Author(s)	Date	Description
P-19-004717	Kyle Garcia	2016	The Spanish Canyon Motorway, which extends along ridgelines from north Bradbury through Angeles National Forest land and into Monrovia, appears to have been constructed between 1946 and 1952, likely as a firebreak. It is a 1.5-mile dirt road maintained by the County of Los Angeles Fire Department. While closed to public vehicles, it is open for recreational use.
P-19-186917; Forest service Number 05- 01-52-102	D. W. Vance	2001, updated 2005	The Rincon-Red Box-Sawpit Roads Complex, Forest Service Number 05-01-52-102, is a set of dirt roads that extends through the Angeles National Forest east to west, with a spur from the middle (Sawpit Road [2N30.2]) that extends south out of the ANF. The east branch (Van Tassel Truck Trail [1N36]) of this south spur road passes just north of the heads of Bradbury and Spinks Canyons into the cities of Duarte and Azusa. The eastern half of the Complex was a trail in 1907 connecting with the Sawpit Truck Trail, and was improved to a good motor road by 1942. The north half of Van Tassel Truck Trail is shown as a trail in 1924, and was improved to a good motor road to the head of Spanish Canyon by 1942; the southern portion, Van Tassel Road, first appears on the <i>Azusa</i> topo map in 1939 as an unimproved dirt road and as a good motor road on a Forest Service map in 1942.
P-19-192459	Carrie Chasteen	2015	The Bradbury Debris Basin and Flood Control Channel is located at the conjunction of Bradbury and Bliss Canyons in the City of Bradbury. These were constructed in 1954 and designed by the Los Angeles County Flood Control District; there do not appear to be any alterations to the Basin or channel itself, though pipes on sides of the canyon have been added to channel water to the basin. The bowl-shaped basin was cut from the hillside; there is a large vent within the basin, the southern end is fortified with a small, cast concrete dam approx. 450 by 65 wide; a central spillway reinforced with steel I-beams connects the basin with the channel; and a pumping station east of the dam.
Source: UltraSystems, 2022			



Pedestrian Survey

A pedestrian field survey to look for the presence of cultural resources was conducted November 22, 2019. Survey transects were conducted in an opportunistic manner in conformity with the available exposed ground surface and layout of the landscaping. During the survey, the project site was carefully inspected for any indication of human activities dating to the prehistoric or historic periods (i.e., 50 years or older).

The project site is completely undeveloped and consists of foothills of the San Gabriel Mountains with steep sided ridges overlooking Spinks, Bradbury and Bliss Canyons which drain southward into two debris basins (Debris Basin for Bliss and Bradbury Canyons to the southwest and the Spinks Canyon debris basin to the southeast) just outside the project boundary to the south. Due to the steepness of the slopes and the dense vegetation, approximately 80percent of the project site area could not be accessed or surveyed. Because of the density of brush in the project area and predominance of steep ridgelines, it was decided to search out and walk the various ridgelines to look for cultural resources along them, as well as to seek out large rock outcrops that might contain bedrock mortars/grinding slicks.

The first set of ridgelines that could be accessed was in the southern portion of the project site, between the small unnamed canyon on the east (immediately west of Spinks Canyon) and the graded hillsides (the Spinks Debris Disposal Area) to the west. The first ridgeline went north; it had been graded in the past but was now partially overgrown with brush and fully covered with grass. This trail ended at another connecting ridgeline that went southwest/northeast and had also been graded in the past. Oak (*Quercus dumosa* and *Q. agrifolia*), toyon (the dominant plant) (*Heteromeles arbutifolia*), *Opuntia* (flat), black sage (infrequent) (*Salvia mellifera*), creosote (*Larrea tridentata*), California sagebrush (*Artemisia californica*), wild oats (*Avena fatua*), and monkey flower (*Mimulus* sp.) were observed, along with yucca (infrequent - dried stalks and new plants), and dried spiny cucumber (*Marah macrocarpus*). Signs of rabbit (*Sylvilagus audubonii*) were observed. A bear cub (*Ursus* sp.) was encountered at the base of the trail that leads to the ridgeline.

Bradbury and Bliss Canyons enter the main Bradbury Debris Basin from the east, at the southwest corner of the project site. The south ridgeline overlooking Bradbury Canyon was surveyed. This ridgeline extends southwest to northeast with a relatively straight east/west segment in the middle. This ridgeline had also been graded in the past. The surface was covered with grasses and brush. There were generally the same dominant plants here as along the southern ridgeline and along the Flood Control Road – oak and toyon. There were also patches of white sage (*Salvia apiana*) along the Bradbury Canyon ridgeline. Deer tracks on the west start of the ridgeline, a pile of rabbit pellets scattered along the ridgeline, and extensive appearance of both old and fresh coyote (*Canis latrans*) scat were observed.

The Bradbury Canyon wash, accessible from the back of the Debris Basin, was surveyed. The wash is narrow at the canyon entrance, but opens wider a few hundred feet in with a flat canyon bottom with grass, shrubs and some oaks, while the narrow wash cutting down the middle is sandy with small and large rocks. This is a riparian environment containing numerous tree tobacco, abundant mugwort (*Artemisia douglasiana*) and mule fat along the edge of the bank; and an oak grove on south slope facing north, while the north slope facing south is drier, containing open brush. There is some mature elderberry (*Sambucus nigra*) in the creek bed, a patch of native grape vine (*Vitis californica*) intermingled with prickly pear cactus (*Opuntia littoralis*); gooseberry (uncommon) (*Ribes californicum*), and California fuchsia (*Epilobium canum*). A small (five member) flock of mourning doves (*Zenaida macroura*) was observed at the entrance to Bradbury Canyon, and there were some



small lizards throughout. A mature doe (*Odocoileus hemionus*) was seen up the south bank, and the scapula of a medium size deer was observed on the adjacent ridgeline. Until the survey entered Bradbury Canyon, no lizards or birds had been observed or heard; only crows were noted in the lowlands of Bradbury among the houses.

Boulder outcrops potentially suitable for groundstone were sought out but there were none on the surveyed ridgelines, nor were there suitable bedrock outcrops observed on the surrounding slopes. No suitable lithic deposits that could be used for worked material were observed. No cultural isolates or features were observed during the survey.

The foothills do contain numerous plants and animals utilized by the Tongva tribe that inhabited this region. Deer, rabbit, bear, various reptiles and birds are present, all hunted by the Tongva. Several species of oak, toyon, Opuntia, grape, elderberry, multiple sage species, creosote, sage and other edible and medicinal plants are available in the project area in abundance. This area would have been extensively used to harvest and gather natural resources by the various clans that inhabited the nearby villages of *Ashuukshanga*, *Ahwiinga* and *Guinibit* described in **Section 3.4.1** above.

The result of the pedestrian survey was negative for both prehistoric and historic archaeological sites (relatively large and often multi-component cultural resources), features (a single cultural element such as a bedrock mortar or hearth) and isolates (one to three artifacts such as a flake or pottery shard).

Native American Outreach

On August 23, 2019, Mr. O’Neil submitted a request to the NAHC via email and fax for a Sacred Lands File (SLF) search within the 0.5-mile project buffer. The results were received September 12, 2019, from Mr. Steven Quinn, Associate Governmental Program Analyst. The NAHC letter stated that “A record search of the Native American Heritage Commission (NAHC) *Sacred Lands File* (SLF) was completed for the information you have submitted for the above referenced Project. The results were positive [emphasis in the original].” The Commission identified the Gabrielino Band of Mission Indians – Kizh Nation to contact for information regarding the site in the SLF. (See Attachment C to **Appendix N**.)

UltraSystems prepared letters to each of the five tribal contacts representing five tribal organizations provided by the NAHC (Attachment C to **Appendix N**). On September 16, 2019 Mr. O’Neil mailed letters and sent emails with accompanying maps to all five tribal contacts describing the project and showing the project’s location, requesting a reply if they have knowledge of cultural resources in the area that they wished to share, and asking if they had any questions or concerns regarding the project.

The Administrative Specialist for the Gabrieleño Band of Mission Indians – Kizh Nation, replied for Chairperson Andrew Salas by email on September 17, 2019 stating that they wished to have AB 52 consultation on the project; O’Neil replied by email explaining that such consultation would be between the tribe and the project’s lead agency, the City of Bradbury’s Planning Department, and not with the client’s cultural resource consultant; O’Neil took the opportunity to again request information on the potential traditional cultural resource in the project area listed on the SLF as recommended by the NAHC. The Gabrieleño-Kizh Nation Admin Specialist replied on September 18, 2019 requesting contact information for the project’s lead agency, which O’Neil provided the same day (See Attachment C to **Appendix N**). Chairperson Salas provided no information regarding the SLF traditional cultural site. On October 3, 2019, an email was received from the Gabrieleño-Kizh Nation Tribal Specialist, indicating that they would like to consult with the Lead Agency if any ground

disturbance will be taking place for this project. On December 10, 2019 O'Neil sent another email to Mr. Salas and the Gabrieleño-Kizh Nation requesting information on the SLF site noted by the NAHC; there has been no further response from this tribe.

Following up on the initial letter and email contacts, telephone calls were conducted by Mrs. Doukakis on October 17, 2019 to the three tribal organizations that had not previously responded by email. Two calls were placed with no answer (see **Attachment C** to **Appendix N**). A message was left with Mr. Charles Alvarez of the Gabrielino-Tongva Tribe. A message was not left for Chairperson Sandonne Goad of the Gabrielino/Tongva Nation as her telephone inbox was full and would not allow for a message to be left.

When telephoned on October 17, 2019, Mr. Anthony Morales, Chairman of the Gabrieleno/Tongva San Gabriel Band of Mission Indians, stated that the area around the project site was of concern for the Band as that region had been inhabited by the Tongva and so would be sensitive for cultural resources. Furthermore, the project area is a watershed and as such would contain many natural resources that would have been of importance to the Tongva tribe. He noted that the adjacent Angeles National Forest was declared a national monument by President Obama in 2014 giving special protection to archaeological resources in the vicinity. Based on these factors Mr. Morales stated that Native American monitoring should be conducted during project construction-related ground disturbance, and further recommended that monitors from the San Gabriel Band be used for this work. He requested that Mr. O'Neil telephone him following an archaeological field survey to inform him of the results. On December 20, 2019, Mr. O'Neil telephoned Chairperson Morales to provide a summary of the archaeological field survey results, noting the lack of cultural resources and the topography that would make the presence of such resources unlikely, and of the abundance of natural resources that were observed. Morales expressed the belief that the abundance of natural resources and presumed water sources would make this area heavily used by the Tongva people and stated his strong recommendation that both archaeological and tribal monitors be present during construction grading for the project (See Attachment C to **Appendix N**.)

During the October 17, 2019 telephone call to Mr. Robert Dorame, Chairman of the Gabrielino Tongva Indians of California Tribal Council, he stated that he was unable to give an answer at the time but requested that the original letter and map be re-sent to him. This was done the same day. No further response from this group has been received.

The Native American Outreach is separate and apart from Tribal Consultation required by SB 18 for General Plan/Specific Plan amendments and AB 52 required for projects.

3.4.3 Methods

This section provides an overview of cultural resources that may be present within the project study area. Cultural resources are artifacts of human activity, occupation, or use. They include expressions of human culture and history in the physical environment, such as archaeological sites, historic buildings and structures, or other culturally significant places. The analysis of potential cultural resources that may be present in the project study area is based on investigations of the project site by cultural resources and historical resources specialists. This section is based on record searches and other investigation methods provided in a Phase I Cultural Resources Inventory for the Chadwick Ranch Estates Project (O'Neil and Doukakis, 2019). This report is provided herein as **Appendix N**.

Historic buildings and structures generally must be 50 years or older and are typically identified through archival and library research, followed by field reconnaissance and recordation. Historic

buildings and structures are architecturally, historically, or artistically important individual and groups of residential, commercial, industrial, and transportation properties.

Archaeological resources refer to surface or buried material remains, buried structures, or other items used or modified by people. Prehistoric archaeological resources predate European presence in the Los Angeles region, and can include villages or campsites, food remains, basketry fragments, shell and stone tools and tool making debris. Ethnohistoric or protohistoric archaeological resources are those that can be attributed to native cultures, but include evidence of European contact, such as trade beads in a site that otherwise appears to be prehistoric. Historic archaeological sites are those deposits that postdate European contact.

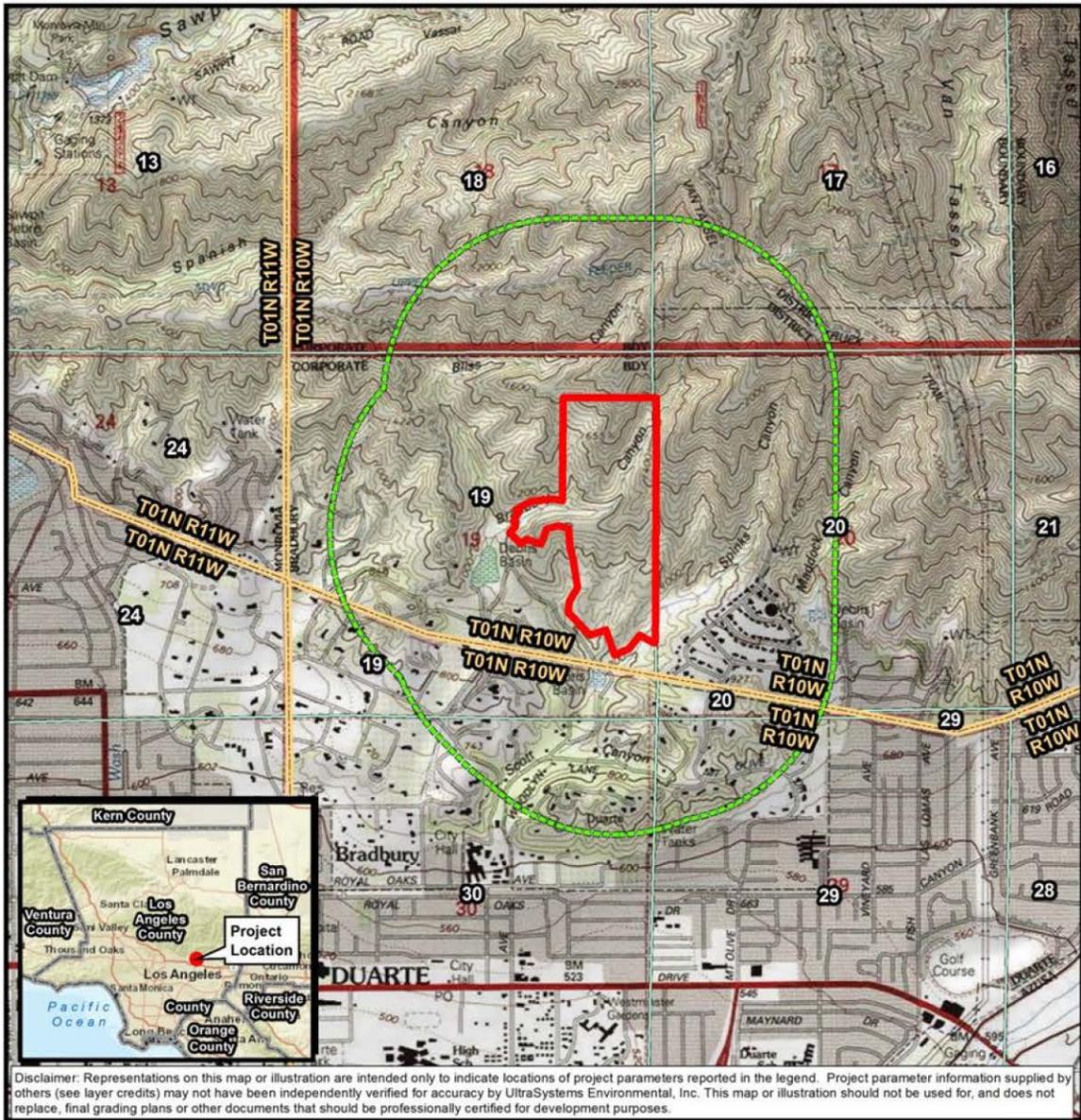
Traditional cultural properties (TCPs) are places associated with the cultural practices or beliefs of a living community, and expressed by that community (Native American). The significance of these places is derived from the role the property plays in a community's cultural identity, as defined by its beliefs, practices, history, and social institutions. Examples include natural landscape features, plant gathering places, sacred sites, and Native American burial locations.

UltraSystems established the absence of historic properties within the Area of Potential Effect (APE) through background research, desktop visual inspections of the project area, pedestrian survey and tribal outreach. Specific identification efforts for this undertaking are discussed below. The APE **Figure 3.4-1, USGS Topographic Map of the Study Area**, depicts the project footprint.

The record search and literature review conducted by UltraSystems for the Phase I Cultural Resources Inventory for the Chadwick Ranch Estates Project provided the basic overview information for this document. A cultural resource records and literature search was conducted on August 29, 2019, utilizing a half mile buffer beyond the APE, at the South Central Coastal Information Center (SCCIC) at California State University Fullerton. The SCCIC is the regional repository for the California Historical Resources Information System (CHRIS). The record search there included archaeological site records and reports, California Points of Historical Interest, California Historical Landmarks, the CRHR, the NRHP, the California Historical Resources Inventory, and the Caltrans Historic Bridge Inventory. The record search only includes the results of previous archaeological or historical surveys and other investigations.

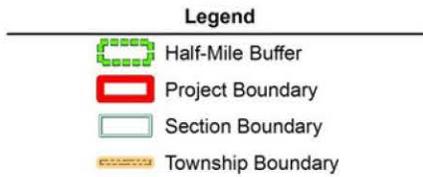
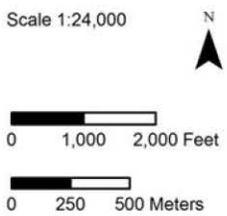
On November 22, 2019, Archaeologists Stephen O'Neil, M.A., RPA, and Megan B. Doukakis, M.A. visited the project area to conduct a pedestrian survey. The project site area is completely undeveloped, with a paved access road to adjacent debris basins and related graded hillsides outside the southern boundary of the project. The project site consists of foothills of the San Gabriel Mountains with steep sided ridges overlooking Spinks, Bradbury and Bliss Canyons which drain southward into two debris basins (Debris Basin for Bliss and Bradbury Canyons to the southwest and the Spinks Canyon debris basin to the southeast) just outside the project boundary. During the survey, the project site was carefully inspected for any indication of human activities dating to the prehistoric or historic periods (i.e., 50 years or older).

**Figure 3.4-1
USGS TOPOGRAPHIC MAP OF THE STUDY AREA**



Disclaimer: Representations on this map or illustration are intended only to indicate locations of project parameters reported in the legend. Project parameter information supplied by others (see layer credits) may not have been independently verified for accuracy by UltraSystems Environmental, Inc. This map or illustration should not be used for, and does not replace, final grading plans or other documents that should be professionally certified for development purposes.

Path: J:\Projects\7023_Bradbury\MXD\7023_Bradbury_4_5_Topo_2019_08_13.mxd August 13, 2019
 Service Layer Credits: Copyright © 2013 National Geographic Society, i-cubed, Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community, Teale Data Center GIS Solutions Group, 2003, CA Dept. of Conservation, March 2013; UltraSystems Environmental, Inc., 2019



Chadwick Ranch Estates Project
 Topographic Map
 USGS Quadrangle: Azusa
 Township: 01N Range: 10W



3.4.4 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- a) **Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?**
- b) **Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?**
- c) **Disturb any human remains, including those interred outside of formal cemeteries?**

The Initial Study, included as Appendix G to this DEIR, concluded that impacts related to threshold (a), historical resources, would have no impact; therefore this impact is not analyzed below.

3.4.5 Impact Analysis

- b) **Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?**

Less Than Significant Impact With Mitigation Incorporated

As indicated by the SCCIC record check, there are no known archaeological sites located on the project area or within a 0.5-mile radius surrounding area. This assessment is based on the results of a search of the National Register database and a record check through the CHRIS. The pedestrian survey also did not result in the observation of historic or prehistoric cultural resources; however, the survey was conducted on rough terrain and the vegetation allowed view of only approximately 15 percent of the surface. While there is a low potential for the presence of prehistoric cultural resources within the project site, with the implementation of mitigation measures (MMs) **CUL-1** through **CUL-3** impacts on potential unexpected finds would be less than significant.

- c) **Disturb any human remains, including those interred outside of formal cemeteries?**

Less Than Significant Impact With Mitigation Incorporated

As indicated by the SCCIC record check, there are no known archaeological sites located on the project area or within a 0.5-mile radius surrounding area containing burials or isolated burials.

If human remains are found, state law requires proper treatment for the remains in accordance with applicable regulations. Sections 7050.5–7055 of the *California Health and Safety Code* describe the general provisions for dealing with human remains. Specifically, § 7050.5 of the *California Health and Safety Code* describes the protocols to be followed in the event that human remains are accidentally discovered during excavation of a site. In addition, the requirements and procedures set forth in § 5097.98 of the *California Public Resources Code* would be implemented. Although there is no indication that human remains are present within the project area, project-related grading has the potential to unearth previously undiscovered human remains. Therefore, MM **CUL-4** is recommended to reduce potential impacts to less than significant.

3.4.6 Mitigation Measures

MM CUL-1 If archaeological resources are encountered during project construction, the applicant shall hire a Project Archaeologist, meeting Secretary of the Interior standards. The Project Archaeologist will be allowed to temporarily divert or redirect grading or excavation activities in the vicinity of the find in order to make an evaluation of the find. The Project Archaeologist, upon evaluation of the resource(s), shall propose conducting spot-check or regular monitoring of sub-surface grading activities into native soil if warranted.

The disposition of any prehistoric and historic archaeological resources shall be governed by mitigation measure **CUL-3**.

MM CUL-2 Prior to the start of any project-related grading, the following note shall be placed on the Conditions of Approval:

“If any suspected archaeological resources are discovered during ground-disturbing activities and the Project Archaeologist or their designated archaeological monitor or Tribal representatives are not present, the construction supervisor is obligated to halt work in a 100-foot radius around the find and call the Project Archaeologist and appropriate Tribal representatives to the site to assess the significance of the find.”

MM CUL-3 Any archaeological resources that are uncovered during the course of project-related grading shall be recorded and/or removed per applicable guidelines, in consultation and cooperation with the City, and appropriate Native American tribal representatives.

If a significant archaeological resource(s) is discovered on the property, ground-disturbing activities shall be suspended 50 feet around the resource(s). The Project Archaeologist or their designated archaeological monitor and representatives of the appropriate Native American Tribe(s), and the City Planning Department shall confer regarding mitigation of the discovered resource(s). A treatment plan and/or preservation plan shall be prepared and by the Project Archaeologist and reviewed by representatives of the appropriate Native American Tribe(s) and the City Planning Department and implemented by the archaeologist to protect the identified archaeological resource(s) from damage and destruction.

The City shall relinquish ownership of all archaeological artifacts that are of Native American origin found on the project site to the culturally affiliated Native American tribe(s) for proper treatment and disposition. A final report containing the significance and treatment findings shall be prepared by the archaeologist and submitted to the City Planning Department, the appropriate Native American tribe(s), and the South Central Coastal Information Center. All cultural material, excluding sacred, ceremonial, grave goods and human remains, collected during the grading monitoring program shall be curated, as determined by the treatment plan, according to the current professional repository standards and may include a culturally affiliated tribal curatorial facility. All monitoring, treatment, and disposition shall be at the project applicant's expense.

MM CUL-4 If human remains are encountered during any project-related ground-disturbing activities, § 7050.5 of the California Health and Safety Code states that no further

disturbance shall occur until the County Coroner has made a determination of origin and disposition of the materials pursuant to § 5097.98 of the California Public Resources Code. The cessation of ground disturbance shall extend 50 feet from the discovery site. The provisions of § 15064.5 of the California Environmental Quality Act Guidelines shall also be followed. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner shall notify the NAHC. The NAHC will determine and notify a Most Likely Descendent (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The descendent must complete the inspection within 24 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. These requirements shall be included as notes on the contractor specification and verified by the Community Development Department, prior to issuance of grading permits. This measure shall be implemented to the satisfaction of the City in consultation with the Los Angeles County Coroner.

3.4.7 Level of Significance After Mitigation

Implementation of mitigation measures **CUL-1** through **CUL-3** would reduce potential archaeological impacts to less than significant.

Implementation of mitigation measure **CUL-4** would reduce potential impacts regarding human remains to less than significant.

SECTION 3.5 - ENERGY

3.5 Energy

3.5.1 Relevant Policies and Regulations

Federal

Corporate Average Fuel Economy (CAFE) Standards

Enacted in 1975, the Corporate Average Fuel Economy (CAFE) Standards aim to reduce energy consumption by improving the fuel economy of cars and light trucks. CAFE standards are regulated by the Department of Transportation's National Highway Traffic and Safety Administration (NHTSA). NHTSA sets and enforces CAFE standards under the Energy Policy and Conservation Act (EPCA) and the U.S. Environmental Protection Agency (USEPA) calculates average fuel economy levels and sets GHG standards under the Clean Air Act (US Department of Transportation, 2020).

Energy Independence and Security Act

Enacted in 2007, the Energy Independence and Security Act (EISA) reinforces energy reduction goals by aiming to increase the production of clean renewable fuels, improve efficiency of products, and promote research on GHG capture options. Additionally, the EISA aims to protect American consumers by moving the United States toward increased energy independence and security. Three primary provisions of the EISA are (1) the CAFE standards, (2) the Renewable Fuel Standard, and (3) the appliance/lighting efficiency standards (USEPA, 2020).

State

California Code of Regulations (CCR) Title 24, Part 6

CCR Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24) were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.

The Title 24 standards are updated on a three-year schedule, with the most current 2019 standards having gone into effect on January 1, 2020. The Title 24 standards require the installation of insulated hot water pipes, improved window performance, improved wall insulation, and mandatory duct sealing. Title 24 also requires roofs to be constructed to be solar ready, with cool roofing shingles, a minimum one-inch air space between roof material and roof deck, and a minimum of R-22 roof/ceiling insulation. The 2019 standards require photovoltaic solar systems on single-family residences and on multifamily residential structures of three stories or less. All lighting is required to be high efficiency and daylight sensors and motion sensors are required for outdoor lighting, bathrooms, utility rooms and other spaces. The forced air systems are required to limit leakage to 5percent or less and all heat pump systems must be equipped with liquid line filter driers. Single-family homes built in California with the 2019 standards will use about seven percent less energy due to energy efficiency measures versus those built under the 2016 standards. Once rooftop solar electricity generation is factored in, homes built in California under the 2019 standards will use about 53 percent less energy than those under the 2016 standards. This will reduce greenhouse gas emissions by 700,000 metric tons over three years, equivalent to taking 115,000 fossil fuel cars off the road. Nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades.

California Code of Regulations (CCR) Title 24, Part 11

CCR Title 24, Part 11: *California Green Building Standards* (Title 24) was developed in response to continued efforts to reduce energy, water, and material consumption. The most current version is the 2019 California Green Building Standards Code (CalGreen), which became effective on January 1, 2020. One focus of CCR Title 24, Part 11 is clean air vehicles and increasing requirements for electric vehicle (EV) charging infrastructure, which would reduce pollutant emissions.

California Renewable Portfolio Standard

Senate Bill 1078 (SB 1078), enacted in 2002, required retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. In 2006, Senate Bill 107 (SB 107) changed the target date to 2010. Executive Order S-14-08, signed on November 2008, changed the State's Renewable Energy Standard to 33 percent renewable energy by 2020. The executive order was codified by Senate Bill X1-2. Finally, Executive Order S-21-09 directed the ARB to adopt regulations by July 31, 2010 to enforce S-14-08.

Senate Bill 350

Senate Bill 350 (SB 350), the Clean Energy and Pollution Reduction Act, was enacted in 2015 and includes aggressive clean energy goals in an effort to address climate change. The law creates new clean energy, clean air, and GHG reduction goals for 2030. SB 350 adopts a GHG reduction target of 40 percent below 1990 levels by setting targets for efficiency and renewable electricity, primarily in the energy and transportation sectors. The Act is part of a larger effort to reduce GHG emissions to 80 percent below 1990 levels by 2050. To implement SB 350, the Energy Commission is working closely alongside the California Public Utilities Commission (CPUC) and the ARB. Additionally, SB 350 tasks states agencies with studying and identifying barriers to, and opportunities for, utilizing clean, renewable energy in low-income communities (California Energy Commission, 2020a).

Senate Bill 100

Senate Bill 100 (SB 100), officially known as "The 100 Percent Clean Energy Act of 2018," requires that public utilities, including electric corporations, must design renewable energy portfolios so that at least 50 percent of all retail sales by 2050 are generated from renewable energy sources. Additionally, incremental goals for 2024 and 2027 are established to monitor progress leading to the final target deadline (California Legislative Information, 2020a).

Assembly Bill 32

In 2006, the California State Legislature adopted Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006. AB 32 requires ARB to adopt rules and regulations that would achieve GHG emissions equivalent to statewide levels in 1990 by 2020 through an enforceable statewide emission cap which will be phased in starting in 2012. Emission reductions shall include carbon sequestration projects that would remove carbon from the atmosphere and best management practices that are technologically feasible and cost effective.

ARB's AB 32 Scoping Plan, which was adopted in 2009, proposes a variety of measures including strengthening energy efficiency and building standards; targeted fees on water and energy use; a market-based cap-and-trade system; achieving a 33 percent renewable energy mix; and a fee

regulation to fund the program. The 2014 update to the Scoping Plan identifies strategies moving beyond the 2020 targets to 2050.

The cap and trade program established under Scoping Plan sets a statewide limit on sources responsible for 85 percent of California’s GHG emissions, and has established a market for long-term investment in energy efficiency and cleaner fuels since 2012.

Assembly Bill 1493

Assembly Bill 1493 (AB 1493), Vehicular emissions: greenhouse gases, enacted in 2002, directed the ARB to achieve the maximum feasible and cost-effective reduction of GHG emissions from new passenger vehicles manufactured in the 2009 model year or later. In setting reduction targets, the ARB had to consider the technological feasibility of regulations, impacts on the state’s economy, and industry-specific metrics (California Legislative Information, 2020b). The ARB adopted the regulations (sometimes known as the “Pavley regulations”) in 2005. After years of litigation and negotiations, the Pavley regulations became effective in 2009 for the 2012 through 2016 model years and the ARB continues to develop standards for later years (ARB, 2021).

Low Carbon Fuel Standard

The Low Carbon Fuel Standard (LCFS), adopted in 2009 and implemented in 2011, is designed pursuant to California AB 32 and Executive Order S-01-07. The LCFS is one of nine action measures to reduce California’s GHG emissions and emissions that cause climate change and smog-forming pollutants by improving vehicle technology, improving fuel efficiency, and increasing alternative transportation options. The LCFSs encourage production and use of clean low-carbon fuels across the state and establish a ten percent reduction in carbon intensity of fuel products by 2020. Moreover, providers of transportation fuels in the state must meet LCFS carbon intensity standards for each annual compliance period. The ARB administers the LCFS (California Air Resources Board, 2020a).

California Air Resources Board (ARB) Advanced Clean Cars Regulation

The Advanced Clean Cars regulation was adopted in 2012 by the ARB in an effort to reduce emissions from passenger vehicles. Regulations were developed in coordination with the USEPA and NHTSA, and aim to control criteria pollutants and GHG emissions. The program aims to promote the development of environmentally advanced cars that promote high performance while also reducing smog-forming pollution and GHG emissions (California Air Resources Board, 2020b).

ARB - Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

The ARB Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling¹³ was adopted to reduce public exposure to particulate matter and associated toxic air contaminants by establishing restrictions, emissions standards, and other requirements for heavy-duty diesel engines. The regulation applies to any person, business, or agency that operates diesel-fueled vehicles within the State of California. A primary requirement is that drivers may not idle diesel engines for greater than five minutes at any location.¹⁴

¹³ 13 CCR § 2485.

¹⁴ 13 CCR § 2485(c)(1)B).

ARB - Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles

Title 13, § 2025, Article 4.5 aims to reduce emissions of diesel particulate matter, NO_x, and other criteria pollutants. The regulation applies to any owner or operator of heavy-duty vehicles that operate on diesel fuel, dual fuel, or alternative diesel fuel, in the state of California. Owners must comply with the best available control technology (BACT) requirements of § 2025(f) to reduce emission of harmful pollutants and further the State's goals to fight climate change (California Air Resources Board, 2020c).

Sustainable Communities and Climate Protection Act of 2008- SB 375

SB 375 promotes the State's climate goals by helping reduce GHG emissions through coordinated transportation, housing, and land use planning. Under SB 375, the ARB creates regional targets for GHG reductions from passenger vehicles for 2020 and 2035 for the 18 metropolitan planning regions. The targets were last updated in 2018. In accordance with SB 375, each MPO must develop a Sustainable Communities Strategy (SCS) that would allow the region to meet the ARB's targets. Additionally, SB 375 provides incentives to encourage sustainable development, including CEQA exemptions (California Air Resources Board, 2020d).

2012-2035 Regional Transportation Plan/Sustainable Communities Strategy

In compliance with SB 375, the Southern California Association of Governments (SCAG) adopted its 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS): Towards a Sustainable Future. The most recent update to the plan was adopted in September 2020, and includes a planning vision through 2045. A primary goal of the plan is to promote mobility and transportation services across the SCAG region, and in turn, meet goals set by the ARB. The RTP/SCS applies to six counties under SCAG's jurisdiction; Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The SCAG RTP/SCS addresses air quality challenges, transportation challenges, potential investment opportunities, and a financial plan identifying funds available to support the region's plans. The plan has an emphasis on adopting land use strategies that promote urban infill growth; walkable, mixed-use communities; and energy-efficient housing types such as townhomes and smaller single-family homes (Southern California Association of Governments, 2020).

Assembly Bill 758

Assembly Bill 758 (AB 758), adopted in 2009, requires the California Energy Commission (CEC) to develop a comprehensive program to achieve greater energy savings in the state's residential and nonresidential buildings. AB 758 requires publicly-owned electric utilities to implement energy efficiency programs that encourage energy savings in GHG reductions and report its implementation status to the state. Programs may include, but are not limited to, upgrading infrastructure or providing consumers with information on energy usage (California Legislative Information, 2020c).

Senate Bill 1389

Senate Bill 1389 (SB 1389), adopted in 2002, requires the CEC to develop an integrated energy policy report on or before November 2003, and every two years thereafter. The bill requires the commission to conduct assessments and forecasts to evaluate energy supply, production, distribution, demand and price (California Legislative Information, 2020d). The most recent report was completed in February 2019 and includes, "an integrated assessment of major energy trends and issues facing

California’s electricity, natural gas, and transportation fuel sectors.” The report also provides policy guidance to conserve natural resources, protect the environment, and ensure adequate energy supplies while furthering the state’s economic growth and protection public health (California Energy Commission, 2020b).

California Environmental Quality Act

Appendix F of the CEQA Guidelines, titled Energy Conservation, identifies the state’s goals of conserving energy and presents means of achieving the goal, including decreased per capita energy consumption, decreased reliance on natural gas, and increasing reliance on renewable energy. To ensure that energy implications are considered when assessing proposed projects, CEQA requires that EIRs discuss potential energy impacts with an emphasis on reducing inefficient consumption of energy. Appendix F details the manner in which impacts to energy must be addressed in various parts of an EIR, including, but not limited to, the project description, mitigation measures, and alternatives.

Assembly Bill 1109

California Assembly Bill 1109 (AB 1109), also known as the Lighting Efficiency and Toxics Reduction Act, requires reductions in energy usage for lighting and is structured to reduce lighting electrical consumption by (1) at least 50percent from 2007 levels for indoor residential lighting, and (2) at least 25percent from 2007 levels for indoor commercial and all outdoor lighting by 2018.

Senate Bill 1368

Senate Bill 1368 (SB 1368) is the companion Bill of AB 32 and was adopted September, 2006. SB 1368 requires the CPUC to establish a performance standard for baseload generation of GHG emissions by investor-owned utilities by February 1, 2007 and for local publicly-owned utilities by June 30, 2007. These standards could not exceed the GHG emissions rate from a baseload combined-cycle, natural gas-fired plant. Furthermore, the legislation states that all electricity provided to the State, including imported electricity, must be generated by plants that meet the standards set by CPUC and California Energy Commission.

City of Bradbury Municipal Code

Title XVII Chapter 11 of the Municipal Code addresses Small Residential Rooftop Solar Systems. The purpose of the chapter is to adopt an expedited, streamlined solar permitting process that complies with the Solar Rights Act and AB 2188 (Chapter 521, Statutes 2014) to achieve timely and cost-effective installations of small residential rooftop solar energy systems. It encourages the use of solar systems by removing unreasonable barriers, minimizing costs to property owners and the City, and expanding the ability of property owners to install solar energy systems. The Chapter allows the City to achieve these goals while protecting the public health and safety (City of Bradbury, 2020a).

Title XVII Chapter 14 of the Municipal Code allows for Electric Vehicle Charging Stations. It promotes and encourages the use of electric vehicles in the city by creating an expedited, streamlined permitting process for electric vehicle charging stations while promoting public health and safety and preventing specific adverse impacts in the installation and use of such charging stations (City of Bradbury, 2020b).

City of Bradbury General Plan (2012-2030 Update)

The General Plan states, “the City will incorporate, at a minimum, the adoption of the State Building Codes and Green Building Codes which include requirements and techniques to conserve energy consumption and reduce the use of nonrenewable energy resources.”

The following energy-related goals, policies and actions, for the conservation of local natural resources to the greatest extent possible, are included in the General Plan:

- | | |
|-------------------------------|---|
| Conservation Goal 5 | Protect Bradbury’s environment through the use of renewable energy resources. |
| Conservation Policy 2 | Assist residents in developing compatible renewable resources and identifying funding sources. |
| Conservation Action 10 | Create and maintain renewable energy guidelines for residents. |
| Conservation Action 18 | Adopt ordinances that require new development to utilize techniques and equipment that reduce consumption of non-renewable resources. |

3.5.2 Existing Setting

Electricity

Electricity is supplied to residents and businesses in Bradbury by Southern California Edison. SCE’s electricity sources in 2019, the latest year for which data are available, were 35 percent renewable including 16 percent solar and 12 percent wind; eight percent large hydroelectric; 16 percent natural gas, eight percent nuclear, and 33 percent unspecified (SCE, 2020). SCE would provide electricity to the project site from existing electrical service lines.

Natural Gas

More than 90 percent of the natural gas used in California is produced from basins in Texas and New Mexico. Southern California Gas Company (SoCalGas) has a “network of transmission pipelines and four interconnected storage fields to deliver natural gas to nearly 6 million residential and business customers. The gas transmission system extends from the Colorado River on the east of SoCalGas’ approximately 20,000 square mile service territory, to the Pacific Coast on the west, and from Tulare County to the north, to the United States/Mexico border to the south supporting 21 million consumers of Southern California. SoCalGas operates four storage facilities that interconnect with its gas transmission system. These storage facilities – Aliso Canyon, Honor Rancho, La Goleta, and Playa del Rey – are located near the primary load centers of the SoCalGas system” (SoCalGas, 2019). In 2017, residential natural gas consumption in Los Angeles County was 1116.125569 million therms.¹⁵ This is equivalent to 1.12×10^{14} BTU per year. The countywide average per-capita consumption¹⁶ would be 10,891 kiloBTU (kBTU) per year.

¹⁵ Data from California Energy Commission, Gas Consumption by County. Available at <http://ecdms.energy.ca.gov/gasbycounty.aspx>. Downloaded June 19, 2019.

¹⁶ 2010 and 2018 Los Angeles County populations are 9,818,605 (U.S. Census, <https://www.census.gov/prod/cen2010/doc/dpsf.pdf>) and 10,283,729 (SCAG, 2019, p. 3), respectively.

Transportation Energy¹⁷

According to the CEC, transportation accounted for nearly 37 percent of California’s total energy consumption in 2014. In 2018, motor vehicles in Los Angeles County consumed 3.38 billion gallons of gasoline and 561 million gallons of diesel fuel.¹⁸ Petroleum-based fuels currently account for 90percent of California’s transportation energy sources. However, as discussed in previous sections, the state has been working for over a decade on developing strategies and regulations for reducing petroleum use, such as use of alternative fuels and reducing vehicle miles traveled. Although total petroleum fuel use in Los Angeles County increased by 4.1 percent from 2010 through 2018, per-capita gasoline use decreased from 1.15 gallons per day to 1.12 gallons per day, about 2.8 percent. The CEC predicts that the demand for gasoline will continue to decline over the next ten years, and that there will be an increase in the use of alternative fuels.

3.5.3 Methods

Construction energy consumption was calculated by methods provided in **Appendix W.1**. For the operational phase, the California Emissions Estimator Model (CalEEMod) was used to calculate natural gas, electricity (used onsite and for water conveyance), and vehicle miles traveled after project buildout. CalEEMod inputs and outputs are in **Appendix W.2**.

3.5.4 Thresholds of Significance

Appendix G of the CEQA Guidelines specifies two criteria for evaluating the significance of energy resources:

- a) Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?**
- b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?**

CEQA requires that EIRs include a discussion of the potential energy impacts of a proposed project, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy. Public Resources Code § 21000(b)(3) states that an Environmental Impact Report (EIR) must discuss “mitigation measures proposed to minimize significant effects on the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy.” CEQA Guidelines § 15126.4(a)(1)(C) states that energy conservation measures, as well as other appropriate mitigation measures, shall be discussed when relevant. For this analysis, the Appendix G thresholds listed above are relied upon.

Examples of energy conservation measures are provided in Appendix F, *Energy Conservation*, of the CEQA Guidelines. Per Appendix F, “Potentially significant energy implications of a project shall be considered in an EIR to the extent relevant and applicable to the project.”

¹⁷ The following discussion, except where otherwise referenced, is based upon a section of the Paseo Marina Project Draft Environmental Impact Report (Eyestone Environmental, 2019).

¹⁸ Data from California Air Resources Board EMFAC2017 (v1.0.2) Emissions Inventory; values are projections based upon assumptions regarding vehicle population growth and fleet characteristics, and implementation schedules for fuel efficiency standards.

According to the CEQA Guidelines, “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 that provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.”¹⁹ Therefore, the purpose of this analysis is to identify any significant irreversible environmental effects of project implementation that cannot be avoided.

3.5.5 Impact Analysis

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

and

b) **Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?**

Construction

Less Than Significant Impact

The following forms of energy would be expended during construction:

- Diesel fuel for off-road equipment (gallons).
- Electricity to deliver water for use in dust control (kWh).
- Motor vehicle fuel for worker commuting, materials delivery and waste disposal (gallons).

Natural gas is not typically consumed during project construction. It was therefore omitted from the analysis. The number of horsepower-hours of each off-road equipment type was calculated using equipment characteristics and scheduling generated by CalEEMod for the air quality and greenhouse gas emissions analyses (refer to **Section 4.2**). Horsepower hours were multiplied by a fuel use rate of 0.05 gallon of diesel fuel per horsepower hour (SCAQMD, 1993, Table A9-3E). Calculations are shown in in **Appendix W.1**.

During project construction, energy would be consumed in the form of electricity associated with the conveyance and treatment of water used for dust control and, on a limited basis, powering lights, electronic equipment, or other construction activities necessitating electrical power. Due to the fact that electricity usage associated with lighting and construction equipment that utilizes electricity is not easily quantifiable or readily available, the estimated electricity usage during project construction is speculative. Lighting used during project construction would comply with Title 24 standards/requirements (such as wattage limitations). This compliance would ensure that electricity use during project construction would not result in the wasteful, inefficient, or unnecessary use of energy.

¹⁹ CEQA Guidelines § 15126.2(d).

A relatively small amount of electricity would be used for power drills and other equipment during construction. This analysis assumes that an onsite portable diesel-fueled generator would supply the electricity. Air emissions and noise from the generator have been evaluated in **Section 3.2** and **Section 3.11**, respectively.

The analysis did estimate the amount of electricity required to transport and treat water to the project area for ultimate use as a dust suppressant. It was assumed that 3,020 gallons would be needed per acre watered per day (Buonicore and Davis, 1992). CalEEMod assumes that 0.009727 kWh of electricity are required per gallon of delivered water in Southern California (BREEZE Software, 2017, Appendix D, Table 9.2). Calculations are shown in **Appendix W.1**.

Petroleum-based fuels (i.e., gasoline and diesel fuel) would be consumed during the construction phase of the proposed project. Petroleum-based fuels would be consumed via off-road construction vehicles/equipment, gasoline consumed by construction workers traveling to and from the project site, as well as equipment delivery and hauling of building materials to the site. Onroad vehicle miles traveled (VMT) for each construction subphase and each of the three trip types were calculated from results of the CalEEMod modeling. It was assumed that worker commuter vehicles were gasoline-powered and the remainder were diesel-powered. Composite fuel efficiencies (in miles per gallon) for gasoline and diesel vehicles in the South Coast Air Basin were calculated with the ARB EMFAC2021 model. Finally, VMT values were divided by fuel efficiencies to obtain fuel volumes used for construction. Calculations are shown in **Appendix W.1**.

The results of the construction energy calculations are summarized in **Table 3.5-1**, *Estimated Construction Energy Requirements*.

Table 3.5-1
ESTIMATED CONSTRUCTION ENERGY REQUIREMENTS

Category	Units	Value
Offroad Equipment	Gallons diesel fuel	75,712
Electricity for Water Conveyance	Kilowatt-hours	49,938
Worker Commuting	Gallons gasoline	6,743
Vendor Deliveries	Gallons diesel fuel	102

During project construction, trucks and construction equipment would be required to comply with the ARB's anti-idling regulations. ARB's In-Use Off-Road Diesel-Fueled Fleets regulation would also apply. Vehicles driven to or from the project site (delivery trucks, construction employee vehicles, etc.) are subject to fuel efficiency standards requirements established by the Federal Government. Therefore, project construction activities regarding fuel use would not result in wasteful, inefficient, or unnecessary use of energy.

Operations

Less Than Significant Impact

The following forms of energy would be expended during project operations:

- Natural gas for space and water heating.
- Electricity for domestic needs, street lighting, and conveyance and treatment of water.
- Gasoline for on-road motor vehicles.

Energy would be consumed during project operations for lighting, electric appliance use, space and water heating, water conveyance, landscaping maintenance, solid waste disposal, and vehicle trips of residents. Results of the CalEEMod calculations are shown in **Table 3.5-2, *Estimated Project Operational Energy Use***.

Table 3.5-2
ESTIMATED PROJECT OPERATIONAL ENERGY USE

Energy Type	Units	Value	Per Capita
Onroad Motor Vehicle Travel	Vehicle miles traveled per year	568,341	13,532
Natural Gas Use	1,000 BTU per year	384,644	9,158
Electricity Use	Kilowatt-hours per year	114,916	2,736

The project would comply with all applicable regulations and codes that require achievement of various levels of energy efficiency in building operation. These include (1) CCR Title 24, Part 6: California’s Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24); and (2) the 2019 CalGreen. Per-capita natural gas consumption would be less than that calculated for 2018. (See above.)

Continued use of energy resources is consistent with the anticipated growth within the city and the general vicinity and would not result in energy consumption requiring a significant increase in energy production for the energy provider. Therefore, the energy demand associated with the project would be less than significant.

Based on the information provided above, the proposed project would have a Less Than Significant Impact regarding wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. The project would also have a Less Than Significant Impact regarding conflict with or obstruction of a state or local plan for renewable energy or energy efficiency.

3.5.6 Mitigation Measures

The project would result in Less Than Significant Impacts. Therefore, no mitigation measures are required.

3.5.7 Level of Significance after Mitigation

Project impacts were determined to be less than significant and no mitigation measures are required.

SECTION 3.6 – GEOLOGY AND SOILS

3.6 Geology and Soils

This section describes the existing geology and soils on the project site and analyzes the potential impacts of existing geotechnical hazards that may adversely affect the proposed project or may be exacerbated by project implementation. Information presented in this section is derived primarily from the Geotechnical Review Report Tentative Tract Map No. 82349 Chadwick Ranch, City of Bradbury Los Angeles County, California (Petra Geosciences, 2019; included as Appendix O to this DEIR), City of Bradbury General Plan Update 2012- 2030 (City of Bradbury, 2014), and the City of Bradbury Emergency Operations Plan (City of Bradbury, 2010). The information on paleontological resources is from a Paleontological Records Search completed by the Los Angeles County Museum of Natural History on September 24, 2019; the Records Search is included as Appendix P of this DEIR.

3.6.1 Relevant Policies and Regulations

Federal

Earthquake Hazards Reduction Act of 1977 (Public Law [PL] 95 – 124), as amended

The Earthquake Hazards Reduction Act (1977 Act) was passed by Congress in 1977 to “...reduce the risks of life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards reduction program.” This Act led to the establishment of the National Earthquake Hazard Reductions Program (NEHRP). In establishing NEHRP, Congress recognized that earthquake-related losses could be reduced through improved design and construction methods and practices, land use controls and redevelopment, prediction techniques and early-warning systems, coordinated emergency preparedness plans, and public education and involvement programs (NEHRP, 2018). Congress thoroughly reviewed and updated the Act in 2004, resulting in the NEHRP Reauthorization Act of 2004, PL 108 – 360 (Reauthorization Act), which was signed into law the same year. The five primary agencies involved in the NEHRP are:

- Federal Emergency Management Agency (FEMA) of the Department of Homeland Security
- National Institute of Standards and Technology (NIST) of the Department of Commerce
- National Science Foundation (NSF)
- United States Geological Survey (USGS).
- The National Institute of Standards and Technology is the NEHRP lead agency (NEHRP, 2018).

State

Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code 2, Division 2, Chapter 7.5 §§ 2625-2630)

The Alquist-Priolo Earthquake Fault Zoning Act was enacted in 1972 to mitigate the hazard of surface fault rupture to structures for human occupancy. The Alquist-Priolo Earthquake Fault Zoning Act's main purpose is to prevent construction of buildings used for human occupancy on the surface trace of active faults. Before a new project is permitted, cities and counties require a geologic investigation to demonstrate that proposed buildings will not be constructed on active faults. The act addresses

only the hazard of surface fault rupture and is not directed toward other earthquake hazards, such as liquefaction or seismically-induced landslides. The law requires the State of California geologist to establish regulatory zones around the surface traces of active faults and to issue appropriate maps. The maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. Local agencies must regulate most development projects within the zones. Projects include all land divisions and most structures for human occupancy (Petra, 2019).

The State of California requires that property sellers or their agents disclose to potential buyers the contents of geotechnical reports, specifically if the property is within an Alquist-Priolo Earthquake Hazard Zone or in an area that has been mapped as having the potential for seismically-induced liquefaction or landslides.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act, was passed in 1990, addresses earthquake hazards other than surface fault rupture. The California Geological Survey designates zones of required investigation for liquefaction and earthquake-induced landslides pursuant to the Act. Geotechnical investigations for structures for human occupancy must evaluate the potentials for liquefaction and/or earthquake-induced landslides for project sites in such zones.

California Earthquake Hazards Reduction Act of 1986

The California Earthquake Hazards Reduction Act (1986 Act) is similar in purpose to the 1977 Act, and was enacted by the State of California with the goal of reducing the earthquake hazard within California to “acceptable levels” through a significant reduction in the number of hazardous buildings and expansion of scientific and engineering studies. The 1986 Act established a coordinated program which was allotted the task of specifying priorities, funding sources and amounts, schedules, and other resources needed to significantly reduce earthquake hazards statewide by January 1, 2000. As part of this program, the State Office of Emergency Services was to:

- Establish an interim state operations center in southern California to coordinate response to a major earthquake. The office shall also develop an operational communications plan for the center based upon an inventory of current communications capabilities and an assessment of structural vulnerabilities (8871.3[a]);
- Undertake a design analysis regarding construction of a permanent state operations center in southern California, including an evaluation of telecommunications and information technology systems for emergency management functions (8871.3[b]); and
- Integrate and coordinate the California Emergency Services Act (Chapter 7 [commencing with § 8550]), the Disaster Assistance Act (Chapter 7.5 [commencing with § 8680]), the Economic Disaster Act of 1984 (Chapter 7.6 [commencing with § 8695]), the Planning and Zoning Law (Title 7 [commencing with § 65000]), the Community Redevelopment Law (Part 1 [commencing with § 33000] of Division 24 of the Health and Safety Code), and the Community Development Financial Assistance and Disaster Project Law (Part 1.5 [commencing with § 34000] of Division 24 of the Health and Safety Code) (8871.5[e]).

California State Building Code (California Code of Regulations Title 24)

Title 24 of the California Code of Regulations, known as the California Building Standards Code (CBSC) or *Title 24*, contains the regulations that govern the construction of buildings in California. The California Building Code (CBC) contains general building design and construction requirements relating to fire and life safety, structural safety, and access compliance. CBC provisions provide minimum standards 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 and certain equipment. Part 2 is pre-assembled with the International Building Code (IBC) with necessary California amendments. The 2019 California Building Code, Part 2, Volume 2, Chapter 16 §1613 contains specific seismic design criteria required for *“Every structure, and portion thereof, including nonstructural components that are permanently attached to structures and their supports and attachments, shall be designed and constructed to resist the effects of earthquake motions in accordance with ASCE 7 “(American Society of Civil Engineers “Minimum Design Loads and Associated Criteria for Buildings and Other Structures”) with few exceptions (CBSC, 2019).*

Local

The 2019 CBC is adopted by reference as §17.01.010 of the City of Bradbury Municipal Code.

3.6.2 Existing Setting

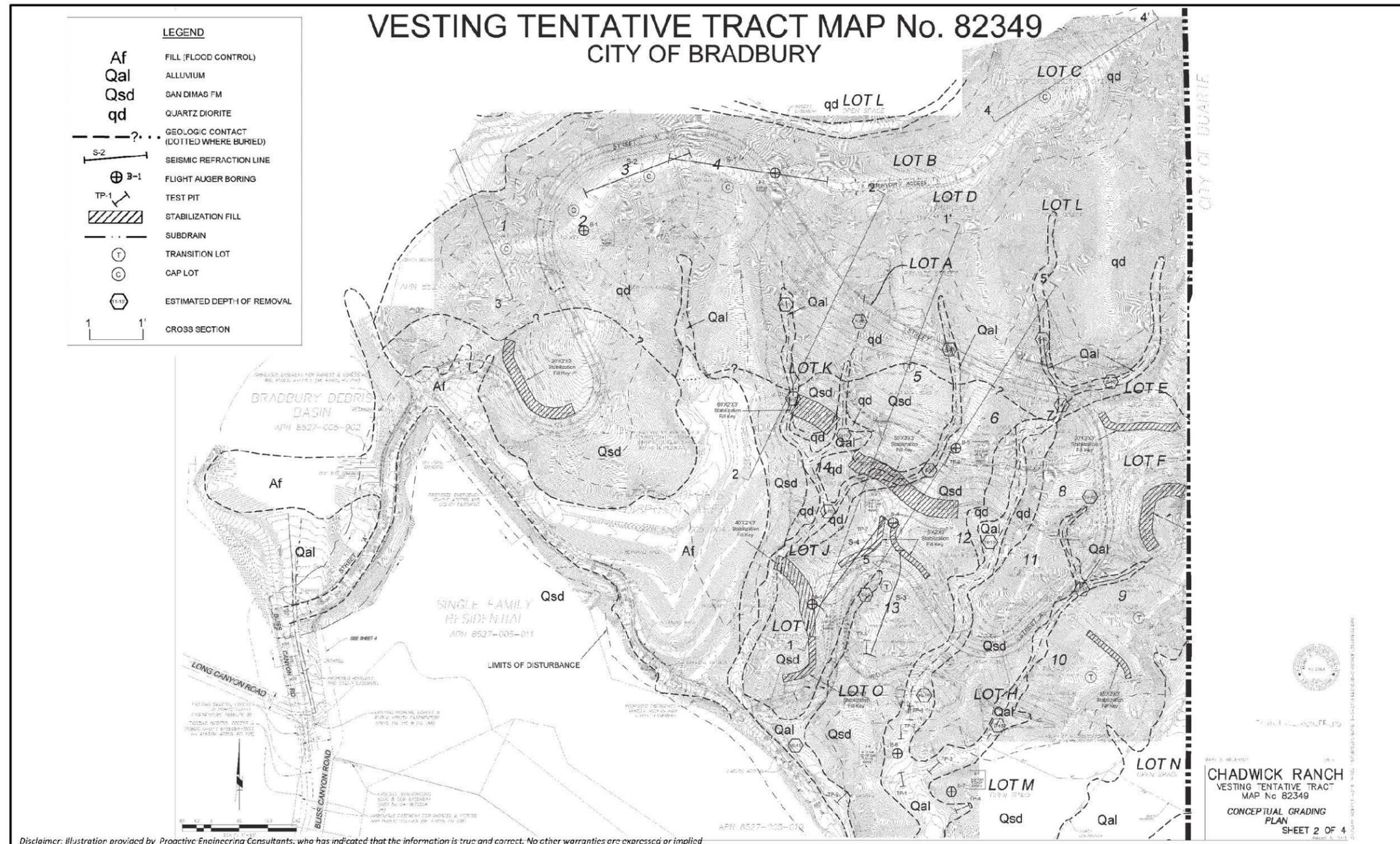
Geologic and Geomorphic Setting

The subject site is located on the northern edge of the Los Angeles Basin within the Peninsular Ranges Geomorphic Province at the southern edge of the San Gabriel Mountains. The San Gabriel River is located 1.5 miles to the west and the topographically prominent Puente Hills are located nine miles to the south of the site.

Based on regional geologic mapping and on a recent subsurface exploration, the subject property is underlain by Cretaceous age (66 to 145 million years before present [mybp]) granitic rocks that are moderately fractured and deeply weathered. In the southern portion of the site, the igneous bedrock is mantled by dissected, older alluvial fan deposits (Pleistocene age, that is, 12,000 ybp to 2.58 mybp), locally referred to as the San Dimas Formation. These deposits consist of gravel, sand, silt, and clay, which is poorly consolidated and moderately to slightly decomposed. This unit varies in thickness from a few feet to as much as 70 to 90 feet. Stream laid alluvial deposits are in the canyon bottoms. These loose, granular materials are derived from near source granitics/fan deposits and are on the order of 15 to 20 feet in maximum depth (Petra Geosciences, 2019, p. 4). Refer to **Figure 3.6-1, Geotechnical Map of Chadwick Ranch Estates**.

Artificial fills (non-engineered), topsoil, alluvium, older alluvial fan deposits, and igneous bedrock (in order from surface to the greatest depth explored) were encountered during the field portion of the geotechnical investigation (Petra Geosciences, 2019, p. 4).

Figure 3.6-1
GEOTECHNICAL MAP OF CHADWICK RANCH ESTATES



Faults and Seismic Hazards

The project site is in a seismically active region. Forty-four faults have been identified within a 100-kilometer radius from the project site; faults within approximately 10 miles of the project site are mapped on **Figure 3.6-2, Active Faults in the Project Region**. Primary earthquake hazards include both surface rupture and ground motion (shaking). Secondary hazards resulting from major earthquakes include liquefaction and seismically induced landslides.

Primary Hazards

Surface Rupture

The State of California has identified faults that are considered capable of producing “surface displacement within the Holocene time (about the last 11,000 years)”. An Alquist-Priolo Earthquake Fault Zone passes through the southernmost part of the project site (refer to **Figure 3.6-3, Alquist-Priolo Fault Zones**).

Ground Motion (Shaking)

Chadwick Ranch is within a seismically active region. The nearest known active faults are presented in **Table 3.6-1, Faults in the Project Region** and on **Figure 3.6-2**.

**Table 3.6-1
FAULTS IN THE PROJECT REGION**

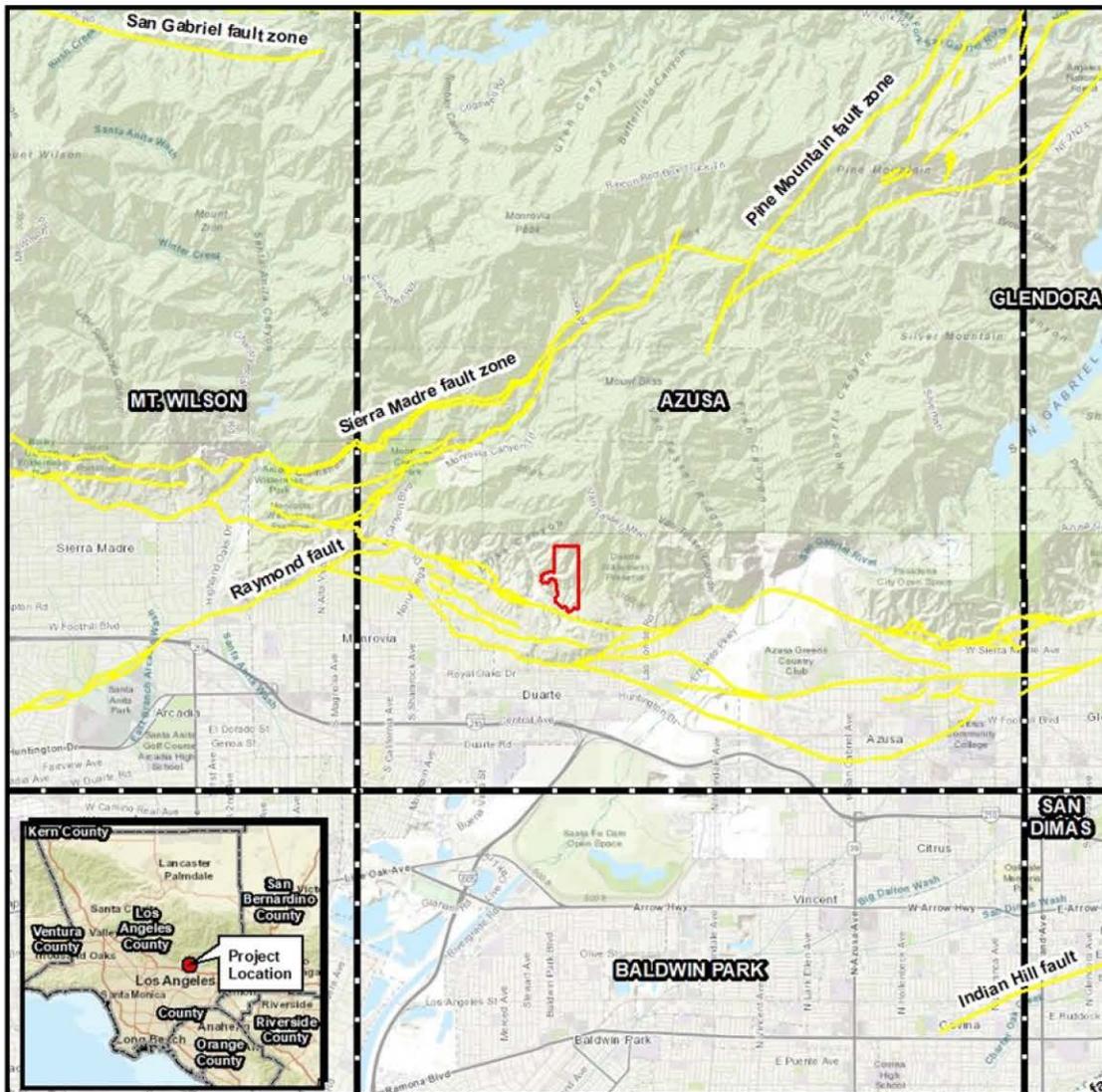
Fault Name	Approximate Distance (miles)
Sierra Madre	1.1
Raymond	2.0
Clamshell-Sawpit	3.4
San Gabriel	7.1
San Jose	8.9
Puente Hills (Los Angeles Segment)	9.2
Elysian Park	9.4
Puente Hills (Coyote Hills Segment)	10.1
San Andreas (Mojave Segment)	20.7

Source: Petra Geosciences 2019, p. 7

The design peak ground acceleration onsite calculated in the geotechnical review report is 0.648g where g is the acceleration of gravity. Ground acceleration of 0.648g correlates with intensity VIII on the Modified Mercalli Intensity (MMI) Scale (Wald et. al., 1999), a subjective scale of how earthquakes are felt by people and the effects of earthquakes on buildings. The MMI Scale is a 12-point scale where Intensity I earthquakes are generally not felt by people; in Intensity XII earthquakes damage is total, and objects are thrown into the air (USGS, 2021).

In an intensity VIII earthquake, damage is slight in specially designed structures; considerable damage occurs in ordinary substantial buildings with partial collapse; and damage is great in poorly built structures. Chimneys, factory stacks, columns, monuments, and walls fall, and heavy furniture is overturned (USGS, 2021).

Figure 3.6-2
ACTIVE FAULTS IN THE PROJECT REGION



Disclaimer: Representations on this map or illustration are intended only to indicate locations of project parameters reported in the legend. Project parameter information supplied by others (see layer credits) may not have been independently verified for accuracy by UltraSystems Environmental, Inc. This map or illustration should not be used for, and does not replace, final grading plans or other documents that should be professionally certified for development purposes.

Path: I:\Gas\vr\gis\Projects\7023_Bradbury\MXD\7023_Bradbury_Active_Faults_2020_01_03.mxd
 Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community, Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBasis, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community, U.S./California Geological Survey, 2006, UltraSystems Environmental, Inc., 2020

Scale: 1:95,040

0 0.75 1.5 Miles

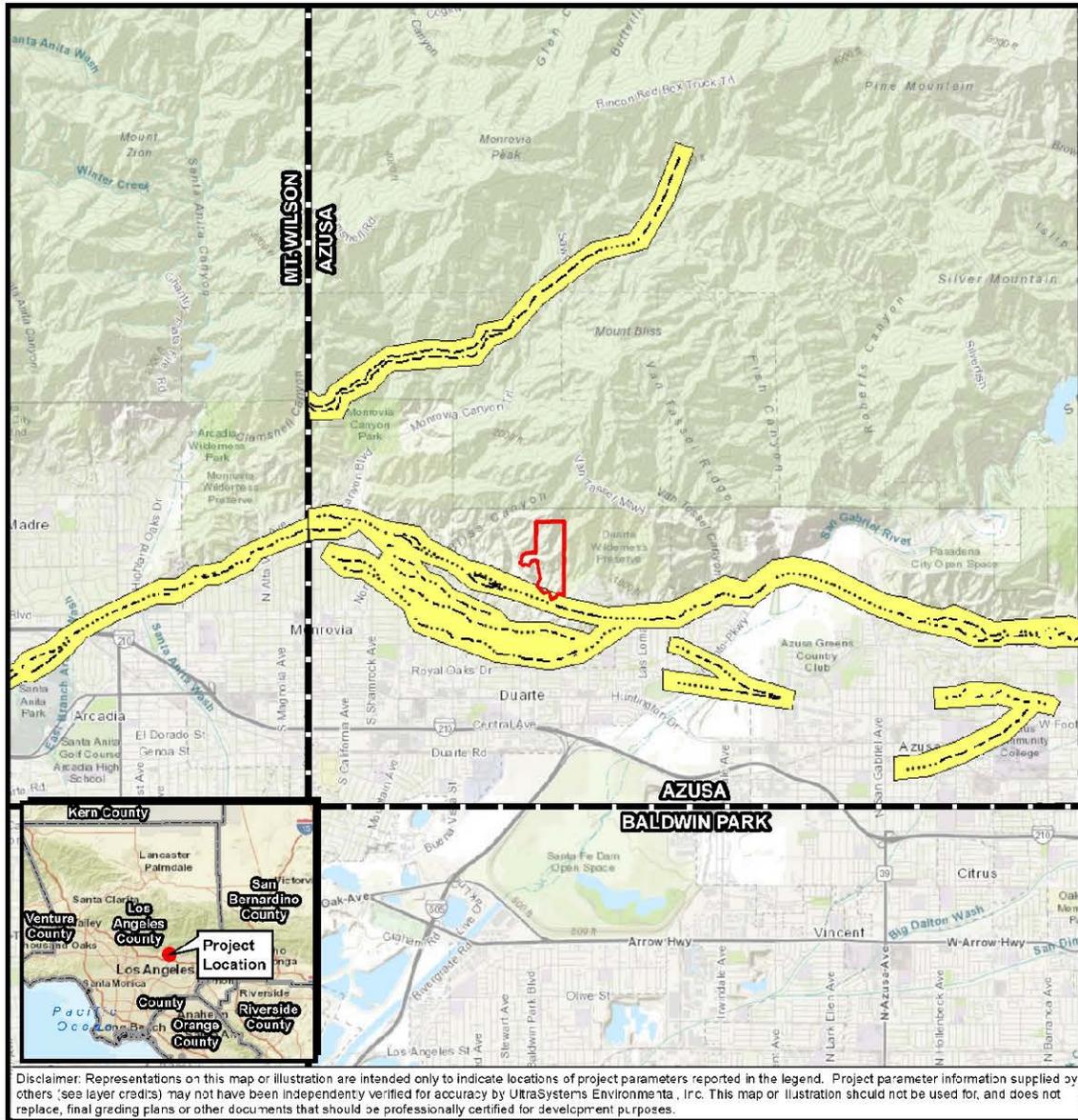
0 0.75 1.5 Kilometers

Legend

- Project Boundary
- Quaternary Fault
- USGS Quadrangle Boundary

Chadwick Ranch Estates Project
Regionally Active Faults

Figure 3.6-3
ALQUIST-PRIOLO FAULT ZONES



Disclaimer: Representations on this map or illustration are intended only to indicate locations of project parameters reported in the legend. Project parameter information supplied by others (see layer credits) may not have been independently verified for accuracy by UltraSystems Environmental, Inc. This map or illustration should not be used for, and does not replace, final grading plans or other documents that should be professionally certified for development purposes.

Path: \\10.0.0.137\gis\Projects\7023_Bradbury\MapDocs\7023_Bradbury_4.7_1_Alquist_Priolo_2020_01_03.mxd
 Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeBCO, IGN, Kartidier, NIT, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community. Scenic: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Taiwan), NGCC, © OpenStreetMap contributors, and the GIS User Community. Seismic Hazard: Program, California Geological Survey, California Department of Conservation; UltraSystems Environmental, Inc., 2020

Scale: 1:80,000

0 0.6 1.2 Miles

0 0.75 1.5 Kilometers

Legend

- Project Boundary
- USGS Quadrangle Boundary
- Alquist-Priolo Fault Traces
- Alquist-Priolo Earthquake Fault Zones

Chadwick Ranch Estates Project

Alquist Priolo Earthquake Fault Zones

Secondary Hazards

Liquefaction and Dynamic Settlement

Strong shaking of loose, saturated sands and silty sands can result in a build-up of pore water pressures. If pore water pressures are sufficient to overcome overburden stresses, a temporary quick condition known as liquefaction can result. This can be manifested as sand boils, lateral spreading, or dynamic settlement.

Potentially liquefiable soils are present on site in the form of loose/soft alluvium, colluvium and non-engineered artificial fill. Bedrock units are not liquefiable. No portion of the developable site area is located in a zone of required investigation for liquefaction (Petra Geosciences, 2019, p. 7; refer to **Figure 3.6-4, Landslides and Liquefaction**).

Seismically Induced Landslides

The site is located within a hillside region and has been identified by the state-mandated Seismic Hazards Mapping Act as requiring investigation for earthquake induced landslides. Stability analyses of selected proposed cut, proposed fill and natural slopes within and adjacent to the proposed grading limits depicted on the Site Plan were performed as part of the geotechnical investigation of the subject Tentative Tract. Pseudo-static slope stability analyses were also performed. The results of these calculations meet or exceed minimum requirements for both static and pseudostatic conditions (refer to **Appendix O**).

Other Geologic Hazards

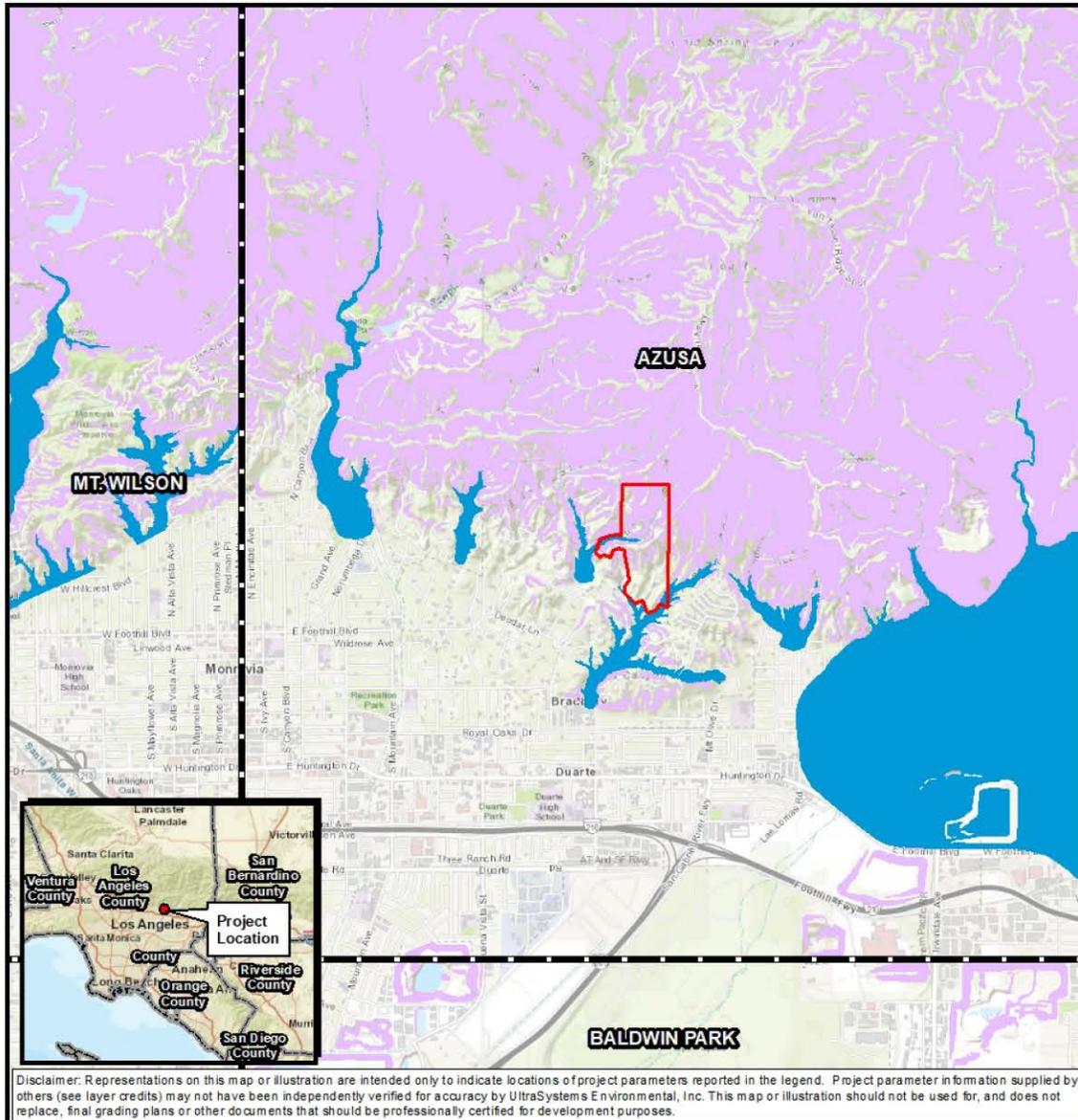
Collapsible Soils

Collapsible soils shrink upon being wetted and/or being subject to a load. A common characteristic of collapsible soils is recent and rapid deposition, usually during brief intense floods, resulting in unstable soil structure. The generally arid conditions of the area cause these deposits to dry quickly in their original condition, without the benefit of further reworking or packing of the sediment grains by water (NRCS, 2004). The geotechnical engineering evaluation determined that soil, non-engineered artificial fill, alluvium, weathered bedrock, and alluvial fan deposits are compressible in their existing state (Petra Geosciences, 2019, p. 9).

Subsidence

The major cause of ground subsidence is the excessive withdrawal of groundwater. Groundwater was not observed in seven borings drilled onsite to depths of up to 65 feet below ground surface (bgs). Part of the proposed development area is over the Main San Gabriel Valley Groundwater Basin; the balance of the development area is not over a groundwater basin (DWR, 2020). The project site is not in an area of land subsidence mapped by the US Geological Survey (US Geological Survey, 2020).

**Figure 3.6-4
LANDSLIDES AND LIQUEFACTION**



Path: \\GIS\svr\GIS\Projects\7023_Bradbury\MXD\7023_Bradbury_4.7-3_Landslide_Liquefaction_2020_01_03.mxd
 Service Layer Credits - Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community, Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community, LA County Assessor, 2015-2016; California Department of Conservation, 2017; UltraSystems Environmental, Inc., 2020

January 03, 2020

Scale: 1:48,000

N

0 2,000 4,000 Feet

0 500 1,000 Meters

- Legend**
- Project Boundary
 - USGS Quadrangle Boundary
 - Earthquake-induced Landslides
 - Liquefaction

**Chadwick Ranch
Estates Project**
Landslides and Liquefaction



Expansive Soils

Expansive soils contain substantial amounts of clay that swells when wetted and shrinks when dried; the swelling or shrinking can shift, crack, or break structures built on such soils. It is anticipated that the majority of onsite soils will possess very low (expansion index [E.I.] ≤ 20) to low (E.I. 21 - 50) expansion potential. However, some alluvial, colluvium and surface soils and the finer-grained materials within the site may possess medium (E.I. 51 - 90) and possibly even high (E.I. 91 - 130) expansion potential.

3.6.3 Methods

Petra Geosciences prepared a Geotechnical Review Report of the project dated October 9, 2019. A complete copy of the report is provided herein as Appendix O. The report was based on their interpretation of primary and secondary data. Primary data were obtained via the conduct of a reconnaissance of the project site to ascertain what readily identifiable geologic and soils conditions exist on the project site and to prepare a geologic basemap. A subsurface exploration program was also undertaken. It consisted of seven flight auger borings (B-1 through B-7), and nine backhoe test pits (TP-1 through TP-9). The exploratory borings and test pits were observed and logged. The results of the exploratory borings and test pits are presented in Appendix I of the report provided herein as Appendix O. The approximate locations of the exploratory excavations/soundings are shown on Figure 3.6-1, Geotechnical Map of Chadwick Ranch Estates.

3.6.4 Thresholds of Significance

- a) **Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:**
 - i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**
 - ii) **Strong seismic ground shaking?**
 - iii) **Seismic-related ground failure, including liquefaction?**
 - iv) **Landslides?**
- b) **Would the project result in substantial soil erosion or the loss of topsoil?**
- c) **Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?**
- d) **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?**

- e) **Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?**
- f) **Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

3.6.5 Impact Analysis

- a) **Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:**
 - i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

Less Than Significant Impact

According to the Geotechnical Review Report prepared for the project (Petra Geosciences, 2019, p. 5), included in **Appendix O**, and as shown on **Figure 3.12-2, Alquist-Priolo Fault Zones**, the southernmost portion of the site is located within an Alquist-Priolo Earthquake Fault Zone, the Sierra Madre Fault Zone. This portion of the project site, designated “Lot M”, is planned to be Open Space and would not contain residences. The closest Alquist-Priolo Earthquake Fault Zone to the project site is along the Sierra Madre Fault, located approximately one mile to the south. There are no mapped faults shown on any of the published regional geological maps which cover the subject area, including the *State of California Earthquake Fault Zone Maps* (Petra Geosciences, 2019, p. 6). Project development would not exacerbate hazards arising from surface rupture of a known active fault, and impacts would be less than significant.

- ii) **Strong seismic ground shaking?**

Less Than Significant Impact

The proposed project is located within a seismically active region, susceptible to collapse of structures, buckling of walls, and damage to foundations from strong seismic ground shaking. The project would be constructed in accordance with applicable CBC regulations adopted by the legislature and used throughout the state (Title 24, Part 2, California Code of Regulations). The CBC provides minimum standards to protect property and the public welfare by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic shaking and adverse soil conditions.

The CBC contains provisions for earthquake safety based on factors including occupancy type, the types of soil and rock onsite, and the strength of ground motion with specified probability of occurring at the site. It requires the preparation of project-specific geotechnical reports prepared by a Certified Engineering Geologist or Geotechnical Engineer prior to construction of proposed structures. A project-specific preliminary geotechnical engineering evaluation conducted for the project site. contains seismic design parameters for use in the design and construction of the future residences (Petra Geosciences, 2019, p. 20). Site-specific recommendations provided in the geotechnical report would be incorporated into project plans that are reviewed by building officials

prior to issuance of permits. Graded building pads, foundations, and structures would also be inspected in the field prior to permit signoff to ensure that these requirements are implemented. For these reasons, impacts from strong seismic ground shaking would be less than significant.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact

According to the Preliminary Geotechnical Investigation Report for the project (Petra Geosciences, 2019, p. 7), potentially liquefiable soils are present on site in the form of loose/soft alluvium, colluvium and nonengineered artificial fill. Bedrock units are not liquefiable. However, based on a review of the Seismic Hazard Map for the Azusa Quadrangle, no portion of the developable site area is located in a zone of required investigation for liquefaction. Potentially liquefiable materials would be removed as part of the remedial grading operations as recommended in the project geotechnical review report (Petra Geosciences, 2019, p. 7). Compliance with recommendations in the geotechnical review report would be a condition of approval of a grading permit that would be issued by the City of Bradbury; thus, mitigation is not required to ensure implementation of this recommendation. Impacts related to liquefaction would be less than significant.

iv) Landslides?

Less Than Significant Impact

The site is located within a hillside region and has been identified by the state mandated Seismic Hazards Mapping Act as requiring investigation for earthquake induced landslides. As part of the preparation of the Geotechnical Review Report (see **Appendix O**), Petra Geosciences performed stability analyses of selected proposed cut, proposed fill and natural slopes within and adjacent to the proposed grading limits depicted on the project site plan. Pseudo-static slope stability analyses were performed in accordance with guidelines for preparation of geotechnical reports. The result of these calculations (included in the report) meet or exceed minimum requirements for both static and pseudostatic conditions (Petra Geosciences, 2019 p.7). Therefore, impacts would be less than significant.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact

Project site grading and project construction would involve disturbing and exposing large amounts of soil and thus could cause intense erosion if effective erosion control measures were not used. The project Stormwater Pollution Prevention Plan (SWPPP) would specify construction best management practices (BMPs) to be implemented to avoid and minimize the transport of soil or contaminants offsite during construction activities. BMPs intended to minimize erosion and transport of soil are grouped in two categories:

Erosion control BMPs minimize removal of soil particles from the land surface, such as by water or wind; examples include preservation of existing vegetation, hydraulic mulch, hydroseeding, soil binders, straw mulch, geotextile and mats, slope drains, streambank stabilization, and soil preparation/roughening.

Sediment control BMPs filter out soil particles that have been detached and transported in water; examples include silt fence, sediment basin, check dam, fiber rolls, gravel bag berm, street sweeping and vacuuming, straw bale barrier, storm drain inlet protection, manufactured linear sediment controls, and biofilter bags (CASCA, 2012).

The project site would be developed with a mix of impervious surfaces such as concrete and pavement for local roads and driveways and therefore would not contribute to soil erosion/loss of topsoil. Therefore, impacts would be less than significant.

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

Less Than Significant Impact

Landslides

Landslide hazards due to project development would be less than significant, as substantiated above in the impact analysis for threshold a) iv.

Liquefaction

Liquefaction hazards resulting from project development would be less than significant, as substantiated above in the impact analysis for threshold a).iii.

Lateral Spreading

Lateral spreading is the rapid downslope movement of surface sediment, in a fluid-like flow, due to liquefaction in a subsurface layer. As remedial grading for the project would involve removal of liquefiable soils under the developable parts of the project site, project development would not cause substantial hazards arising from lateral spreading. Impacts in this regard would be less than significant.

Collapsible Soils

The geotechnical engineering evaluation determined that soil, non-engineered artificial fill, alluvium, weathered bedrock, and alluvial fan deposits are compressible in their existing state and would require removal from areas planned to receive fill. The geotechnical Review Report recommends that removals should expose competent, un-weathered bedrock/alluvial fan deposits; and that these materials, once properly moisture conditioned, would be suitable for use as compacted fill (Petra, 2020, p. 9). Hazards from collapsible soils would be a Less Than Significant Impact after compliance with recommendations of the geotechnical engineering evaluation report and no mitigation is warranted.

Subsidence

The major cause of ground subsidence is the excessive withdrawal of groundwater. Groundwater was not observed in seven borings drilled onsite to depths of up to 65 feet below ground surface (bgs). Several of the proposed building pads would be over the Main San Gabriel Valley Groundwater Basin; the building pads in the northern part of the proposed development area would not be over a

groundwater basin (DWR, 2020). The project site is not in an area of land subsidence mapped by the US Geological Survey (US Geological Survey, 2020). Project development would not exacerbate ground subsidence and impacts would be less than significant.

d) 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?

Less Than Significant Impact

It is anticipated that the majority of onsite soils will possess very low (expansion index [E.I.] ≤ 20) to low (E.I. 21 - 50) expansion potential. However, some alluvial, colluvium and surface soils and the finer-grained materials within the site may possess medium (E.I. 51 - 90) and possibly even high (E.I. 91 - 130) expansion potential. For soils having medium to high expansion potential, consideration should be given to utilizing post-tensioned foundations. For preliminary design purposes, the following foundation design recommendations for both conventionally reinforced and post-tensioned foundations systems are presented.

The 2019 CBC does not require special design of foundations and slabs-on-ground in order to resist potential effect of expansive soils for soils characterized as having very low (E.I. ≤ 20) expansion potential. The geotechnical review report recommends that design of foundations and slabs-on-ground for soils classified as Low (E.I. 21-- 50) expansion potential (i.e., considered to be expansive per Section 1803.5.3 of the 2019 CBC) should be performed in accordance with the procedures outlined in Sections 1808.6.1 and 1808.6.2 of the 2019 CBC, respectively. Section 1808.6.1 of the 2019 CBC requires that foundations placed on or within the active zone of expansive soils shall be designed to resist differential volume changes and to prevent structural damage to the supported structure (Petra Geosciences, 2019, p. 22). Project design and construction would comply with recommendations of the geotechnical review report, and impacts related to expansive soils would be less than significant without mitigation.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Less Than Significant Impact

The proposed project would employ a wastewater treatment system consisting of a septic tank utilizing one or more supplemental treatment components to treat the effluent prior to discharge to the dispersal field. Supplemental treatment may include systems to reduce nitrogen concentration of the effluent, provide disinfection, or both. This type of wastewater treatment system is known as a Non-Conventional Onsite Wastewater Treatment System (NOWTS). Per the Los Angeles County Department of Public Health (Department), NOWTS apply to domestic wastewater systems producing under 10,000 gallons per day (gpd), including single family homes, where wastewater is primarily generated from toilets, sinks, clothes washers, bathtubs and showers. The granting of an approval for a domestic NOWTS by the Department grants an exemption from obtaining a Waste Discharge Requirement (WDR) permit from the local regional water quality control board. The project proponent is presently engaged in the feasibility study component of Los Angeles County Department of Public Health NOWTS approval process. Therefore, impacts in this regard would be less than significant without mitigation.

f) **Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

Less Than Significant Impact with Mitigation Incorporated

The information in this section is from a Paleontological Records Search completed by the Los Angeles County Museum of Natural History on September 24, 2019; the Records Search is included as **Appendix P** of this DEIR.

A paleontological records search for the project site, completed by the Los Angeles County Museum of Natural History on September 18, 2019 (McLeod, 2019), is included as **Appendix P** to this Draft EIR.

McLeod (2019:1) states that “most of the project area, the northern portion, has exposures of plutonic igneous rocks that will not contain recognizable vertebrate fossils.” The slopes of the lower foothills do contain surface deposits of older Quaternary gravels that, at shallow depths, may contain significant fossil remains; mastodon and mammoth specimens have been found regionally in gravel pits in older Quaternary deposits (McLeod 2019:2) in Irwindale to the south and Pasadena to the west of the project site. The Bradbury and Spinks Canyon drainages do contain surface deposits of younger Quaternary Alluvium, which may also contain significant vertebrate fossils at shallow depths.

Therefore, deeper excavations in the Quaternary Alluvium could encounter fossil vertebrate specimens. Project grading and trenching activities could damage paleontological resources. This impact could be significant without mitigation; therefore, mitigation measure GEO-1 below is recommended.

3.6.6 Mitigation Measure

MM GEO-1 Before the commencement of ground disturbance, the project proponent shall retain a qualified paleontologist to be on-call for the duration of ground-disturbing activities. If paleontological resources are uncovered during construction activities, the contractor shall halt construction activities in the immediate area and notify the City of Bradbury. The on-call paleontologist shall be notified and afforded the necessary time and funds to recover, analyze, and curate the find(s). Subsequently, the paleontologist shall remain onsite periodically for the duration of the ground disturbance to ensure the protection of any other resources that may be in the area.

3.6.7 Level of Significance after Mitigation

In the event of an unexpected discovery, implementation of **Mitigation Measure GEO-1** would ensure paleontological resources or unique geologic features are not significantly affected, and impacts would be less than significant after mitigation. With adherence to regulatory requirements and the implementation of Mitigation Measure **GEO-1**, the proposed project would have Less Than Significant Impacts related to geology and soils.

SECTION 3.7 – GREENHOUSE GAS EMISSIONS

3.7 Greenhouse Gas Emissions

Gases that trap heat in the atmosphere are called greenhouse gases (GHGs), since they have effects that are analogous to the way in which a greenhouse retains heat. GHGs are emitted by both natural processes and human activities. The accumulation of GHGs in the atmosphere regulates the earth's temperature. The State of California has undertaken initiatives designed to address the effects of GHG emissions, and to establish targets and emission reduction strategies for GHG emissions in California. Activities associated with the project, including construction and operational activities, would have the potential to generate GHG emissions.

The principal GHGs are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride, perfluorocarbons, hydrofluorocarbons, and water vapor. Associated with each GHG species is a "global warming potential" (GWP), which is a value used to compare the abilities of different GHGs to trap heat in the atmosphere. GWPs are based on the heat absorbing ability of each gas relative to that of CO₂, as well as the decay rate of each gas (the amount removed from the atmosphere over a given number of years). The GWPs of CH₄ and N₂O are 25 and 298, respectively (ARB, Undated). "Carbon dioxide equivalent" (CO₂e) emissions are calculated by weighting each GHG compound's emissions by its GWP and then summing the products. To account for the varying warming potential of different GHGs, GHG emissions are often quantified and reported as CO₂ equivalents (CO₂e).

3.7.1 Relevant Policies and Regulations

Federal

The federal government is taking several common-sense steps to address the challenge of climate change. The U.S. Environmental Protection Agency (USEPA) collects several types of GHG emissions data. These data help policy makers, businesses, and USEPA track GHG emissions trends and identify opportunities for reducing emissions and increasing efficiency. USEPA has been collecting a national inventory of GHG emissions since 1990, and in 2009 established mandatory reporting of GHG emissions from large GHG emissions sources.

Until January 19, 2017 the USEPA's regulatory initiatives included USEPA's vehicle GHG rules and Clean Power Plan; partnering with the private sector through voluntary energy and climate programs; and reducing USEPA's carbon footprint with the federal GHG requirements and USEPA's Strategic Sustainability Performance Plan.

The recently concluded Trump administration had a different strategy in relation to climate change and took the USEPA in a new direction (USEPA, 2017). Executive Order on Energy Independence (WH, 2017) specifically addressed revisions in the Clean Power Plan and standards of performance for GHGs for new stationary sources; CH₄ standards for the oil and gas sector; and light-duty vehicle GHG standards. On January 20, 2021, President Biden issued Executive Order 13990 (White House, 2021), which rescinded the Executive Order on Energy Independence, along with several other executive orders concerning energy, climate, and environmental protection. Among the stated goals of Executive Order 13990 are "to reduce greenhouse gas emissions" and "to bolster resilience to the impacts of climate change." Various federal agencies are restoring prior regulations and developing new ones to further these policies.

State

Through several pieces of legislation, gubernatorial executive orders, and administrative regulations that relate to GHG emissions and climate change, California has set aggressive goals for GHG reductions within the state. Per Senate Bill (SB) 97, the California Natural Resources Agency adopted amendments to the CEQA Guidelines, which address the specific obligations of public agencies when analyzing GHG emissions under CEQA to determine a project's effects on the environment. However, neither a threshold of significance nor any specific mitigation measures are included or provided in these CEQA Guideline amendments. The major state provisions for reducing GHG emissions are as follows.

Assembly Bill 32 (AB 32)

The California Global Warming Solutions Act of 2006, widely known as AB 32, requires the California Air Resources Board (ARB) to develop and enforce regulations for the reporting and verification of statewide GHG emissions. The ARB is directed to set a statewide GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner. The heart of the bill is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020.

The AB 32 Scoping Plan (Scoping Plan) (ARB, 2008) contains the main strategies to achieve the 2020 emissions cap. The Scoping Plan was developed by the ARB with input from the Climate Action Team and proposes a comprehensive set of actions designed to reduce overall carbon emissions in California, improve the environment, reduce oil dependency, diversify energy sources, and enhance public health while creating new jobs and improving the state's economy. The GHG reduction strategies contained in the Scoping Plan include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system.

In May 2014, the ARB adopted the First Update to the Climate Change Scoping Plan (ARB, 2014). This update identifies the next steps for California's leadership on climate change. The first update to the initial Scoping Plan describes progress made to meet the near-term objectives of AB 32 and defines California's climate change priorities and activities for the next several years. It also frames activities and issues facing the state as it develops an integrated framework for achieving both air quality and climate goals in California beyond 2020.

In the original Scoping Plan, the ARB approved a total statewide GHG 1990 emissions level and 2020 emissions limit of 427 million metric tons (MT) of CO₂e. As part of the update, the ARB revised the 2020 Statewide limit to 431 million MT of CO₂e, an approximately 1percent increase from the original estimate. The 2020 business-as-usual²⁰ forecast in the update is 509 million MT of CO₂e. The state would need to reduce those emissions by 15.3percent to meet the 431 million MT of CO₂e 2020 limit.

In November 2017, the ARB published the 2017 Scoping Plan (ARB, 2017), which builds upon the former Scoping Plan and Update by outlining priorities and recommendations for the state to achieve a 40percent reduction in GHGs by 2030, compared to 1990 levels. The major elements of the

²⁰ Business-as-usual (BAU) in this context is the assumption that population and economic growth are the same, whether or not an effort is made to reduce GHG emissions, and that none of the measures engendered by AB 32 and other government action are implemented.



framework proposed are enhancement of the Renewables Portfolio Standard (RPS) and the Low Carbon Fuel Standard (LCFS); a Mobile Source Strategy, Sustainable Freight Action Plan, Short-Lived Climate Pollutant Reduction Strategy, Sustainable Communities Strategies, and a Post-2020 Cap-and-Trade Program; a 20percent reduction in GHG emissions from the refinery sector and an Integrated Natural and Working Lands Action Plan.

Executive Order B-30-15

On April 29, 2015, Governor Edmund G. Brown Jr. issued an executive order to establish a California GHG reduction target of 40percent below 1990 levels by 2030. This new emission reduction target is a step toward the ultimate goal of reducing emissions by 80 percent below 1990 levels by 2050. The executive order also specifically addresses the need for climate adaptation and directs state government to:

- Incorporate climate change impacts into the state’s Five-Year Infrastructure Plan.
- Update the Safeguarding California Plan – the state climate adaption strategy – to identify how climate change will affect California infrastructure and industry, and what actions the state can take to reduce the risks posed by climate change.
- Factor climate change into state agencies' planning and investment decisions.
- Implement measures under existing agency and departmental authority to reduce GHG emissions.

California Senate Bills 1078, 107, 2, and 350; Renewables Portfolio Standard

Established in 2002 under California SB 1078 and accelerated in 2006 under California SB 107, California’s RPS requires retail suppliers of electric services to increase procurement from eligible renewable energy resources by at least 1percent of their retail sales annually, until they reach 20percent by 2010.

On April 2, 2011, Governor Brown signed California SB 2 to increase California’s RPS to 33percent by 2020. This new standard also requires regulated sellers of electricity to procure 25percent of their energy supply from certified renewable resources by 2016. Most recently, Governor Brown signed into legislation SB 350 in October 2015, which requires retail sellers and publicly owned utilities to procure 50percent of their electricity from eligible renewable energy resources by 2030.

California Senate Bill 100 (Chapter 312, Statutes of 2018)

Senate Bill 100 (SB 100) sets a 2045 goal of powering all retail electricity sold in California and state agency electricity needs with renewable and zero-carbon resources — those such as solar and wind energy that do not emit climate-altering greenhouse gases. SB 100 updates the state’s Renewables Portfolio Standard to ensure that by 2030 at least 60 percent of California’s electricity is renewable. SB 100 requires the Energy Commission, Public Utilities Commission and Air Resources Board to use programs under existing laws to achieve 100 percent clean electricity.



Low Carbon Fuel Standard

California Executive Order S-01-07 (January 18, 2007) requires a 10percent or greater reduction in the average carbon intensity for transportation fuels in California regulated by the ARB. The ARB identified the LCFS as a Discrete Early Action item under AB 32, and the final resolution (09-31) was issued on April 23, 2009.

Sustainable Communities and Climate Protection Act (SB 375)

California’s Sustainable Communities and Climate Protection Act, also referred to as SB 375, became effective January 1, 2009. The goal of SB 375 is to help achieve AB 32’s GHG emissions reduction goals by aligning the planning processes for regional transportation, housing, and land use. SB 375 requires the ARB to develop regional reduction targets for GHGs and prompts the creation of regional plans to reduce emissions from vehicle use throughout the state. California’s 18 Metropolitan Planning Organizations (MPOs) have been tasked with creating Sustainable Community Strategies in an effort to reduce the region’s vehicle miles traveled (VMT) in order to help meet AB 32 targets through integrated transportation, land use, housing and environmental planning. Pursuant to SB 375, the ARB set per-capita GHG emissions reduction targets from passenger vehicles for each of the state’s 18 MPOs. On September 23, 2010, the ARB issued a regional 8percent per capita reduction target for the planning year 2020, and a conditional target of 13percent for 2035.

California Green Building Standards (CALGreen) Code

California Code of Regulations Title 24 Part 11: California’s Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24), was first adopted in 1978 in response to a legislative mandate to reduce California’s energy consumption. Since then, Title 24 has been amended with recognition that energy-efficient buildings that require less electricity reduce fuel consumption, which in turn decreases GHG emissions. The current 2019 Title 24 standards (effective as of January 1, 2020) contain several provisions that will help the state meet its GHG reduction targets. For example, on the residential side, the standards require solar photovoltaic systems for new homes and encourage demand-responsive technologies, including battery storage and heat pump water heaters, and improve the building’s thermal envelope through high-performance attics, walls and windows to improve comfort and energy savings. In nonresidential buildings, the standards update indoor and outdoor lighting, making maximum use of LED technology. For the first time, the standards establish requirements for newly constructed healthcare facilities (California Energy Commission, 2018a; 2018b). Analysis by the California Energy Commission concludes that the 2019 energy efficiency standards, which took effect January 1, 2020, are projected to result in a 30 percent improvement in energy efficiency for nonresidential buildings over the 2016 standards. The 2019 standards require photovoltaic solar systems on single-family residences and on multifamily residential structures of three stories or less. Single-family homes built to the 2019 standards will be about 7 percent more efficient than homes built to the 2016 standards; and about 53 percent more efficient after factoring in the required solar systems (CEC 2020).

Local

City of Bradbury General Plan

The City of Bradbury General Plan (GP) is a long-range policy document designed to guide future conservation, enhancement, and development in the City. It defines the framework by which the City’s environmental and economic resources are managed.



Community Resources Element

The General Plan’s Community Resources Element consists of the State required Open Space Element and Conservation Element. The Conservation Chapter is designed to protect and maintain the City’s natural and cultural resources, and to prevent their exploitation and destruction, which includes climate change. Goals, objectives, policies, and action programs related to climate change are listed below:

- Conservation Goal 5:** Protect Bradbury’s environment through the use of renewable energy resources.

- Conservation Objective 1:** Continue to improve the waste diversion and recycling programs already in place.

- Conservation Objective 2:** Provide adequate waste disposal systems and increase the use of compatible renewable resources.

- Conservation Policy 2:** Assist residents in developing compatible renewable resources and identifying funding sources.

- Conservation Action 10:** Create and maintain renewable energy guidelines for residents.

Climate Action Plan Element

The General Plan’s Climate Action Plan Element (CAPE) was included in the General Plan Update to compile potential strategies (i.e., actions, projects, and programs) that the City’s government operations and the community can use to address their impact on the environment. The City has integrated the goals and policies of the City’s Energy Action Plan into the General Plan. The CAPE supports the City’s coordination with the San Gabriel Valley Energy Wise Partnership and the San Gabriel Valley Council of Governments by establishing Climate Action Implementation Action Programs. Below are the climate action programs relevant to the project:

- Climate Action 1:** Recognize homeowners that have implemented cost-effective energy efficiency improvements.

- Climate Action 2:** Encourage homeowner associations to support community energy efficiency efforts such as an annual neighborhood energy conservation competition.

- Climate Action 3:** Provide a residential energy efficiency checklist that prioritizes actions by return on investment to interested homeowners.

- Climate Action 4:** Provide incentives to encourage various homeowners to participate in an energy audit that can be used as a case study for others.

- Climate Action 5:** Encourage homeowners to participate in utility funded energy efficiency programs and retrofits such as Energy Upgrade California.

- Climate Action 6:** Provide new construction owners with educational materials and resources that assist with energy efficiency improvements.



- Climate Action 9:** Encourage the use of smart grid-integrated appliances to allow for programming to operate appliances remotely or when energy costs are at their lowest.
- Climate Action 10:** Encourage the use of variable speed drive pumps for pools and spas.
- Climate Action 16:** Encourage the use of recirculating water systems for decorative water features.
- Climate Action 17:** Promote the retention of natural vegetation and the rural character of the community.
- Climate Action 18:** Promote the use of cool roofs, light-colored paved surfaces, and permeable pavement in new and existing residential projects.

3.7.2 Existing Setting

The following information is summarized from the City of Bradbury’s 2014 draft Climate Action Plan. In 2008, which is the baseline year for the Plan, community-wide GHG emissions were 9,520 metric tons of CO₂e. The largest contributing sector was onroad transportation, which accounted for about 42% of the total. Following close behind was the residential sector, with 40% of the total (3,750 metric tons). If nothing is done locally to reduce these emissions, except measures taken by the state, emissions in 2020 would be about 9,980 metric tons of CO₂e.

3.7.3 Methods

CalEEMod, Version 2016.3.2, the same software that was used for the criteria air pollutant analysis, was used to estimate carbon dioxide, methane, and nitrous oxide emissions for project construction and operation. Modeling inputs and results are provided in **Appendix L**. The model calculates the CO₂e emissions from the emissions and global warming potentials of the three GHGs.

The estimates for this analysis include the following sources of annual direct and indirect GHG emissions: (1) area sources (e.g., landscaping-related fuel combustion sources); (2) energy use associated with residential buildings; (3) water and wastewater; (4) solid waste; (5) mobile sources (e.g., passenger vehicles and trucks); and (6) construction activity. The ongoing operational emissions consist of the first five categories, while emissions associated with construction are generated only during construction. The typical types of GHG gases emitted from developments such as the project are CO₂, CH₄, and N₂O.

Construction emissions are from offroad equipment and onroad vehicles such as worker and vendor commuting and trucks for soil and material hauling. CalEEMod defaults were used for construction activity and equipment usage, except that phase lengths were proportionately adjusted to reflect estimated durations supplied by the project proponent. To assess the temporary construction effect on the Project’s overall lifetime GHG emissions, the SCAQMD developed an Interim Guidance (SCAQMD, 2008) recommending that construction emissions should be amortized over the life of the Project, defined in the Guidance as 30 years, which is then added to the operational emissions and compared to the applicable GHG significance threshold.

GHG emissions would also continue to occur every year after buildout. GHGs are emitted from buildings because of activities for which electricity and natural gas are typically used as energy sources. Combustion of any type of fossil fuel emits CO₂ and other GHGs directly into the atmosphere;

these emissions are considered direct emissions when associated with a building. GHGs are also emitted during the generation of electricity from fossil fuels; these emissions are indirect emissions as they occur elsewhere but are attributed to the power usage onsite. Indirect GHG emissions also result from the production of electricity used to convey, treat, and distribute water and wastewater. In addition, CalEEMod calculates the indirect GHG emissions associated with waste that is disposed of at a landfill using waste disposal rates by land use and overall composition.

For the operational emissions calculations, CalEEMod's "default" assumptions were used, except for the following:

- The trip generation rate was for estate housing, as presented in San Diego's Trip Generation Manual (San Diego, 2003). These rates are higher than for "Single Family Residential," which is the CalEEMod default.
- CalEEMod default for number of fireplaces was adjusted to reflect that all estate housing would have natural gas fireplaces.

3.7.4 Thresholds of Significance

Appendix G of the CEQA Guidelines specifies two criteria for evaluating the significance of GHG emissions:

- a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**
- b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?**

The South Coast Air Quality Management District's (SCAQMD's) guidance uses a tiered approach rather than a single numerical emissions threshold, for evaluating the first criterion. If a project's GHG emissions "fail" the non-significance of a given tier, the analysis proceeds using the next one.

The threshold selected for this analysis is Tier 3, which establishes a screening significance threshold level to determine significance using a 90percent emission capture rate. For Tier 3, the SCAQMD estimated that at a threshold of approximately 3,000 metric tons CO₂e per year emissions would capture 90percent of the GHG emissions from new residential or commercial projects. The present analysis uses 3,000 metric tons of CO₂e per year as the significance threshold under the first impact criterion above. The results of the analysis are presented in **Section 3.7.5**

For the second criterion, a qualitative analysis is needed. The results of that analysis are presented in **Section 3.7.5**.

3.7.5 Impact Analysis

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

Less Than Significant Impact

The results of the CalEEMod emissions calculations are presented in **Table 3.7-1**. The annual increase in GHG emissions (as CO₂e) from project construction activities would be 657 metric tons

in 2022, 479 metric tons in 2023, and 145 metric tons in 2024, for total construction GHG emissions of 1,281 metric tons. Consistent with SCAQMD recommendations and to ensure that construction emissions are assessed in a quantitative sense, construction GHG emissions have been amortized over a 30-year period. The amortized value, **42.7 MTCO₂e**, has been added to the Chadwick Ranch Estates project’s annual operational GHG emissions. (See below.) Detailed modeling results are in **Appendix L**.

Table 3.7-2, Project GHG Emissions, shows estimated project GHG emissions during project operations, including the aforementioned amortized construction emissions. Total annual emissions would be 347 metric tons.

**Table 3.7-1
PROJECT CONSTRUCTION-RELATED GHG EMISSIONS**

Year	Annual Emissions (MT)			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
2022	651.5	0.2013	0	656.5
2023	475.6	0.1356	0	479.0
2024	144.4	0.0329	0	145.2
Total	1,275	0.370	0	1,281

**Table 3.7-2
PROJECT GHG EMISSIONS**

Emissions Source	Estimated Project Generated CO ₂ e Emissions (Metric Tons per Year)
Area Sources	3.62
Energy Demand (Electricity & Natural Gas)	57.39
Mobile (Motor Vehicles)	228.10
Solid Waste Generation	8.25
Water Demand	7.08
Construction Emissions ^a	42.7
Total	347

^a Total construction GHG emissions were amortized over 30 years and added to those resulting from the operation of the project.

As detailed in **Table 3.7-2**, the project’s emissions will be less than the Tier 3 screening level of 3,000 MTCO₂ per year. Therefore, it will have a less than significant cumulative effect.

b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact

The project was evaluated against the eight relevant current policies of the Climate Action Plan. The results of the evaluation are shown in **Table 3.7-3, Project Compatibility with Bradbury Climate Action Plan.**

**Table 3.7-3
PROJECT COMPATIBILITY WITH BRADBURY CLIMATE ACTION PLAN**

Current Climate Action Programs	Evaluation
Provide a residential energy efficiency checklist that prioritizes actions by return on investment to interested homeowners.	Compatible. This resource will be available to the project designers if needed.
Encourage homeowners to participate in utility funded energy efficiency programs and retrofits such as Energy Upgrade California.	Compatible. This resource will be available to the project designers if needed.
Provide new construction owners with educational materials and resources that assist with energy efficiency improvements.	Compatible. This resource will be made available to the project designers at their request.
Encourage the use of smart grid-integrated appliances to allow for programming to operate appliances remotely or when energy costs are at their lowest.	Compatible. This resource will be available to the project designers if needed.
Encourage the use of variable speed drive pumps for pools and spas.	Compatible. This resource will be available to the project designers if needed.
Encourage the use of recirculating water systems for decorative water features.	Compatible. This resource will be available to the project designers if needed.
Promote the retention of natural vegetation and the rural character of the community.	Compatible. This resource will be available to the project designers if needed.
Promote the use of cool roofs, light-colored paved surfaces, and permeable pavement in new and existing residential projects.	Compatible. This resource will be available to the project designers if needed.

The proposed project would be compatible with all relevant Climate Action Plan policies. Therefore, greenhouse gas emissions from the proposed project would be less than significant.

3.7.6 Mitigation Measures

The project would result in Less Than Significant Impacts. Therefore, no mitigation measures are required.

3.7.7 Level of Significance After Mitigation

Project impacts were determined to be less than significant and no mitigation measures are required.

SECTION 3.8 – HAZARDS AND HAZARDOUS MATERIALS



3.8 Hazards and Hazardous Materials

The Initial Study, included as Appendix G to this DEIR, determined that impacts involving hazardous materials and airport-related hazards (threshold questions a) through e) would be less than significant or have no impact. Therefore, the only remaining thresholds to be analyzed are:

Would the project:

- f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; and**
- g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.**

As these questions are intricately related to the discussion of Wildfire in **Section 3.15**, they will be discussed therein.

SECTION 3.9 – HYDROLOGY AND WATER QUALITY



3.9 Hydrology and Water Quality

3.9.1 Relevant Policies and Regulations

Federal

Clean Water Act

The Clean Water Act was first introduced in 1948 as the Water Pollution Control Act. The Clean Water Act authorizes federal, state, and local entities to cooperatively create comprehensive programs for eliminating or reducing the pollution of state waters and tributaries. The primary goals of the Clean Water Act are to restore and maintain the chemical, physical, and biological integrity of the nation's waters and to make all surface waters fishable and swimmable. As such, the Clean Water Act forms the basic national framework for the management of water quality and the control of pollutant discharges. The Clean Water Act sets forth a number of objectives to achieve the above-mentioned goals. These objectives include: regulating pollutant and toxic pollutant discharges; providing for water quality that protects and fosters the propagation of fish, shellfish and wildlife; developing waste treatment management plans; and developing and implementing programs for the control of non-point sources of pollution. The State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs) are the primary state agencies responsible for implementing the Clean Water Act and regulating the activities and factors that affect or have the potential to affect water quality in the state.

The Clean Water Act provides the legal framework for several water quality regulations including the National Pollutant Discharge Elimination System (NPDES), effluent limitations, water quality standards, pretreatment standards, anti-degradation policy, non-point source discharge programs, and wetlands protection. An NPDES permit is required for all discharges of pollutants to waters of the United States from any point source. Federal regulations issued in November 1990 and revised in 2003 expanded the original scope of the NPDES program to include the permitting of stormwater discharges from construction sites that disturb areas larger than one acre. Stormwater discharges from construction sites with a disturbed area of one or more acres require either an individual NPDES permit or coverage under the Construction General Permit of the state. The latter is accomplished by: completing a construction site risk assessment to determine the appropriate coverage level; preparing a Stormwater Pollution Prevention Plan (SWPPP), including site maps, a Construction Site Monitoring Program, and sediment basin design calculations; completing a post-construction water balance calculation for hydromodification controls for projects located outside of a Phase I or Phase II permit area; and completing a Notice of Intent.

The primary objective of the SWPPP is to select and implement Best Management Practices (BMPs) to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the construction site during construction. The SWPPP also outlines monitoring and sampling required for the construction site to verify compliance with levels of contaminants set by the Construction General Permit.

In addition to regulating non-stormwater discharges, the Clean Water Act sets forth water quality standards based on a water body's designated beneficial uses (e.g., wildlife habitat, agricultural supply, fishing etc.), along with water quality criteria necessary to support those uses. Water quality criteria are either prescribed concentrations or levels of constituents such as lead, suspended sediment, and fecal coliform bacteria, or narrative statements which represent the quality of water that support a particular use.



When designated beneficial uses of a particular receiving water body are being compromised by water quality, § 303(d) of the Clean Water Act requires identifying and listing that water body as "impaired." Once a water body has been deemed impaired, a Total Maximum Daily Load must be established for the pollutant(s) or flows causing the impairment. A Total Maximum Daily Load 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. Those facilities and activities that are discharging into the water body, collectively, must not exceed the Total Maximum Daily Load. The United States Environmental Protection Agency (USEPA) oversees the 303(d) program and either the USEPA or the SWRCB establishes the Total Maximum Daily Load schedule for individual constituents. In addition to trash and debris, common pollutants of concern that have the potential to affect water quality generally fall into one of the following seven categories: sediments; nutrients; bacteria/viruses; oil/grease; metals; organic compounds; and pesticides.

State

National Pollutant Discharge Elimination System

The LARWQCB issues combined NPDES permits under the Clean Water Act and Waste Discharge Requirements (under the California Water Code) to point dischargers of waste to surface waters. To ensure protection of water quality, NPDES permits may contain effluent limitations for pollutants of concern, pollutant monitoring frequencies, reporting requirements, schedules of compliance (when appropriate), operating conditions, BMPs, and administrative requirements. NPDES permits apply to: publicly-owned treatment works discharges; industrial wastewater discharges; and municipal, industrial, and construction site stormwater discharges. Further discussion of the LARWQCB stormwater discharge permitting activities is provided below.

Construction

The Clean Water Act requires coverage under a NPDES construction permit for stormwater discharges to surface waters associated with various construction activities, except activities that result in disturbance of less than one acre of total land area which are not part of a larger common plan of development or sale. The SWRCB has issued a statewide NPDES Construction General Permit for stormwater discharges from construction sites. Any project that disturbs an area more than one acre, as well as linear underground/overhead projects disturbing over one acre require a Notice of Intent to discharge under the Construction General Permit. The Construction General Permit includes three levels of risk for construction sites based on calculated project sediment and receiving water risk. The Construction General Permit includes measures to eliminate or reduce pollutant discharges through implementation of a SWPPP, which describes the implementation and maintenance of BMPs to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the site during construction. The Construction General Permit contains receiving water limitations that require stormwater discharges to not cause or contribute to a violation of any applicable water quality standard. The permit also requires implementation of programs for visual inspections and sampling for specified constituents (e.g., nonvisible pollutants). In addition, based upon particular project risk levels, monitoring is required for stormwater discharges.

California Green Building Standards Code

The California Green Building Standards Code (CALGreen), 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.

Local

County of Los Angeles Hydrology Manual

The Los Angeles County Department of Public Works' Hydrology Manual (Hydrology Manual) requires that a storm drain conveyance system be designed for a 25-year storm event and that the combined capacity of a storm drain and street flow system accommodate flow from a 50-year storm event. Areas with sump conditions are required to have a storm drain conveyance system capable of conveying flow from a 50-year storm event. The County also limits the allowable discharge into existing storm drain facilities based on the municipal separate stormwater sewer systems permit and is enforced on all new developments that discharge directly into the County's storm drain system. Any proposed drainage improvements of County-owned storm drain facilities such as catch basins and storm drain lines require the approval/review from the County Flood Control District department.

County of Los Angeles Stormwater Quality Management Program

The Los Angeles County NPDES Permit contains provisions for implementation of the Stormwater Quality Management Program by the Co-Permittees (collectively, the 84 Los Angeles County cities, including the City of Los Angeles, and Los Angeles County). The Stormwater Quality Management Program states that Permittees are required to implement the most effective combination of BMPs for stormwater/urban runoff pollution control. The objective of the Stormwater Quality Management Program is to reduce pollutants in urban stormwater discharges to the maximum extent practicable in order to attain water quality objectives and to protect the beneficial uses of receiving waters in Los Angeles County.

County of Los Angeles Low Impact Development Standards Manual (LID Manual)

In accordance with § 402(p) of the Clean Water Act, municipal NPDES permits prohibit the discharge of non-stormwater pollutants except under certain conditions and require controls to reduce pollutants in discharges to the maximum extent practicable. Such controls include BMPs, as well as system, design, and engineering methods. Under the municipal NPDES permit, permittees are required to implement a development planning program to address stormwater pollution. Los Angeles County prepared the 2014 Low Impact Development Standards Manual (LID Manual) in accordance with the municipal NPDES (MS4) permit. The LID manual is an update and compilation of the following documents:

- Development Planning for Storm Water Management: A Manual for the Standard Urban Storm Water Mitigation Plan (SUSMP Manual, September 2002)



- Technical Manual for Stormwater Best Management Practices in the County of Los Angeles (2004 Design Manual, February 2004)
- Stormwater Best Management Practice Design and Maintenance Manual (2010 Design Manual, August 2010)
- Low Impact Development Standards Manual (2009 LID Manual, January 2009),

The LID manual addresses the following objectives and goals:

- Lessen the adverse impacts of stormwater runoff from development and urban runoff on natural drainage systems, receiving waters, and other water bodies.
- Minimize pollutant loadings from impervious surfaces by requiring development projects to incorporate properly designed, technically appropriate BMPs and other LID strategies.
- Minimize erosion and other hydrologic impacts on all projects located within natural drainage systems that have not been improved by requiring projects to incorporate properly designed, technically appropriate hydromodification control development principles and technologies.

The use of LID BMPs in project planning and design is intended to preserve a site's predevelopment hydrology by minimizing the loss of natural hydrologic processes such as infiltration, evapotranspiration, and runoff detention. LID BMPs try to offset these losses by introducing structural and non-structural design components that restore these water quality functions into the project's land plan.

Single-family hillside home projects are subject to the LID Manual.

Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties

As required by the California Water Code, the LARWQCB has adopted a plan entitled Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan). Specifically, the Basin Plan designates beneficial uses for surface waters and groundwater, sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's Antidegradation Policy, and describes implementation programs to protect all waters in the Los Angeles Region. In addition, the Basin Plan incorporates (by reference) all applicable state and RWQCB plans and policies and other pertinent water quality policies and regulations. Those of other agencies are referenced in appropriate sections throughout the Basin Plan. The Basin Plan is a resource for the RWQCB and others who use water and/or discharge wastewater in the Los Angeles Region. Other agencies and organizations involved in environmental permitting and resource management activities also use the Basin Plan. The Basin Plan also provides valuable information to the public about local water quality issues.

City of Bradbury Municipal Code

Title IX of the Bradbury Municipal Code contains the City's Development Code. Part VI outlines site planning and general development standards, including General Property Development and Use Standards (Chapter 94). Among the provisions under Chapter 94 are a number relating to hydrology



topics, including Drainage and Stormwater Runoff (§ 9.94.040), Design Standards for Drainage (§ 9.94.060), and Stormwater Retention (§ 9.94.070).

3.9.2 Existing Setting

The proposed project site is approximately 111.8 acres and is in the foothills of the San Gabriel Mountains, with elevations ranging from approximately 790 feet above mean sea level (amsl) to 1,790 feet amsl. The project site is in the San Gabriel Watershed, which spans 906 square miles in Los Angeles and Orange counties and a small part of San Bernardino County and extends from the San Gabriel Mountains south to the Pacific Ocean. The site is undeveloped, apart from one fire road and several unmaintained access roads. The site is drained by Bradbury Canyon Creek and Spinks Canyon Creek, which discharge into the Bradbury and Spinks Debris Basins, respectively. The debris basins are owned and maintained by the Los Angeles County Flood Control District (LACFCD; Q3 Consulting et.al., 2019a, p. 1). Both debris basins eventually drain into the San Gabriel River, which discharges into the Pacific Ocean in the City of Seal Beach (USEPA, 2020).

The proposed project site is above the San Gabriel Valley Groundwater Basin (the Basin), a structural basin filled with permeable alluvial deposits, underlain by relatively impermeable rock. It is in eastern Los Angeles County and includes the water-bearing sediments underlying most of the San Gabriel Valley. The sediment that makes up this basin consists primarily of unconsolidated to semi-consolidated alluvium deposited by streams flowing out of the San Gabriel Mountains. These alluvial sediments make up the primary aquifer system that supplies groundwater to most of the production wells in the area (Thomas Harder & Company, 2019, p. 2).

In preparation of the Preliminary Hydrology and Hydraulics report, a study area was defined to evaluate the potential for serving the project via groundwater wells; because the proposed project would be in the Duarte service area of the California American Water District (District), the study area was delineated as the area south of Bradbury and west of Interstate 605. Groundwater elevations have not changed in within the study area from 2014 through 2019. Depth to groundwater beneath potential well sites is estimated to range from approximately 240 to 340 feet below ground surface (BGS), based on simulated groundwater levels obtained from the Main San Gabriel Basin Watermaster (Thomas Harder & Company, 2019).

Figure 3.9-1, *Surface Water and Watersheds*, and **Figure 3.9-2, *Groundwater Basins***, further describe existing conditions relevant to the project site.

The Preliminary Hydrology and Hydraulics report divided the project site into five drainage subareas. Peak discharge rates and debris volumes are shown below in **Table 3.9-1, *Estimated Peak Discharge Rates and Debris Volumes, Existing Conditions***.



Table 3.9-1
ESTIMATED PEAK DISCHARGE RATES AND DEBRIS VOLUMES, EXISTING CONDITIONS

Drainage Subarea	Outfall	Acres	Percent Impervious	Downstream Conveyance Type	Q50 (clear) (cfs)	Q50b (burned) (cfs)	Debris Volume (cy) ¹
1A	2A	15.87	1percent	Natural channel	47.3	52.1	6,000
3A	8AB	32.55	1percent	Spinks Debris Basin	78.8	88.5	12,240
4A	8AB	18.23	1percent	Spinks Debris Basin	34.6	38.8	5,520
5B	6B	14.28	1percent	Natural channel	47.7	54.4	6,720
7B	8AB	10.71	1percent	Spinks Debris Basin	29.0	32.2	4,080
Not applicable	8AB	91.64	NA	Confluence Totals at Spinks Basin	218.5	247.9	34,560

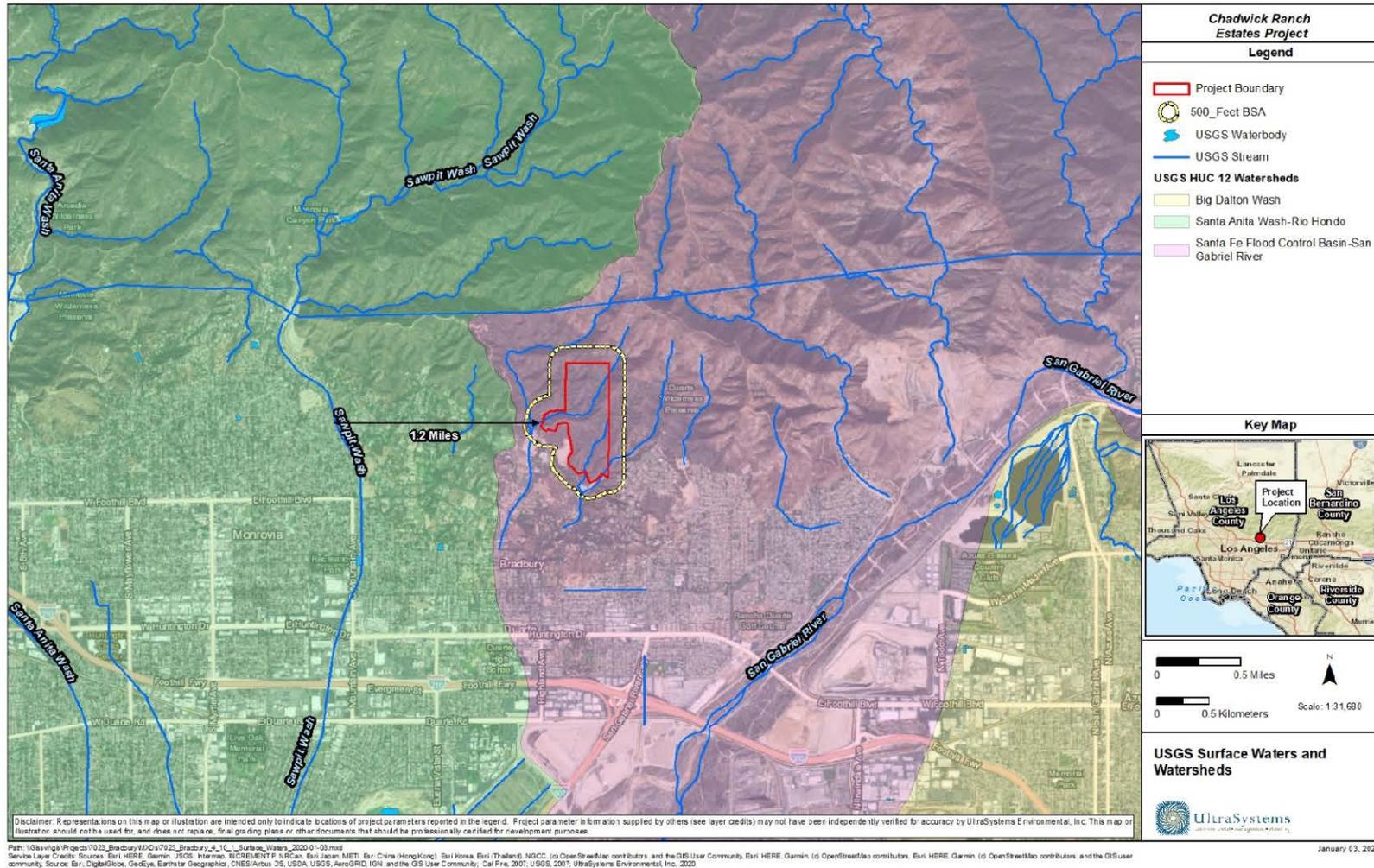
¹ Debris generation for all five drainage subareas is estimated at 240,000 cubic yards per square mile. Debris generation is estimated in the hydrology and hydraulics report per square mile, which equals 640 acres.

NA = not applicable.

Source: Proactive/Q3 Consulting, 2019

Figure 3.9-3, Drainage Subareas, Existing Conditions, shows the five drainage subareas on the existing project site.

Figure 3.9-1
SURFACE WATER AND WATERSHEDS



**Figure 3.9-2
GROUNDWATER BASINS**

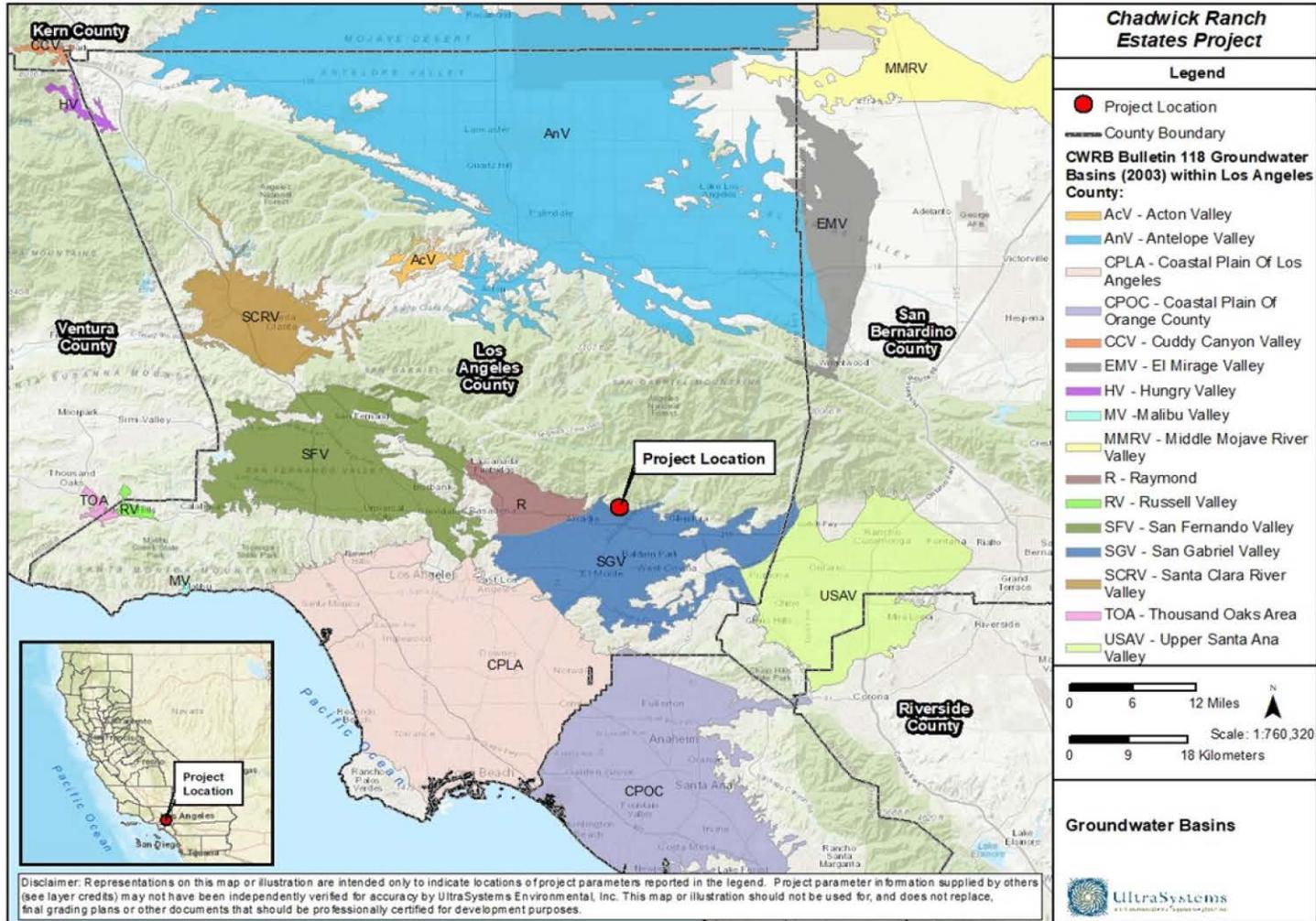
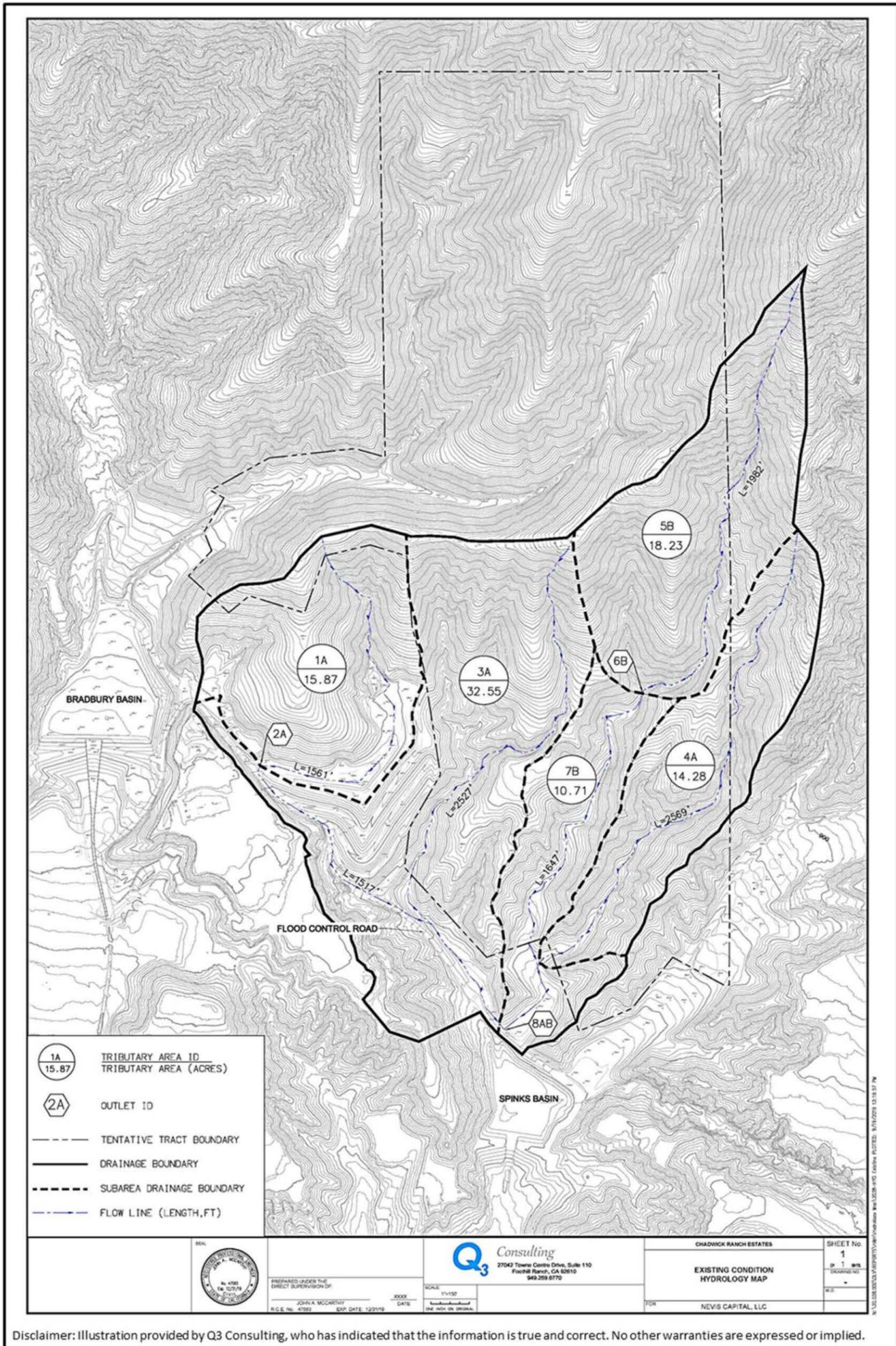


Figure 3.9-3
DRAINAGE SUBAREAS, EXISTING CONDITIONS





3.9.3 Methods

In September 2019, Q3 Consulting, in conjunction with Proactive Engineering Consultants, Inc., prepared a Preliminary Hydrology and Hydraulics report (Q3 Consulting et.al., 2019) that was reviewed in preparation of the analysis that follows. The full report can be found in **Appendix Q-1** of this DEIR.

Q3 Consulting used the following methodologies to prepare their report:

Los Angeles County Modified Rational Method (MODRAT)

All hydrologic analyses were performed in accordance with the Los Angeles County Department of Public Works (LACDPW) Hydrology Manual (2006). The Los Angeles County MODRAT computer program was used to model both the existing and proposed condition hydrologic models. MODRAT was implemented using the Watershed Modeling System (WMS) computer program as the user interface. MODRAT is a modified rational method computer program developed by the LACDPW to compute peak runoff rates under a variety of conditions common to the County. The objective of the interface developed in WMS for MODRAT is to provide graphical representation of MODRAT data, as well as automate the definition of many of the required parameters. The time of concentrations for the subareas were computed using the HydroCalc computer program developed by the LACDPW.

Detention Basin Routing Analysis

The modified-Puls routing method was used to analyze the functional adequacy of the proposed detention basin facility. A stage-storage curve and a stage-discharge curve is required for the facility to be modeled. A stage-storage curve was computed for the proposed detention facility based on the conceptual grading plan. Applicable nomograph charts from the Federal Highway Administration publication, HDS-5 (2005), were used to develop the outlet structure performance curve for the basin (i.e., stage versus discharge). The detention basin was sized to mitigate the downstream impacts based on burned flow conditions.

3.9.4 Thresholds of Significance

- a) **Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?**
- b) **Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?**
- c) **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 through the addition of impervious surfaces, in a manner which would:**
 - i) **result in substantial erosion or siltation on- or off-site;**
 - ii) **substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;**
 - iii) **create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or**
 - iv) **impede or redirect flood flows?**
- d) **In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?**
- e) **Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?**

The Initial Study, included as Appendix G to this DEIR, determined that impacts related to threshold (d) would have no impact; this impact is not analyzed below.

3.9.5 Impact Analysis

- a) **Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?**

Less Than Significant Impact

The RWQCB Basin Plan for the Los Angeles Basin has designated the following *potential* beneficial uses for Bradbury Canyon Creek and Spinks Canyon Creek:

- **Municipal and Domestic Supply (MUN)** - waters which are used for community, military, municipal or individual water supply systems. These uses may include, but are not limited to, drinking water supply.

The Basin Plan has designated the following intermittent beneficial uses for Bradbury Canyon Creek and Spinks Canyon Creek:



- **Ground Water Recharge (GWR)** – water used for natural or artificial recharge of ground water for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers.
- **Warm Freshwater Habitat (WARM)** - waters which support warmwater ecosystems that may include, but are not limited to, preservation and enhancement of aquatic habitats, vegetation, fish and wildlife, including invertebrates.

The Basin Plan has designated the following *existing* beneficial use for Bradbury Canyon Creek and Spinks Canyon Creek:

- **Wildlife Habitat (WILD)** - waters which support wildlife habitats that may include, but are not limited to, the preservation and enhancement of vegetation and prey species used by waterfowl and other wildlife (RWQCB, 1994, pp. 2-4, 2-6, 2-7, and 2-15).

The Clean Water Act (§ 303) requires states to develop water quality standards for all waters and to submit to the USEPA for approval all new or revised water quality standards which are established for inland surface and ocean waters. Water quality standards consist of a combination of beneficial uses (designated in Chapter 2 of the Basin Plan) and water quality objectives (RWQCB, 1994, pp. 3-6 through 3-59).

In addition to the federal mandate, the California Water Code (§ 13241) specifies that each Regional Water Quality Control Board shall establish water quality objectives. The Water Code defines water quality objectives as "the allowable limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area" (RWQCB, 1994, p. 3-3).

Based on expected construction and operation activities, potential project-related stormwater pollutants may include:

- **Pathogens** (e.g., viruses, indicator bacteria): Bacteria and viruses are common contaminants of stormwater. For separate storm drain systems, sources of these contaminants include animal excrement and sanitary sewer overflow. High levels of indicator bacteria in stormwater have led to the closure of beaches, lakes, and rivers to contact recreation such as swimming (CASQA, 2003, p. 2-7).
- **Nutrients** (e.g., phosphorus and nitrogen): Nutrients including nitrogen and phosphorous are the major plant nutrients used for fertilizing landscapes, and are often found in stormwater. These nutrients can result in excessive or accelerated growth of vegetation, such as algae, resulting in impaired use of water in lakes and other sources of water supply. For example, nutrients have led to a loss of water clarity in Lake Tahoe. In addition, un-ionized ammonia (one of the nitrogen forms) can be toxic to fish (CASQA, 2003, p. 2-7).
- **Sediment** (causes sediment toxicity, sedimentation, and siltation): Sediment is a common component of stormwater, and can be detrimental to aquatic life (aquatic plants and algae, benthic invertebrates, and fish) by interfering with photosynthesis, respiration, growth, reproduction, and oxygen exchange. Sediment can also transport pollutants that are attached to it including nutrients, trace metals, and hydrocarbons. Sediment is the primary component of total suspended solids (TSS) and turbidity, common water quality analytical parameters. Sediment and turbidity in the water column can lead to increased water

temperatures, which in turn depresses the amount of dissolved oxygen that water can hold, causing stress to or death of aquatic animals (CASQA, 2003, p. 2-7).

- **Oil, grease, and hydrocarbons:** Oil, grease, and hydrocarbons include a wide array of hydrocarbon compounds, some of which are toxic to aquatic organisms at low concentrations. Sources of oil, grease, and hydrocarbons include leakage, spills, cleaning, and sloughing associated with vehicle and equipment engines and suspensions, leaking and breaks in hydraulic systems, and waste oil disposal (CASQA, 2003, p. 2-7).
- **Trash and debris:** (e.g., floatables): may introduce heavy metals, pesticides, and bacteria in stormwater. Typically resulting from an urban environment, industrial sites and construction sites, trash and floatables may create an aesthetic “eye sore” in waterways. Gross pollutants also include plant debris (such as leaves and lawn clippings from landscape maintenance), animal excrement, street litter, and other organic matter. Such debris may harbor bacteria, viruses, and other vectors, and depress the dissolved oxygen levels in streams, lakes, and estuaries sometimes causing fish kills (CASQA, 2003, p. 2-7).
- **Pesticides and herbicides** (e.g., chlordane, DDT): Pesticides and herbicides (including fungicides, rodenticides, and insecticides) have been repeatedly detected in stormwater at toxic levels, even when pesticides have been applied in accordance with label instructions. As pesticide use has increased, so too have their presence in stormwater. Accumulation of these compounds in simple aquatic organisms, such as plankton, provides an avenue for biomagnification through the food web, potentially resulting in elevated levels of toxins in organisms that feed on them, such as fish, birds, and humans (CASQA, 2003, p. 2-7).
- **Oxygen demanding substances:** Oxygen-demanding substances are those substances that require oxygen as part of their natural, biological, or chemical processes. The oxygen demand of a substance can lead to depletion of natural oxygen resources in a water body and possibly the development of septic conditions. Proteins, carbohydrates, and fats are examples of oxygen-demanding substances. They can also be referred to as “biodegradable organics.” The presence of oxygen-demanding substances in water is measured as biochemical oxygen demand (BOD) and chemical oxygen demand (COD; City of Los Angeles 2000, p. 5).

The RWQCB sets forth narrative and numerical water quality objectives for inland surface and groundwaters in their Basin Plan; groundwater quality objectives were most recently amended on May 6, 2019. Of the expected project-related stormwater pollutants described above, the Basin Plan applies the following numerical water quality objectives for groundwater in the eastern San Gabriel Groundwater Basin (RWQCB, 1994, p3-54).

- **Total dissolved solids (TDS)** not to exceed 600 milligrams per liter (mg/l).
- **Sulfates** not to exceed 100 mg/l.
- **Chloride** not to exceed 100 mg/l.
- **Boron** not to exceed 0.5 mg/l.



Narrative groundwater quality objectives that apply to all groundwaters in the Los Angeles Region can be found in the Basin Plan (RWQCB, 1994, pp. 3-47 through 3-50).

Development of the proposed project may result in two types of water quality impacts: (1) short-term impacts due to construction-related discharges; and (2) long-term impacts from operation or changes in site runoff characteristics. Runoff during the construction process may carry onsite surface pollutants to groundwater, through insufficient construction stormwater best management practices (BMPs), which may allow rapid infiltration into a high water table, or to receiving water bodies such as streams, rivers, and channels that ultimately drain to the ocean. Projects that increase urban runoff into local streets or storm drains may indirectly increase erosion as well as local and regional flooding intensity.

Construction Pollutants Control

Construction projects typically expose soil to erosion and may temporarily alter drainage patterns. Stormwater runoff during construction may contain soil amendments such as fertilizers and pesticides, entrained soil, trash, waste oil, paints, solvents, and other substances used during construction.

The project proponent would be required by the California SWRCB to obtain coverage under a General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ, as authorized by § 402 CWA, NPDES) for projects which will disturb one or more acres of soil during construction. The Construction General Permit requires potential dischargers of pollutants into waters of the U.S. and waters of the State of California (State) to prepare a site-specific SWPPP, which establishes enforceable limits on discharges, requires effluent monitoring, designates reporting requirements, and requires construction BMPs to reduce or eliminate point and non-point source discharges of pollutants.

The project proponent would be required to obtain an NPDES permit, prepare a SWPPP, and implement construction stormwater BMPs prior to commencement of construction activities; additionally, BMPs must be maintained, inspected before and after each precipitation event, and repaired or replaced as necessary. Because the project is required by the SWRCB to comply with all applicable conditions of Construction General Permit Order 2009-0009-DWQ, potential violations of water quality standards or waste discharge requirements during project construction would be a Less Than Significant Impact.

Operational Pollutant Controls

The Los Angeles County NPDES Permit (NPDES No. CA004001) and Waste Discharge Requirements Area-Wide Urban Storm Water Runoff Management Program regulates, through Los Angeles RWQCB Order No. R4-2012-0175-A01, the discharge of pollutants into waters of the U.S. through stormwater and urban runoff conveyance systems, including flood control facilities. These conveyance systems are commonly referred to as municipal separate storm sewer systems (MS4s), or storm drains. In this context, the NPDES Permit is also referred to as an MS4 Permit (RWQCB, 2016).

Pursuant to the MS4 Permit, Principal Permittees and Co-Permittees (the City of Bradbury is a Co-Permittee) must regulate discharges of pollutants in urban runoff from human-caused sources into storm water conveyance systems within their jurisdiction.



As new development and redevelopment occurs, it can significantly increase pollutant loads in stormwater and urban runoff, because increased population density results in proportionately higher levels of vehicle emissions, vehicle maintenance wastes, municipal sewage wastes, household hazardous wastes, fertilizers, pet waste, trash, and other human-generated pollutants (RWQCB, 2016). The Los Angeles County MS4 Permit requires new development and significant redevelopment projects to incorporate post-construction low-impact development (LID) BMPs into project design to comply with the local Low-Impact Development Standards Manual (LID Manual) to reduce or eliminate the quantity, and improve the quality of, stormwater being discharged from the project site.

The proposed project includes a project-specific LID Plan (Q3 Consulting et.al., 2019b), which incorporates operational LID BMPs in compliance with the MS4 permit requirements. Based on preliminary engineering evaluation and site investigation, the geotechnical consultant Petra Geosciences, Inc. (2019) does not recommend infiltration for the project site due to the site's rock/soil characteristics. The infiltration of surface waters would have an adverse impact on the stability of the proposed and existing slopes. Therefore, the project will meet stormwater quality mitigation requirements through biofiltration (Q3 Consulting et.al., 2019b, p. 1).

Modular Wetland Systems (MWS) are stormwater management LID facilities that mitigate the impacts of runoff and stormwater pollution as close to the source as possible. These LID facilities are highly effective at removing water pollutants such as sediment, nutrients, trash, metals, oil and grease, and (GeoSolutions, 2020) while reducing the volume and intensity of stormwater flow leaving a site.

As detailed in the LID Plan (Q3 Consulting et.al., 2019b; located in **Appendix Q-2**), project design includes the installation of four modular wetland system units adjacent to the southern perimeter of the project site between Outlet 8B and Outlet 9AB. Filtered stormwater would discharge from these MWS units and drain south, via proposed storm drains, and drain into Spinks Basin.

Stormwater generated by the development would have gross pollutants filtered out prior to entering the MWS units, which would then remove additional pollutants, such as those described above, prior to discharging the stormwater into a municipal storm drain or receiving water body.

The MS4 and the project LID Plan would require the implementation of water quality features to ensure that runoff is treated prior to discharge into storm drains or other receiving waters, as described above. Therefore, with adherence to existing state and regional water quality requirements, impacts would be less than significant and no mitigation is warranted.

- b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?**

Less Than Significant Impact

The proposed project is within the service area of the Cal American Water Company (Cal-Am). The service area is served entirely by groundwater sources from the Main San Gabriel Basin; the water supply is distributed for residential, commercial, and industrial use in the cities of Duarte and Bradbury, portions of Azusa, Irwindale, and Monrovia, and also, some unincorporated areas of Los Angeles County (California American Water, 2019, p. 5).

Cal-Am has provided the project proponent with a Will Serve letter stating that Cal-Am will supply the project with domestic water service. However, Cal-Am will require the Project applicant to provide additional source water by either installing a new well or by contributing towards a new well that Cal-Am is already in the process of designing and constructing, depending on the timing of project development. This impact involves groundwater well capacity, not groundwater supplies or groundwater recharge. Impacts to groundwater supplies and groundwater recharge would be less than significant.

Thomas Harder & Co. has prepared a Technical Memorandum Report (Thomas Harder & Company, 2019) regarding their evaluation of five potential well sites to serve the project. A full copy of the report can be found in **Appendix R**. Of the five potential sites evaluated by Harder, all scored moderate to high in the five evaluation criteria categories used in their analysis.

- c) 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 through the addition of impervious surfaces, in a manner which would:**
- i) Result in substantial erosion or siltation on- or offsite;**
 - ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;**
 - iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;**

Less Than Significant Impact

The proposed project site is situated on mountainous terrain containing ephemeral and intermittent streams which would be impacted by development of the proposed project. Project development would impact six drainages: Bradbury Canyon, Spinks Canyon, three drainages tributary to Spinks Canyon, and a short drainage near Bradbury Canyon that has been disconnected from Bradbury Canyon by flood control modifications. Project development would impact a total of 0.78 acres of Waters of the United States under US Army Corps of Engineers jurisdiction, including 0.57 acres in the Specific Plan area and 0.21 acres in the offsite improvement areas. Development would impact a total of approximately 6.08 acres of Waters of the State under California Department of Fish and Wildlife jurisdiction, consisting of 3.81 acres in the Specific Plan area and 2.27 acres in the offsite improvement areas. Further information on jurisdictional waters in the project site and offsite improvement areas is in the Biological Technical Report included as **Appendix M-1** to this DEIR.

The Hydrology Study evaluated potential debris flow from the proposed project, and applied the findings to the existing debris basins that are adjacent to the project site. Q3 Consultants found that the proposed project will reduce the drainage area to the Bradbury Debris Basin by 2.9 acres. This diversion will reduce the runoff and debris to the basin and will not adversely affect the facility. The diverted area is along a natural ridge line between the Bradbury and Spinks basins and is not anticipated to have a significant impact on the sediment production to the Bradbury Debris Basin.

Regarding the Spinks Debris Basin, the estimated peak discharges between the existing and proposed conditions were compared at the outfall to the Spinks Debris Basin. This location is at Node 8AB in the existing condition and Node 16AC in the proposed condition. The comparison reveals that the



proposed project will increase the peak flow rate to the existing basin by 19.8 cfs in the 50-year storm event (burned) (Q3 Consulting et.al., 2019b; located in **Appendix Q-1**).

The Hydrology and Hydraulics Report divided the site in post-project conditions into seven drainage subareas. Estimated peak flow rates and debris generation in post-project conditions are shown in **Table 3.9-2, Estimated Peak Discharge Rates and Debris Volumes, Post-Project Conditions**, below. **Figure 3.9-4, Drainage Subareas, Post-Project Conditions**, maps the seven drainage subareas.

As detailed in the Preliminary Hydraulics and Hydrology Report (Q3 et.al., 2019a) and LID Plan (Q3 et.al., 2019b), and discussed in **Section 3.14 a**), the proposed project would incorporate operational LID BMPs in compliance with County of Los Angeles MS4 and LID permit requirements, as well as with City of Bradbury General Property Development and Use Standards (§§ 9.94.010 et. seq.).

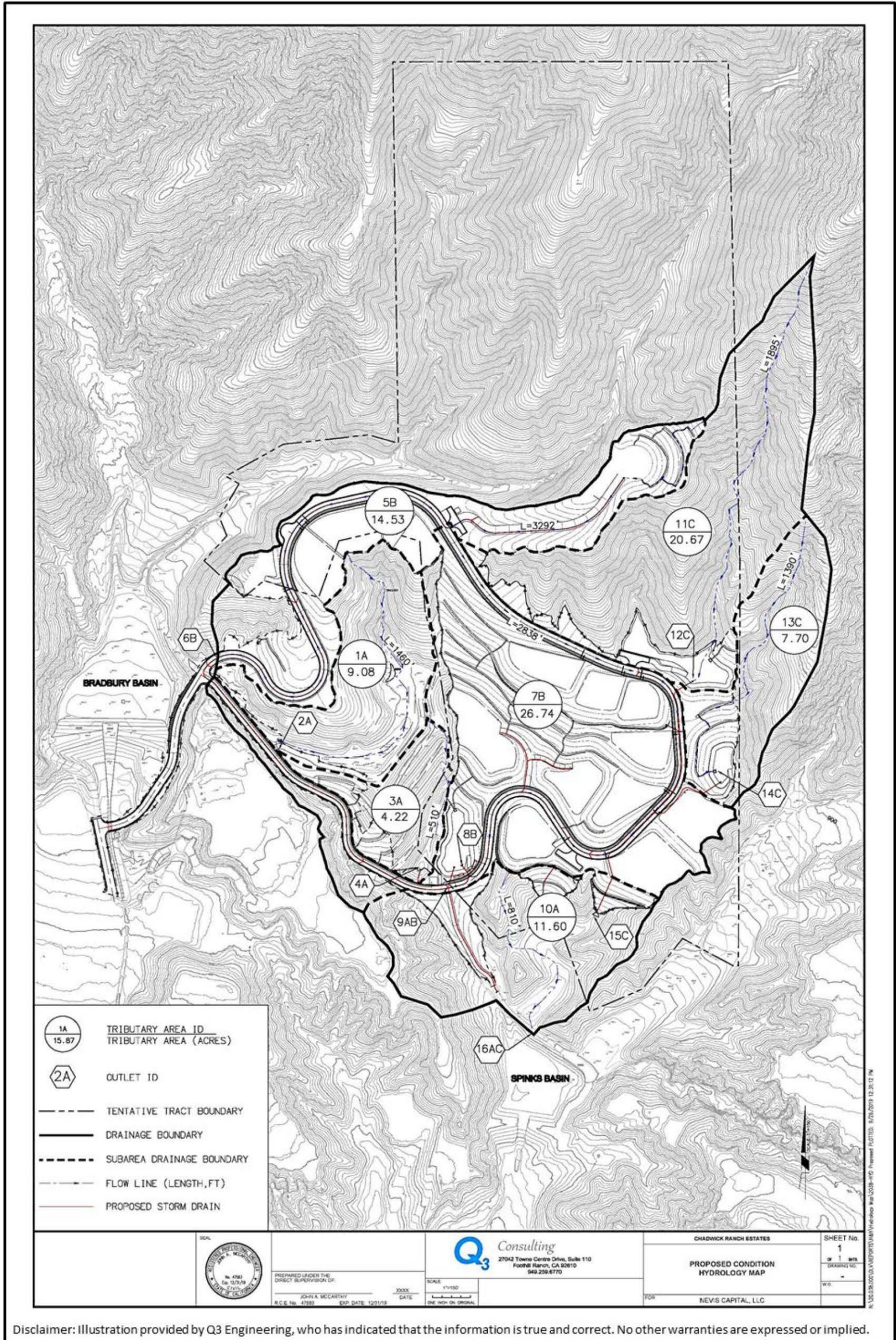
The proposed project includes a project specific LID (Q3 Consulting et.al., 2019b), which incorporates operational LID BMPs in compliance with the MS4 permit requirements. The project would meet stormwater quality mitigation requirements through biofiltration (Q3 et.al., 2019b, p. 1).

Modular wetland systems are stormwater management LID facilities that mitigate the impacts of runoff and stormwater pollution as close to the source as possible. These LID facilities are highly effective at removing water pollutants such as sediment, nutrients, trash, metals, oil and grease, and (GeoSolutions, 2020) while reducing the volume and intensity of stormwater flow leaving a site.

As detailed in the LID Plan (Q3 Consulting et.al., 2019b; located in **Appendix Q-2**), project design includes the installation of four modular wetland system (MWS) units adjacent to the southern perimeter of the project site between Outlet 8B and Outlet 9AB. Filtered stormwater would discharge from these MWS units and drain south, via proposed storm drains, and drain into Spinks Basin. The proposed storm drain system would include a storm drain extending south approximately 450 feet from the southernmost point on the proposed project access road, along the Spinks Canyon drainage, ending just north of Spinks Basin.

In addition to filtering trash and other pollutants from the stormwater generated by the development, the MWS units would serve as velocity dissipators, decreasing the rate and volume of stormwater entering municipal storm drains and other receiving waters. Therefore, upon adherence to existing state water quality requirements, including MS4 requirements, the proposed project would: (1) minimize or avoid causing a substantial increase in the rate or amount of surface runoff in a manner which would result in flooding on or offsite; (2) would not 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; (3) would not 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. Impacts would be less than significant, and no mitigation is warranted.

Figure 3.9-4
DRAINAGE SUBAREAS, POST-PROJECT CONDITIONS



Disclaimer: Illustration provided by Q3 Engineering, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Sources: Q3 Engineering, 2019.



Chadwick Ranch Estates Project
Drainage Subareas, Post-Project Conditions



Table 3.9-2
ESTIMATED PEAK DISCHARGE RATES AND DEBRIS VOLUMES, POST-PROJECT CONDITIONS

Drainage Subarea	Outfall	Acres	Percent Impervious	Downstream Conveyance Type	Q50 (clear) (cfs)	Q50b (burned) (cfs)	Debris Volume (cy) ¹
1A	2A	9.08	1percent	V-Ditch	27.1	31.1	3,360
3A	4A	4.22	1percent	Basin	16.6	18.4	1,680
	4A	13.30	1percent	Confluence	41.5	47.4	NA
5B	6B	14.53	31percent	Storm Drain Pipe	34.8	34.8	0
7B	8B	26.74	32percent	Stormwater Detention Basin	62.3	62.3	0
	8B	41.27	NA	Confluence	95.9	95.9	NA
	9AB	54.57	NA	Confluence of 4A & 8B	136.2	142.0	NA
10A	16AC	11.60	1percent	Spinks Debris Basin	44.5	49.5	4,320
11C	12C	20.67	1percent	Debris Basin/ Storm Drain Pipe	54.3	65.2	7,680
13C	14C	7.70	1percent	Debris Basin/ Storm Drain Pipe	22.8	27.0	2,880
	14C	28.37	1percent	Confluence	76.6	91.1	NA
	16AC	94.54	NA	Confluence Totals at Spinks Basin	241.3	267.7	19,920

¹ Debris generation for all seven drainage subareas is estimated at 240,000 cubic yards per square mile. Debris generation is estimated in the Hydrology and Hydraulics Report per square mile; one square mile equals 640 acres.

NA = not applicable

Source: Proactive/Q3 Consulting, 2019

iv) Impede or redirect flood flows?

No Impact

The proposed project would be built in an undeveloped area on the southern foothills of the San Gabriel Mountains. Although the southernmost part of the proposed project site is situated between Bliss Canyon Creek on the north and west, Spinks Canyon Creek on the east and south, and is bisected by Bradbury Canyon Creek, the Federal Emergency Management Agency (FEMA) has mapped the majority of the project site as **Zone D**, *Areas in which flood hazards are undetermined, but possible*. The Bradbury Debris Basin is mapped as **Zone X**, *Areas determined to be outside the 0.2 percent*



annual chance [500-year] floodplain (FEMA 2008). **Figure 3.14-3, FEMA FIRM Map Panel**, shows flood zones as mapped by FEMA.

It is not anticipated that floodwaters would reach the project site, or that the proposed project would impede or redirect flood flows. Therefore, no impacts associated with flooding would occur, and no mitigation is proposed.

e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No Impact

As detailed in the project's LID, the combined MWS unit capacity is 3 percent greater than the volume of water that would be discharging through them during an 85th percentile storm (i.e., the Design Capture Volume, or DCV).

Ninety-seven percent of the DCV calculated for this project site would be treated onsite through biofiltration prior to being discharged into municipal storm drains and receiving waters (Q3 Consulting et.al., 2019b, p. 5). The project would be designed in compliance with all applicable City of Bradbury regulations regarding Low Impact Development, as well as the Los Angeles County MS4 permit (Order No. R4-2012-0175-A01, NPDES No. CA004001) to which the City of Bradbury is a signatory, and the LID MWS units would ensure that the water quality objectives of the Basin Plan are met. It is not anticipated that the proposed project would conflict with or obstruct implementation of a water quality control plan. Therefore, the project would have no impact in this regard.

3.9.6 Mitigation Measures

The project would result in Less Than Significant Impacts. Therefore, no mitigation measures are required.

3.9.7 Level of Significance after Mitigation

Project impacts were determined to be less than significant and no mitigation measures are required.

SECTION 3.10 – LAND USE AND PLANNING



3.10 Land Use and Planning

3.10.1 Relevant Policies and Regulations

Federal

There are no federal regulations that pertain to this issue area.

State

There are no state regulations that pertain to this issue area.

Local

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the designated regional planning agency for the following six counties in Southern California: Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. SCAG is a Joint Powers Authority under California state law, established as an association of local governments that voluntarily convene to address regional issues. Under federal law, SCAG is designated as a Metropolitan Planning Organization and under state law as a Regional Transportation Planning Agency and a Council of Government (SCAG, 2018).

Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)

In September 2020, SCAG's Regional Council adopted the 2020-2045 RTP/SCS, which analyzes the impacts of its decisions, policies, strategies and development projects on the environment, the economy and social equity. The 2020 - 2045 RTP/SCS envisions vibrant, livable communities that are healthy and safe with transportation options that provide easy access to schools, jobs, services, health care and other basic needs.

The 2020–2045 RTP/SCS provides the transportation vision for the region through the year 2045 and provides a long-term investment framework for addressing regional transportation and related challenges. The RTP/SCS balances the region's future mobility and housing needs with economic, environmental and public health goals. The RTP/SCS is required by the State of California and the federal government and is updated by SCAG every four years as demographic, economic and policy circumstances change.

Air Quality Management Plan

The South Coast Air Quality Management District's Air Quality Management Plan (AQMP) is a regional blueprint for achieving air quality standards and healthful air. The 2016 AQMP (most recent available) represents a comprehensive analysis of emissions, meteorology, atmospheric chemistry, and regional growth projections (SCAQMD, 2018).

City of Bradbury General Plan

The City of Bradbury General Plan, among other things, addresses the future physical development of the community and serves as a guide for the development and preservation of the community as envisioned by its residents. The General Plan includes the seven elements mandated by state law,

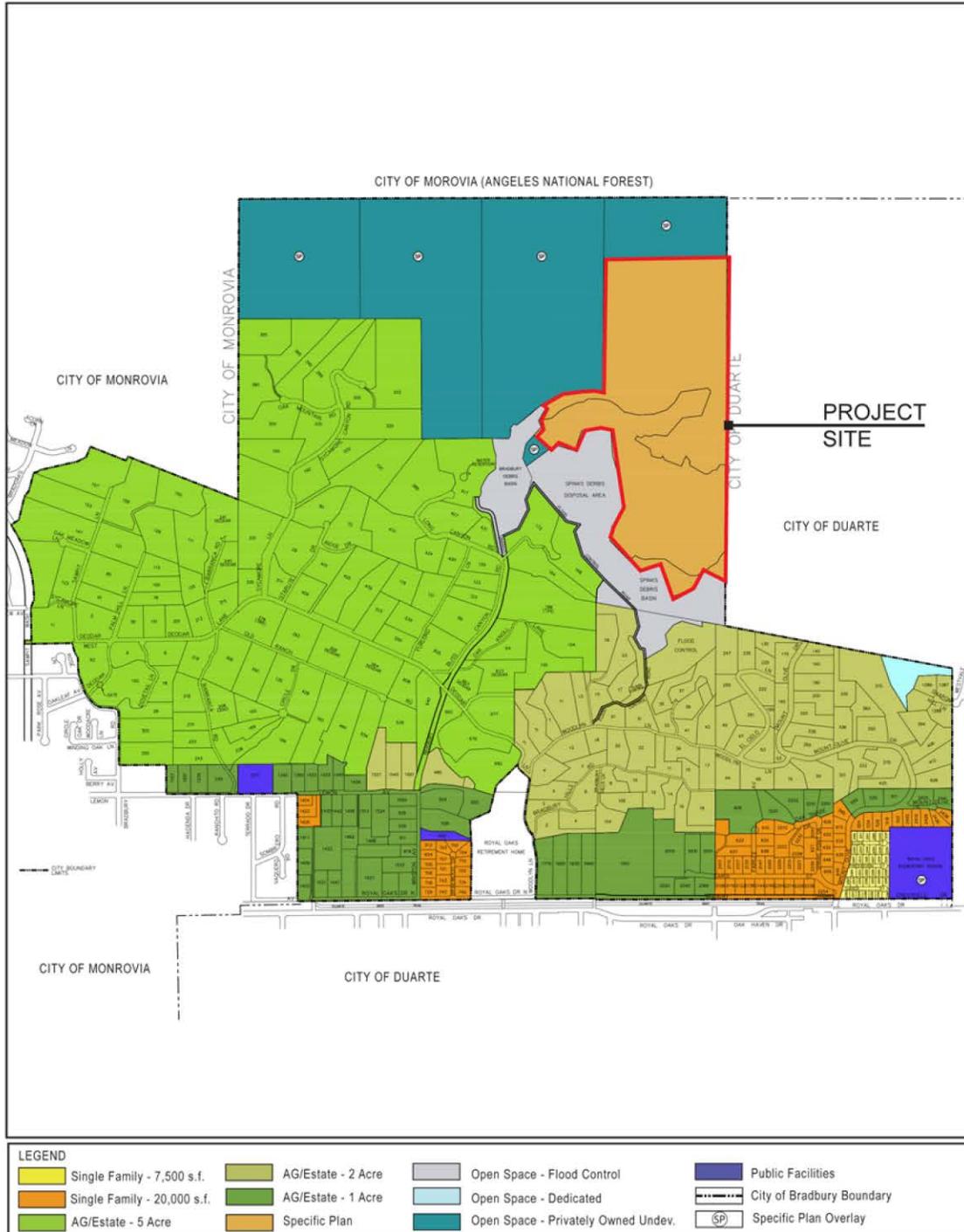


including a Land Use Element. The last update to the Bradbury General Plan was adopted in February 2014 and covers the 2012-2030 timeframe. The General Plan Update discusses future development potential in the City of Bradbury for the 302 acres designated as Privately Owned - Undeveloped, including the project site. Overall, this area is divided into eight parcels along the City's northern boundary. It states that any development or further subdivision of this area would be subject to review and approval of a specific plan, including associated environmental studies. It further states that any development in the area would be subject to hillside development standards that apply to any site that consists of two acres of land having an average slope exceeding 10 percent.

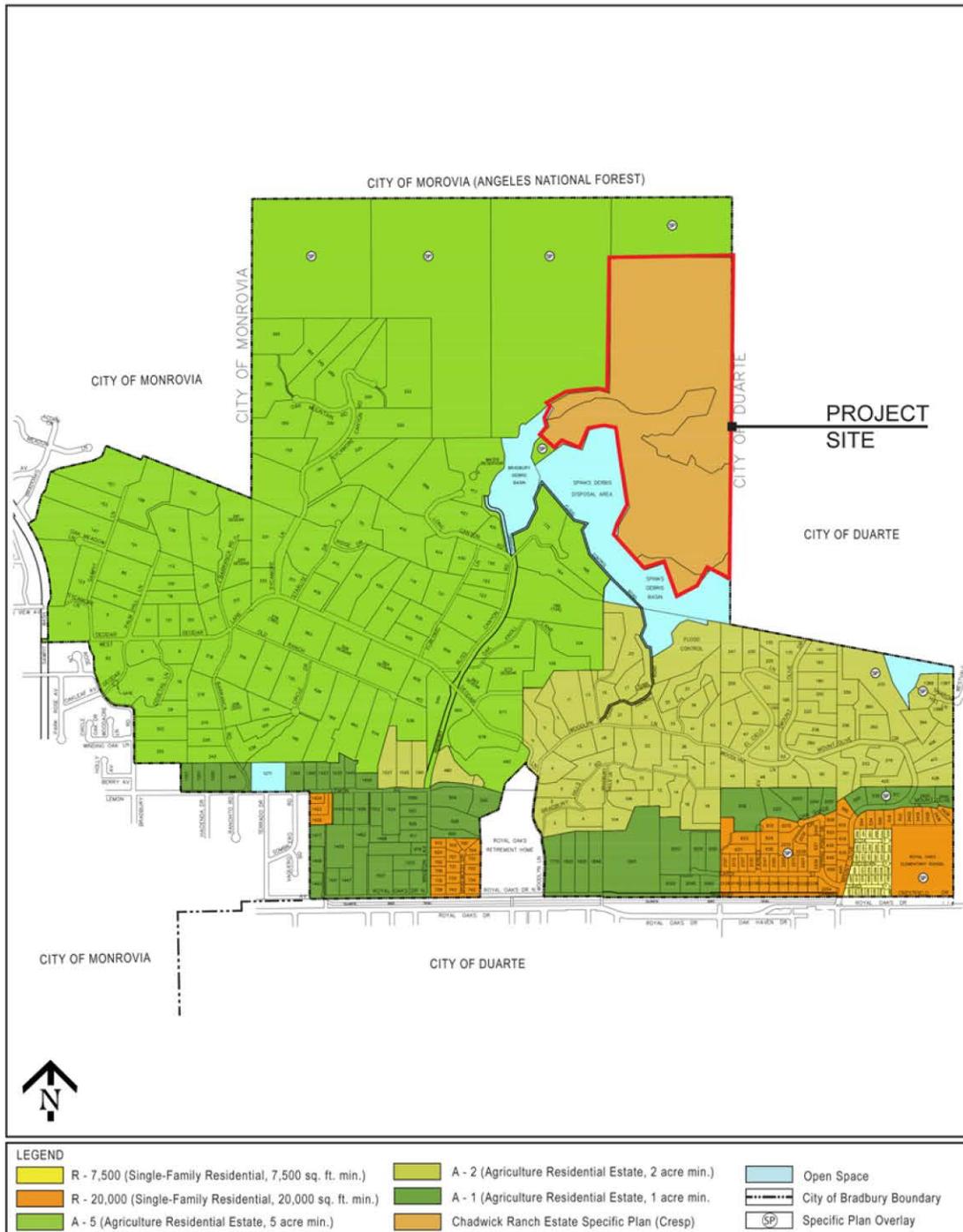
Figure 3.10-1, *City of Bradbury General Plan Land Use Designations*, identifies the General Plan Land Use designations for the project site and vicinity. The site of the Proposed Project has the land use designation of "Open Space-Privately Owned Undeveloped". According to the General Plan Land Use Element, parcels with this designation have a maximum density of one dwelling unit per five acres. However, the Land Use Element specifically recognizes that a cluster concept could be used.

The City of Bradbury Development Code implements the community's long-standing stated policies aimed at retaining its rural, low-density single-family residential character as expressed in the General Plan Land Use Element. **Figure 3.10-2**, *City of Bradbury Zoning Designations*, identifies the zoning designations for the project site and vicinity. The site of the Proposed Project is zoned "A-5 (SP)" (Agriculture Residential Estate, 5 Acre Minimum) with a Specific Plan Overlay. Any development of this area requires the adoption of a Specific Plan.

Figure 3.10-1
CITY OF BRADBURY GENERAL PLAN LAND USE DESIGNATIONS



**Figure 3.10-2
CITY OF BRADBURY ZONING DESIGNATIONS**



3.10.2 Existing Setting

Existing and Adjacent Land Uses

The project site is vacant and devoid of man-made improvements. As shown in **Figure 3.10-2**, adjacent land uses include vacant, undeveloped land to the west; open space to the east (Duarte Wilderness Preserve); open space, including the Angeles National Forest, to the north; and open space managed by Los Angeles County Flood Control District to the south.

3.10.3 Methods

This analysis compares the characteristics of the proposed project to determine its consistency with the City of Bradbury General Plan. This analysis also evaluates the compatibility of the project improvements with surrounding land uses. Finally, the analysis evaluates the project characteristics against established regional land use and planning policies.

3.10.4 Thresholds of Significance

Appendix G of the State CEQA Guidelines specifies two criteria for evaluating the significance of Land Use and Planning:

- a) **Would the project physically divide an established community?**
- b) **Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?**

The Initial Study, included as Appendix G to this DEIR, determined that impacts related to threshold (a) would have no impact; this impact is not analyzed below.

3.10.5 Impact Analysis

- b) **Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?**

Significant and Unavoidable Impact

The project site is comprised of three parcels designated “Open Space Privately Owned Undeveloped” on the Land Use Map of the Bradbury General Plan. A general plan amendment is proposed to change the land use designation for the 111.8-acre project site to Specific Plan. In addition, the proposed project also requests a Change of Zone from Agriculture/Estate Residential (A-5) SP to Chadwick Ranch Estates Specific Plan to ensure that the zoning for the project site is consistent with its General Plan Land Use Map designation requirements. The City’s General Plan, Development Code, and Design Guidelines govern all development within the city limits and are oriented toward avoiding or minimizing adverse environmental consequences due to development. The Chadwick Ranch Estates Specific Plan would serve to refine the mandates and guidelines set forth in the City’s development policy and regulatory documents.



Proposed project consistency with the RTP/SCS is evaluated below in **Table 3.10-1, Consistency Analysis with RTP/SCS**. The project would be consistent with three RTP/SCS goals; the remaining seven goals are inapplicable to the project. The project would be inconsistent with six SCS strategies, four of which are within the category *Focus Growth Near Destinations & Mobility Options*, and the remaining two in the category *Promote a Green Region*. Most of the remaining SCS strategies are policy initiatives that are inapplicable to the proposed development project. Impacts would be significant.

**Table 3.10-1
CONSISTENCY ANALYSIS WITH RTP/SCS**

RTP/SCS Goals and SCS Strategies	Project Consistency
RTP/SCS Goals	
1. Encourage regional economic prosperity and global competitiveness	Inapplicable. Project development would have no effect on global economic competitiveness of the southern California region. The economic impact of the project would be too small to affect regional economic prosperity.
2. Improve mobility, accessibility, reliability, and travel safety for people and goods	Inapplicable. Development of the proposed residential project would not affect mobility or the reliability or safety of the transportation system.
3. Enhance the preservation, security, and resilience of the regional transportation system	Inapplicable. Development of the proposed residential project would not affect the regional transportation system.
4. Increase person and goods movement and travel choices within the transportation system	Inapplicable. Development of the proposed residential project would not affect the regional transportation system.
5. Reduce greenhouse gas emissions and improve air quality	Consistent. Project air quality and greenhouse gas emissions impacts were determined to be less than significant.
6. Support healthy and equitable communities	Inapplicable. Project development would have no impact regarding healthy communities; development of the planned 14 estate homes would have no adverse effect regarding equitable communities.
7. Adapt to a changing climate and support an integrated regional development pattern and transportation network	Consistent. Fire protection measures set forth in the project Fire Protection Plan, which go beyond those required under State law, would aid in climate adaptability of the project (wildfires could become more frequent due to a warming climate).
8. Leverage new transportation technologies and data-driven solutions that result in more efficient travel	Inapplicable. The project does not propose new transportation technologies.
9. Encourage development of diverse housing types in areas that are supported by multiple transportation options	Inapplicable. The project proposes development of 14 graded pads for single-family estate homes and does not propose a diversity of housing types. The project site is not in an area supported by multiple transportation options. The project site is 0.8 mile north of the nearest public transit bus line, Foothill Transit Line 860 on Royal Oaks



❖ SECTION 3.10 – LAND USE AND PLANNING ❖

RTP/SCS Goals and SCS Strategies	Project Consistency
	Drive. The nearest bicycle facility to the project site shown on the Metro Bike Map is a bike path on Royal Oaks Drive also 0.8 mile to the south.
10. Promote conservation of natural and agricultural lands and restoration of habitats	Consistent. The project proposes permanent conservation of 51 percent of the project site as open space. Mitigation measures include purchase of mitigation credits compensating for impacts to waters including riparian habitats; and planting 831 replacement trees.
SCS Strategies	
Focus Growth Near Destinations & Mobility Options	
Emphasize land use patterns that facilitate multimodal access to work, educational and other destinations	Inconsistent. See the response to Goal 9 above. The project site is approximately 1.3 miles north of the nearest commercial and institutional uses, which are along Huntington Drive.
Focus on a regional jobs/housing balance to reduce commute times and distances and expand job opportunities near transit and along center-focused main streets	Inapplicable. Jobs-housing balance is not a meaningful measure for the City of Bradbury due to its small population and lack of employment. The next larger area for which jobs-housing balance can be measured, the San Gabriel Valley Council of Governments region, has population of over 2 million (SGVCOG, 2021); employment in that region in 2019 was approximately 750,000 (US Census Bureau, 2021). The proposed development of 14 estate homes would not impact jobs-housing balance in the San Gabriel Valley region. The project would not develop employment-generating land uses and thus would not affect employment near transit and main streets.
Plan for growth near transit investments and support implementation of first/last mile strategies	Inconsistent. See response to Goal 9 above.
Promote the redevelopment of underperforming retail developments and other outmoded nonresidential uses	Inapplicable. The project does not propose redevelopment.
Prioritize infill and redevelopment of underutilized land to accommodate new growth, increase amenities and connectivity in existing neighborhoods	Inconsistent. The project would be greenfield development on the margin of the urbanized area of the city of Bradbury and the San Gabriel Valley.
Encourage design and transportation options that reduce the reliance on and number of solo car trips (this could include mixed uses or locating and orienting close to existing destinations)	Inconsistent. See the response to Goal 9 above. The project site is approximately 1.3 miles north of the nearest commercial and institutional uses, which are along Huntington Drive.
Identify ways to “right size” parking requirements and promote alternative parking strategies (e.g. shared parking or smart parking)	Inapplicable. Off-street parking prescribed by the Chadwick Ranch Estates Specific Plan does not exceed that required under City of Bradbury Municipal Code Section 9.103.030, that is, two off-street parking spaces for each residences of no more than four bedrooms; and one additional parking space for each additional two bedrooms. The project does not propose mixed land uses



RTP/SCS Goals and SCS Strategies	Project Consistency
	or paid off-street parking where shared parking or smart parking, respectively, would be practicable.
Promote Diverse Housing Choices	
<ul style="list-style-type: none"> • Preserve and rehabilitate affordable housing and prevent displacement • Identify funding opportunities for new workforce and affordable housing development • Create incentives and reduce regulatory barriers for building context-sensitive accessory dwelling units to increase housing supply • Provide support to local jurisdictions to streamline and lessen barriers to housing development that supports reduction of greenhouse gas emissions 	<p>Inapplicable. Three of the four strategies listed are policy initiatives inapplicable to the proposed development project. The remaining strategy, <i>Preserve and rehabilitate affordable housing and prevent displacement</i>, is inapplicable to the proposed development project.</p>
Leverage Technology Innovations	
<ul style="list-style-type: none"> • Promote low emission technologies such as neighborhood electric vehicles, shared rides hailing, car sharing, bike sharing and scooters by providing supportive and safe infrastructure such as dedicated lanes, charging and parking/drop-off space • Improve access to services through technology—such as telework and telemedicine as well as other incentives such as a “mobility wallet,” an app-based system for storing transit and other multi-modal payments • Identify ways to incorporate “micro-power grids” in communities, for example solar energy, hydrogen fuel cell power storage and power generation 	<p>Inapplicable. Due to the small scale of the proposed project, infrastructure for services such as car sharing and bike sharing is impracticable. Provision of technology such as telework and telemedicine would be under the control of future residential owners, not the applicant. The project does not propose a micro-power grid. Bradbury Municipal Code Chapter 17.14 promotes the use of electric vehicles by creating an expedited, streamlined permitting process for electric vehicle charging stations. Mitigation requiring installation of charging stations in residential properties to be developed pursuant to the proposed project was assessed and rejected as impracticable, as various types of electric vehicles use different types of chargers.</p>
Support Implementation of Sustainability Policies	
<ul style="list-style-type: none"> • Pursue funding opportunities to support local sustainable development implementation projects that reduce greenhouse gas emissions • Support statewide legislation that reduces barriers to new construction and that incentivizes development near transit corridors and stations • Support local jurisdictions in the establishment of Enhanced Infrastructure Financing Districts (EIFDs), Community Revitalization and Investment Authorities (CRIAs), or other tax increment or value capture tools to finance sustainable infrastructure and development projects, including parks and open space • Work with local jurisdictions/communities to identify opportunities and assess barriers to implement sustainability strategies • Enhance partnerships with other planning organizations to promote resources and best practices in the SCAG region • Continue to support long range planning efforts by local jurisdictions • Provide educational opportunities to local decisions makers and staff on new tools, best practices and 	<p>Inapplicable. The strategies are policy initiatives inapplicable to the proposed residential project.</p>

RTP/SCS Goals and SCS Strategies	Project Consistency
policies related to implementing the Sustainable Communities Strategy	
Promote a Green Region	
<ul style="list-style-type: none"> Support development of local climate adaptation and hazard mitigation plans, as well as project implementation that improves community resiliency to climate change and natural hazards 	Consistent. See response to Goal 7.
<ul style="list-style-type: none"> Support local policies for renewable energy production, reduction of urban heat islands and carbon sequestration 	Inapplicable. The strategy is a policy initiative inapplicable to the proposed residential project.
<ul style="list-style-type: none"> Integrate local food production into the regional landscape 	Inapplicable. The proposed project would not affect the regional landscape.
<ul style="list-style-type: none"> Promote more resource efficient development focused on conservation, recycling and reclamation 	Inapplicable. The strategy is a policy initiative inapplicable to the proposed development project.
<ul style="list-style-type: none"> Preserve, enhance and restore regional wildlife connectivity 	Inconsistent. Project development would remove approximately 48 acres of native habitat that is used as a local wildlife movement corridor.
<ul style="list-style-type: none"> Reduce consumption of resource areas, including agricultural land 	Inconsistent. See response to the preceding strategy. <i>Resource Areas</i> as defined in Government Code § 65080.01 includes sensitive species habitat.
<ul style="list-style-type: none"> Identify ways to improve access to public park space 	Inapplicable. The east side of the project site borders Duarte Wilderness Park. No existing public access to the park is available on the project site, and the proposed residential project would not be a suitable location for public access to the park.

Sources:

RTP/SCS Goals are set forth in Chapter 1, *About the Plan*.

SCS Strategies are set forth in Chapter 3, *A Path to Greater Access, Mobility & Sustainability*.

San Gabriel Valley Council of Governments Region Population Data: SGVCOG, 2021.

San Gabriel Valley Council of Governments Region Employment Data: US Census Bureau, 2021.

3.10.6 Mitigation Measures

No feasible mitigation measures are available to reduce the project’s inconsistency with the RTP/SCS to less than significant levels. Regarding promotion of low-emissions technologies, the City assessed requiring installation of charging stations in residential properties to be developed pursuant to the project as a mitigation measure and rejected it as impracticable, as various types of electric vehicles use different types of chargers.

3.10.7 Level Significance after Mitigation

Project impacts respecting consistency with the RTP/SCS would be significant and unavoidable, and a statement of overriding considerations is required.

SECTION 3.11 - NOISE

3.11 Noise

3.11.1 Relevant Policies and Regulations

Federal

There are no federal regulations that pertain to this issue area.

State

The most current guidelines prepared by the state noise officer are contained in Appendix D of the General Plan Guidelines issued by the Governor's Office of Planning and Research (OPR) in 2017 (OPR, 2017). These guidelines establish four categories for judging the severity of noise intrusion on specified land uses:

- **Normally Acceptable:** Is generally acceptable, with no mitigation necessary;
- **Conditionally Acceptable:** May require some mitigation, as established through a noise study;
- **Normally Unacceptable:** Requires substantial mitigation;
- **Clearly unacceptable:** Probably cannot be mitigated to a less-than-significant level.

The OPR noise compatibility guidelines assign ranges of CNEL values to each of these categories. The ranges differ for different types of sensitive receivers.

Local

City of Bradbury General Plan Health and Safety Element

The Noise chapter of the City of Bradbury General Plan Health and Safety Element has the following goals, objectives, policies and actions that potentially apply to proposed project (City of Bradbury, 2014b):

Goals

Goal 3: Establish land uses which are compatible with existing noise levels within the community.

Goal 4: Prevent and mitigate the adverse impacts of noise on City residents.

Objectives

Objective 2: Identify and mitigate construction activity and other sources of noise that may impact the community.

Objective 3: Careful consideration of noise impacts should be a part of all land use decisions.



Objective 4: Maintain the quiet residential character of the City free from excessive noise from mobile and fixed source generators both Citywide and region-wide.

Policies

Policy 1: Ensure noise mitigation measures are included in the design of new developments.

Policy 4: Encourage the use of acoustical materials in all new residential developments.

Policy 6: Ensure residential developments are designed and mitigated to achieve a maximum exterior CNEL of 65 dB and a maximum interior CNEL of 45 dB.

Policy 11: Prohibit significant long-term noise-generating activities on land located near sensitive noise receptors.

Policy 14: Ensure that to the greatest extent possible construction noise does not cause an adverse impact to the residents of the City.

City of Bradbury Municipal Code

The City of Bradbury's noise regulation is codified mainly in Municipal Code Title IX (Development Code) Part VI (Site Planning and General Development Standards), Chapter 127 – Noise. Section 9.127.040 prohibits activities that would cause the noise level on any residential property to exceed the median ambient noise level or, if that level is unknown, 55 dBA from 7:00 a.m. to 10:00 p.m. or 50 dBA from 10:00 p.m. to 7:00 a.m. These limits may be increased by 5 to 20 dBA if the noise is less than or equal to 15 minutes per hour. They can be decreased by 5 dBA if the noise source emits an impulsive sound, such as that from a pile driver or jackhammer. However, these limits do not apply to construction and demolition work between 7:00 a.m. and 7:00 p.m. on weekdays and between 9:00 a.m. and 7:00 p.m. on weekends, excluding holidays.

City of Duarte General Plan Noise Element

The nearest sensitive receivers for noise are residences on Spinks Canyon Road, immediately east and southeast of the project site boundary, in the city of Duarte. It is therefore important to consider the City of Duarte's policies and restrictions on residential noise exposure. The following goals, objectives, and policies of the City of Duarte General Plan Noise Chapter (City of Duarte, 2007) are relevant to the proposed project:

Noise Goal 2, Objective 1.2, Policy Noise 2.15

Evaluate the noise impacts from projects and existing uses in adjacent cities and work cooperatively with these cities to develop mitigation measures that will improve ambient noise conditions in Duarte (City of Duarte, 2007, p. 4).

Noise Goal 3, Objective 1.3, Policy Noise 3.1.3

Ensure that construction noise does not cause an adverse impact to the residents of the City. (City of Duarte, 2007, p. 4).

City of Duarte Municipal Code

The City of Duarte’s noise ordinances are codified in Title 9 - Public Peace and Safety, Chapter 9.68 – Noise Regulations, of the Duarte Municipal Code. Section 9.68.050 contains exposure standards for various types of receivers, including residential areas. However, the standards apply to noise produced by “any person within the city of Duarte.”

Section 9.68.120 of the Duarte Municipal Code prohibits construction work within 500 feet of a residential zone between 10 p.m. of one day and 7 a.m. of the next day “in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance,” unless a permit is obtained from the City. The section does not limit the sound source to the city of Duarte.

The state standards for the land uses relevant to the proposed project and the acceptability noise categories for them are presented in **Table 3.11-1, Land Use Compatibility**. There is some overlap between categories, which indicates that some judgment is required in determining the applicability of the numbers in some situations.

**Table 3.11-1
LAND USE COMPATIBILITY FOR COMMUNITY NOISE SOURCES**

Land Use Category	Noise Exposure (dBA, CNEL)					
	55	60	65	70	75	80
Residential – Low-Density Single-Family, Duplex, Mobile Homes	■	■				
		■	■	■		
				■		
						■
■	Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.					
■	Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply system or air conditioning will normally suffice.					
■	Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.					
■	Clearly Unacceptable: New construction or development should generally not be undertaken.					

Source: OPR, 2017.

3.11.2 Existing Setting

Noise Sources

The predominant source of noise in the area of Chadwick Ranch Estates project is motor vehicle traffic. According to the City of Bradbury General Plan, Health and Safety Element (City of Bradbury, 2014b), no industrial uses are near the residents of the city. The city has no major arterials, although



some noise from major arterials outside the city limits could potentially affect Bradbury residents. The document cites noise measurements made for the City of Duarte General Plan along Royal Oaks Drive, just south of the boundary between the two cities, and the Duarte portion of Mount Olive Drive, which the two cities share. No noise levels exceeding 65 dBA CNEL were encountered. The highest ambient noise level in the community (64 dBA) is generated by traffic using Royal Oaks Drive in Duarte. Noise in this area is attributed to traffic south of the old Pacific Electric Railroad right-of-way, which is also outside the Bradbury City limits.

The average residential lot in the City of Bradbury is substantially larger than single-family residential lots in adjacent communities. The larger parcels allow for landscape buffering and significant separation between dwelling units and setbacks from local streets. Most dwellings located near the internal collector streets and the exterior arterial highways are buffered from intruding noise through the use of walls (City of Bradbury, 2014b).

Ambient Noise Measurements - November 22, 2019 Noise Sampling

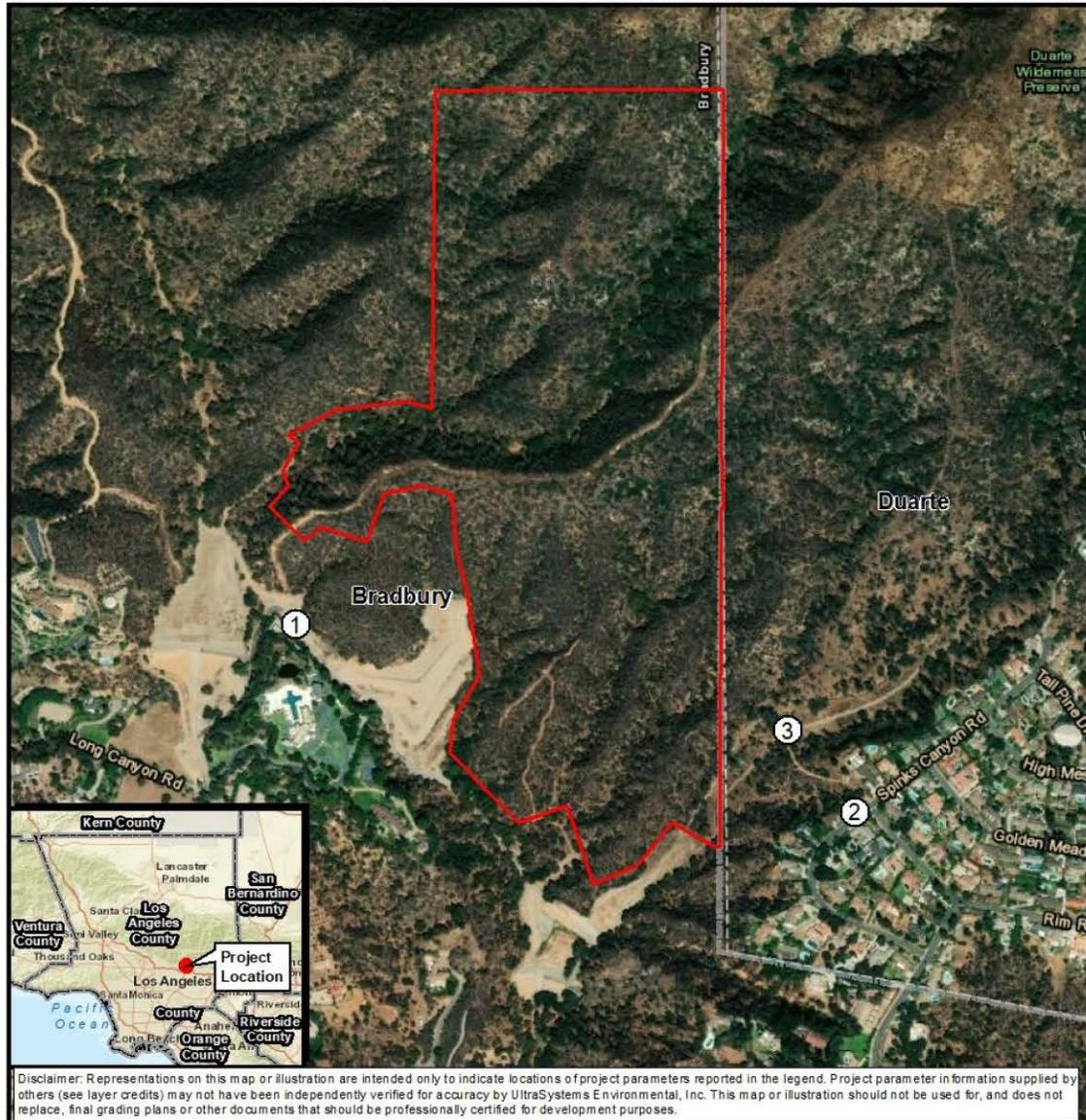
On Friday, November 22, 2019, ambient noise levels were monitored at three residential locations east and west of the southern portion of the project site. Sampling points are shown in **Figure 3.11-1**. Sound levels were measured twice at two locations and three times at the other. A Quest SoundPro Model DL-1-1/3 ANSI Type 1 sound level meter was used in the “slow” mode at each measurement location to obtain a 15-minute average sound level (L_{eq}), as well as other metrics. The meter’s microphone was maintained five feet above the ground. Noise meter output records and observations during sampling are in **Appendix S**.

As shown in **Table 3.11-2, Measured Ambient Noise Levels**, average short-term ambient noise levels (L_{eq}) ranged from 40.9 to 56.0 dBA L_{eq} . All monitored noise levels were within the range considered typical for the nearby land uses. The second reading at point 1, which had the highest L_{eq} and the second highest L_{max} , may have been influenced by operation of a leaf blower about 100 feet from the noise meter.

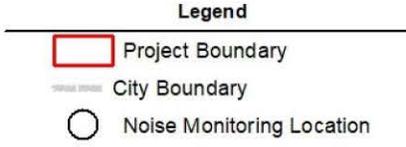
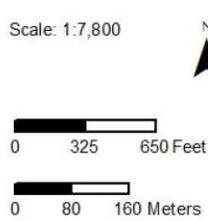
**Table 3.11-2
MEASURED AMBIENT NOISE LEVELS**

Point	Data Set	Sampling Time	Latitude Longitude	Sound Level (dBA)			Notes
				L_{eq}	L_{max}	L_{90}	
1	S096	0849-0904	34.15631° -117.96629°	43.9	57.1	36.3	West of project site, on a small dirt hill across Flood Control Road from a residence at higher elevation; residence has wall.
	S099	1257-1312		56.0	70.3	43.8	
2	S097	0947-1002	34.15386° -117.95750°	52.1	71.0	38.9	On a residential street (Spinks Canyon Road, Duarte) east of project site. Houses at higher elevation than project site.
	S102	1440-1455		49.2	65.4	37.9	
3	S098	1054-1109	34.15493° -117.95857°	40.9	52.6	36.6	On a dirt trail east of the project site, between project boundary and residential community. In Duarte. Lower elevation than nearest part of the project site.
	S100	1329-1344		44.3	61.9	33.8	
	S101	1351-1406		39.1	55.7	34.1	

**Figure 3.11-1
AMBIENT NOISE MONITORING LOCATIONS**



January 03, 2020



Chadwick Ranch Estates Project
Ambient Noise Monitoring Locations



Sensitive Land Uses

The Noise Element of the City of Bradbury General Plan deems the following land uses “noise-sensitive” (City of Bradbury, 2014b):

- Schools.
- Hospitals.
- Rest Homes
- Long-term Care Facilities
- Mental Care Facilities.

There are no hospitals, rest-homes or long-term medical or mental care facilities within the city. The Royal Oaks Elementary School is located in the southeastern corner of the city. The Be Royal Oaks (formally Royal Oaks Manor) retirement/assisted living care facility is located on Royal Oaks Drive North, east of Braewood Drive. This facility is located adjacent to the city in an unincorporated portion of Los Angeles County. The existing sensitive receptors that are nearest to the project site are listed in **Table 3.11-3**. These receivers would be exposed to noise during project construction and operations. The location of sensitive receivers is depicted below in **Figure 3.11-2, Sensitive Receivers in Project Area**.

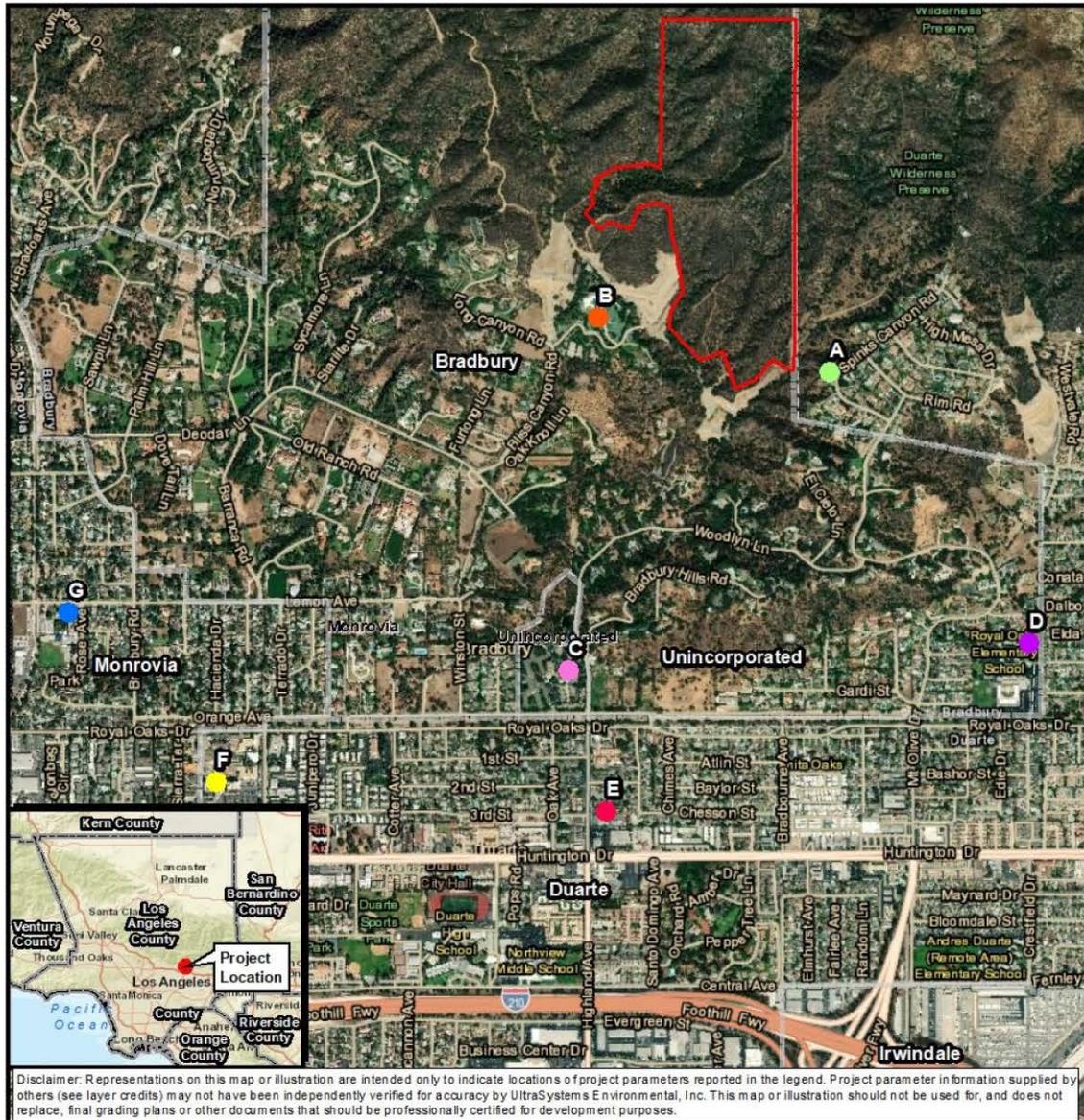
**Table 3.11-3
SENSITIVE RECEIVERS IN PROJECT AREA**

ID	Sensitive Receiver	Type	Address	Latitude, Longitude	Description	Distance (feet)
A	Single-Family Homes	Residential	201 Spinks Canyon Rd., Duarte, CA ^a	34.153362, -117.958441	Residences east of the project site	333
B	Single-Family Homes	Residential	172 Bliss Canyon Rd., Bradbury, CA 91010	34.154884, -117.966237	Residence west of the project site	681
C	Royal Oaks	Senior Living	1763 Royal Oaks Dr N, Bradbury, CA 91010	34.144958, -117.967259	Senior housing southwest of the project site	3,321
F	Royal Oaks STEAM Academy	K-8 School	2499 Royal Oaks Dr, Duarte, CA 91010	34.145726, -117.951669	School southeast of the project site	3,701
E	Wee Care Montessori School	Pre-school	1014 Highland Ave, Duarte, CA 91010	34.140995, -117.965991	Pre-school southwest of the project site	4,510
F	Santa Teresita Hospital	Assisted living facility	819 Buena Vista Street, Duarte, CA 91010	34.141803, -117.979199	Hospital southwest of the project site	6,536
G	Bradoaks School	Elementary School	930 E Lemon Ave, Monrovia, CA 91016	34.146588, -117.984202	Elementary school southwest of the project site	6,789

Source: UltraSystems with Google Earth. 2018.

^aLocation mailing address is Bradbury, CA 91008.

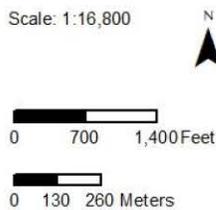
**Figure 3.11-2
SENSITIVE RECEIVERS IN PROJECT AREA**



Disclaimer: Representations on this map or illustration are intended only to indicate locations of project parameters reported in the legend. Project parameter information supplied by others (see layer credits) may not have been independently verified for accuracy by UltraSystems Environmental, Inc. This map or illustration should not be used for, and does not replace, final grading plans or other documents that should be professionally certified for development purposes.

Path: I:\GIS\Projects\7023_Bradbury\MXD\7023_Bradbury_4_13_Sensitive_Receiver_2020_01_02.mxd, Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community; Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community; Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community; UltraSystems Environmental, Inc., 2020.

January 03, 2020



Legend	
	Project Boundary
	City Boundary
Sensitive Receiver Type	
	A. Residential
	B. Residential
	C. Senior Living
	D. K-8 School
	E. Pre-School
	F. Assisted Living Facility
	G. Elementary School

Chadwick Ranch Estates Project

Sensitive Receivers
Near Project Area



Characteristics of Sound

Sound is a pressure wave transmitted through the air. It is described in terms of loudness or amplitude (measured in decibels), frequency or pitch (measured in hertz [Hz] or cycles per second), and duration (measured in seconds or minutes). The decibel (dB) scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Because the human ear is not equally sensitive to all frequencies, a special frequency-dependent rating scale is used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against upper and lower frequencies in a manner approximating the sensitivity of the human ear. The scale is based on a reference pressure level of 20 micropascals (zero dBA). The scale ranges from zero (for the average least perceptible sound) to about 130 (for the average human pain level).

Noise Measurement Scales

Several rating scales have been developed to analyze adverse effects of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise on people depends largely upon the total acoustical energy content of the noise, as well as the time of day when the noise occurs. Those that are applicable to this analysis are as follows:

- Leq, the equivalent noise level, is an average of sound level over a defined time period (such as one minute, 15 minutes, one hour, or 24 hours). Thus, the Leq of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure.
- L90 is a noise level that is exceeded 90 percent of the time at a given location; it is often used as a measure of “background” noise.
- Lmax is the root mean square (RMS) maximum noise level during the measurement interval. This measurement is calculated by taking the RMS of all peak noise levels within the sampling interval. Lmax is distinct from the peak noise level, which only includes the single highest measurement within a measurement interval.
- CNEL, the Community Noise Equivalent Level, is a 24-hour average Leq with a 4.77 A weighted decibel (dBA) “penalty” added to noise during the hours of 7:00 p.m. to 10:00 p.m., and a 10-dBA penalty added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime (Caltrans, 2009). The logarithmic effect of these additions is that a 60-dBA 24-hour Leq would result in a calculation of 66.7 dBA CNEL.
- Ldn, the day-night average noise, is a 24-hour average Leq with an additional 10-dBA “penalty” added to noise that occurs between 10:00 p.m. and 7:00 a.m. The Ldn metric yields values within 1 dBA of the CNEL metric. As a matter of practice, Ldn and CNEL values are considered to be equivalent and are treated as such in this assessment.

3.11.3 Methods

Noise impacts from construction activities are a function of the noise generated by the operation of construction equipment and onroad delivery and worker commuter vehicles, the location of equipment, and the timing and duration of the noise-generating activities. For the purpose of this analysis, it was estimated that the Project would be built in two phases. Phase I would include grading and site preparation, installation of utilities, and other activities on the entire project site. Once this phase of construction is completed, the next phase would be the improvement of each residential estate pad.

Using preliminary design and scheduling information, UltraSystems used the air pollutant emissions estimation model CalEEMod²¹ to estimate the number of days to execute the following construction sub-phases:

- Demolition.
- Site preparation.
- Grading.
- New building construction.
- Concrete paving.
- Architectural coating.

The types and numbers of pieces of equipment anticipated in each phase of construction and development were estimated using CalEEMod and UltraSystems’ experience with similar projects. The CalEEMod equipment mix is based on a construction survey performed by the South Coast Air Quality Management District (SCAQMD) (Breeze Software, 2017). **Table 3.11-2** lists the equipment expected to be used. For each equipment type, the table shows an average noise emission level (in dBA at 50 feet, unless otherwise specified) and a “usage factor,” which is an estimated percentage of operating time that the equipment would be producing noise at the stated level.²² **Table 3.11-4, Construction Equipment Noise Characteristics**, shows the assumed deployment of equipment in each construction sub-phase.

**Table 3.11-4
CONSTRUCTION EQUIPMENT NOISE CHARACTERISTICS**

Equipment Type	Horsepower	Usage Factor	Maximum Sound Level (dBA @ 50 feet)
Air Compressor (portable)	78	0.48	81
Cement and Mortar Mixers	9	0.4	85
Crane	231	0.29	83
Excavator	158	0.4	80
Forklift	89	0.2	67
Generator Set	84	0.5	73
Grader	187	0.41	85
Off-Highway Trucks	402	0.4	75
Paver	130	0.5	77
Paving Equipment	132	0.5	85
Plate Compactors ^a	8	0.2	83
Roller	80	0.2	80
Rubber-Tired Dozer	247	0.4	79
Tractor/Loader/Backhoe	97	0.37	85
Trenchers	78	0.3	83
Welder	46	0.45	74

Source: Breeze Software, 2017; Knauer, H. et al., 2006. Off-highway truck data from County of Ventura, 2010. Trencher data from POLB, 2009.

^aData are for “Compactor (ground) from Knauer et al., 2006; acceptable plate compactor-specific data not available.

²¹ Described in **Section 3.2**.

²² Equipment noise emissions and usage factors are from Knauer, H. et al., 2006. FHWA Highway Construction Noise *Handbook*. U.S. Department of Transportation, Research and Innovative Technology, Administration, Cambridge, Massachusetts, FHWA-HEP-06-015 (August 2006), except where otherwise noted.

Table 3.11-5, Assumed Deployment of OffRoad Construction Equipment, shows the equipment type to be used during project construction.

**Table 3.11-5
ASSUMED DEPLOYMENT OF OFFROAD CONSTRUCTION EQUIPMENT**

Subphase	Equipment Type	No. of Pieces
Site Preparation and Grading	Excavators	1
	Graders	2
	Off-Highway Trucks	2
	Plate Compactors	1
	Rubber Tired Dozers	2
	Tractors/Loaders/Backhoes	3
Trenching	Tractors/Loaders/Backhoes	3
	Trenchers	2
Road Paving	Cement and Mortar Mixers	2
	Pavers	1
	Paving Equipment	2
	Rollers	2
	Tractors/Loaders/Backhoes	1
Building Construction	Cranes	1
	Forklifts	3
	Generator Sets	1
	Tractors/Loaders/Backhoes	3
	Welders	1
Paving	Cement and Mortar Mixers	2
	Pavers	1
	Paving Equipment	2
	Rollers	2
	Tractors/Loaders/Backhoes	1
Architectural Coating	Air Compressors	1

For the noise exposure calculations, the distances used were, for each subphase, the shortest distance between the center of activity and a sensitive receiver. The calculation assumes spherical spreading, which is used for analysis of stationary sources (as opposed to traffic) and travel over soft ground (maximum ground absorption). The formula is (Caltrans, 2013):

$$dBA_2 = dBA_1 + 25 \log_{10} (D_1/D_2)$$

where

- dBA₁ = Reference sound level (dBA)
- dBA₂ = Sound level at receiver (dBA)
- D₁ = Distance from reference source to receiver
- D₂ = Distance from actual source to receiver

As seen in **Table 3.11-4**, the reference distance for all equipment types was 50 feet.

The project site's rugged topography blocks part of all the lines of sight from construction noise sources to the nearest receptors, thus acting like a wall. The topography cannot reflect or absorb all of the construction noise, since sound waves diffract as they pass over it and move downward towards the residences on the other side. However, in the case of the sensitive receivers southeast of the project site, it can block over 99.9% of the construction noise.

The Fresnel number method (Foss, 1978) was used to estimate the topography's noise attenuation. The Fresnel number (N_o) is a dimensionless parameter calculated from the following formula:

$$N_o = \pm 2f\delta_o/c$$

where

f = Frequency of the sound radiated by the source (hertz).

δ_o = Path length difference determined from site geometry (feet).

C = Speed of sound (feet/second).

N_o is positive when the line of sight between the source and receiver is lower than the top of the barrier (as is the case here). It was assumed that $f = 1,000$ hertz (representative of heavy construction equipment)²³ and that $c = 1115.49$ feet per second. The Fresnel number was determined to be 60.8. Using a formula of attenuation as a function of N_o (Vardhan et al., 2005), it was determined that the intervening terrain would provide 30.8 dB of attenuation.

3.11.4 Thresholds of Significance

Appendix G of the CEQA Guidelines sets forth the following thresholds for noise and vibration impacts:

- a) **Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**
- b) **Generation of excessive groundborne vibration or groundborne noise levels?**
- c) **For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?**

The Initial Study, included as Appendix A to this EIR, substantiates that impacts related to thresholds (b) and (c) would be less than significant and no impact, respectively. These impacts are not analyzed below.

The City of Bradbury has not published explicit thresholds for use in determining significance of noise impacts under CEQA. For purposes of this study and in keeping with standard practice, two criteria were used for judging noise impacts. First, noise levels generated by the proposed project must comply with all relevant federal, state, and local standards and regulations. Noise impacts on the surrounding community are limited by local noise ordinances. It is assumed that all existing regulations for the construction and operation of the proposed project will be enforced. In addition,

²³ Noise frequency spectra for typical bulldozers and front-end loaders are presented in Vardhan et al., 2005.

the proposed project should not produce noise levels that are incompatible with adjacent noise sensitive land uses.

The second measure of impact used in this analysis is a significant increase in noise levels above existing ambient noise levels as a result of the introduction of a new noise source. An increase in noise level due to a new noise source has a potential to impact people adversely. The proposed project would have a significant noise impact if it would do any of the following:

- Expose persons to or generate noise levels in excess of standards recommended in the City of Bradbury Municipal Code or the City of Duarte Municipal Code.
- Include construction activities in or within 500 feet of residential areas between 7:00 p.m. of one day and 7:00 a.m. of the next day, without a permit.
- Increase short-term noise exposures at sensitive receivers during construction by 5 dBA L_{eq} or more (USEPA, 1974).
- Contribute, with other local construction projects, to a significant cumulative noise impact.
- Increase operational exposures at sensitive receivers (mainly because of an increase in traffic flow) by 5 dBA L_{eq} or more.

3.11.5 Impact Analysis

- a) **Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

Noise impacts associated with residential projects include short-term and long-term impacts. Construction activities, especially heavy equipment operation, would create noise effects on and adjacent to the construction site. Long-term noise impacts include project-generated on-site and offsite operational noise sources. Onsite (stationary) noise sources from the Chadwick Ranch Estates project would include operation of mechanical equipment such as air conditioners, lawn mowers and leaf blowers. Offsite noise would be attributable to project-induced traffic, which would cause an incremental increase in noise levels within and near the project.

Construction Noise

Significant And Unavoidable Impact

The methods and equipment characteristics data described in **Section 3.11-2** were used to estimate short-term (hourly L_{eq}) noise exposure during construction near the residences on Spinks Canyon Road in Duarte and the residence above Bliss Canyon Road, which correspond to sensitive receivers A and B, respectively in **Table 3.11-5**. For the Spinks Canyon Road analysis, all of the construction phases except road construction were assumed to occur at future lot 10. For the Bliss Canyon Road Analysis, only clearing and grading and road construction were analyzed. The construction scenarios were posited to be the “worst case” for construction noise exposure.

Table 3.11-6 shows the results of the construction noise analysis. For the residences on Spinks Canyon Road, construction noise levels and increases in exposure would be less than significant.

As noted in **Section 3.11.1**, construction is not subject to the exposure limits in Bradbury Municipal Code § 9.127.040 as long as construction and demolition work is limited to 7:00 a.m. and 7:00 p.m. on weekdays and between 9:00 a.m. and 7:00 p.m. on weekends. However, because the increase in noise exposure at the residence southwest of the project site on Bliss Canyon Road would exceed 5 dBA L_{eq} , there is a significant impact.

The increase in noise exposure at the residence southwest of the project site would exceed 5 dBA L_{eq} . Mitigation measures for this part of the construction noise are presented in **Section 3.11.6**, but they will not reduce the impacts below a level of significance. Standard conditions such as noise blankets will not work in the area of impact.

**Table 3.11-6
ESTIMATED ONE-HOUR CONSTRUCTION NOISE EXPOSURES AT NEAREST SENSITIVE
RECEIVERS**

Receiver ^a	Source	Distance (feet)	Ambient (dBA L_{eq})	Construction (dBA L_{eq})	New Total (dBA L_{eq})	Increase (dBA L_{eq})
A	Site Preparation and Grading	830	50.9	27.8 ^b	50.9	0
	Trenching	830	50.9	25.7 ^b	50.9	0
	Building Construction	830	50.9	25.7 ^b	50.9	0
	Paving	830	50.9	28.2 ^b	50.9	0
	Architectural Coating	830	50.9	16.5 ^b	50.9	0
B	Site Preparation and Grading	85.6	53.2	77.5 ^c	77.6	24.4
	Road Construction	85.6	53.2	78.0 ^c	78.0	24.8

^aKeyed to **Table 3.10-5**.
^bReduced by 30.8 dBA by topography in addition to reduction by distance.
^cReduced by 5.7 dBA by topography in addition to reduction by distance.

Operational Noise

Less Than Significant Impact

Onsite noise sources from the proposed housing project would include operation of mechanical equipment such as air conditioners, lawnmowers, leaf blowers, and other maintenance equipment. Noise levels associated with operation of the project are expected to be comparable to those of nearby residential areas. Therefore, noise from onsite sources would be less than significant.

According to the Chadwick Ranch Estates Specific Plan VMT Assessment (Dietrich, 2020), Traffic Analysis Zone (TAZ) #5892, which wholly encompasses the city of Bradbury and does not extend to other adjacent communities, generates 2,644 trips per day. The VMT analysis also estimates that the development will generate 168 trips per day.²⁴ (See **Section 3.12.5**.) This would constitute an increase of about 6.4%. Given the logarithmic nature of the decibel, traffic volume needs to be doubled in order for the noise level to increase by 3 dBA (ICF Jones & Stokes, 2009), the minimum level perceived by the average human ear. A doubling is equivalent to a 100% increase. Because the maximum increase in traffic in any road segment would be far below 100%, the increase in roadway noise experienced at sensitive receivers would not be perceptible to the human ear. Therefore,

²⁴ By its nature, this is a cumulative increase in traffic.

roadway noise associated with project operation would not expose a land use to noise levels that are considered incompatible with or in excess of adopted standards, and impacts would be less than significant.

3.11.6 Mitigation Measures

The following noise mitigation measures will be implemented during construction in order to minimize noise impacts.

- MM N-1** The construction contractor will use the following source controls:
- Use of noise-producing equipment will be limited to the interval from 8:00 a.m. to 5:00 p.m. when within 500 feet of a residence, Monday through Friday and 9:00 a.m. to 5:00 p.m. on Saturday.
 - Locate equipment staging areas onsite, at maximum practical distances between the noise sources and sensitive receptors.
 - For all noise-producing equipment, use types and models that have the lowest horsepower and the lowest noise generating potential practical for their intended use with standard recommended noise shielding and muffling devices.
 - Minimize the number of pieces of particularly noisy equipment (greater than 80 dBA at 50 feet) that operate simultaneously within 500 feet of a residence.
 - Face noise producing equipment away from sensitive receivers.
 - The construction contractor will ensure that all construction equipment, fixed or mobile, is properly operating (tuned-up) and lubricated; is muffled; and that mufflers are working adequately.
 - Have only necessary equipment onsite.
 - Use manually-adjustable or ambient sensitive backup alarms.
- MM N-2** The contractor will use the following **path controls**, in response to complaints and when ambient noise monitoring of complainant's exposure shows an increase of more than 5 dBA over ambient levels, except where not physically feasible:
- Install portable noise barriers, including solid structures and noise blankets, between the active noise sources and the nearest noise receivers.
 - Temporarily enclose localized and stationary noise sources.
 - Store and maintain equipment, building materials and waste materials as far as practical from as many sensitive receivers as practical.

3.11.7 Level of Significance After Mitigation

The mitigation measures presented above will not be able to reduce the noise exposure of sensitive receivers to a less than significant level. Construction noise will remain a significant and unavoidable short-term impact.

SECTION 3.12 - TRANSPORTATION



3.12 Transportation

The information in this section of the Draft EIR is primarily taken from a technical memorandum dated September 1, 2020 prepared by Michael Baker International: *Chadwick Ranch Estates Specific Plan VMT Assessment*. The technical memorandum is provided in **Appendix T**.

3.12.1 Relevant Policies and Regulations

Federal

There are no applicable relevant federal policies or regulations regarding transportation. **Local**

City of Bradbury VMT Baselines and Thresholds of Significance

The City of Bradbury adopted its VMT Guidance in July 2020. This Guidance document uses a baseline per capita VMT volume of 16.29 for residential land use in the Northwest Region of lands subject to oversight by the San Gabriel Valley Council of Governments (SGVCOG).

3.12.2 Existing Setting

Regional access to the City of Bradbury and the project site is provided by either Buena Vista Street from Interstate 210 (I-210), or via Huntington Drive at the northern terminus of Interstate 605 (I-605). The nearest public transit bus routes to the project site are Foothill Transit Routes 860 and 861, loop circulator routes in the cities of Duarte and Bradbury, which both operate on Royal Oaks Drive (Foothill Transit, 2021). The nearest bicycle facility to the project site mapped on the Metro Bike Map is the Duarte Bike Path, an off-road (Class I) bike path parallel to Royal Oaks Drive approximately 0.7 mile south of the project site (Metro, 2014). No signalized intersections or arterial roadways are present in the City of Bradbury. The City's General Plan Circulation Element designates all roadways in the City as either local or local-collector streets (City of Bradbury, 2014c).

No sidewalks are present on Long Canyon Road, Bliss Canyon Road, or the flood control access roadway. Bliss Canyon Road is one of the City's designated Primary Evacuation Routes (Nevis Capital, 2019).

3.12.3 Methods

The Vehicle Miles Traveled (VMT) Technical Memorandum completed by Michael Baker International in September 2020 first evaluated the project against four screening thresholds to determine whether project transportation impacts could be concluded to be less than significant without a detailed VMT analysis. The screening thresholds—small projects; residential and office projects in low-VMT areas; projects near transit stations; and affordable housing developments—are described below in **Section 3.12.5**. The project did not meet any of the four screening criteria, and thus a detailed VMT analysis was conducted.

The baseline VMT used in the analysis is that for residential land use in the Northwest region of the San Gabriel Valley Council of Governments (SGVCOG) territory, which is 16.29 VMT per person.²⁵ Project VMT generation was estimated using VMT per capita from the Southern California

²⁵ The Northwest Region includes the cities of Arcadia, Bradbury, Duarte, La Canada Flintridge, Monrovia, San Marino, and Sierra Madre.

Association of Governments (SCAG) Year 2020 travel demand model for SCAG traffic analysis zone (TAZ) number 5892, which is coextensive with the City of Bradbury. The estimated VMT per capita in TAZ 5892 in 2020 is 26.73.

3.12.4 Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the Project would have a significant impact on Transportation if it would:

- a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.**
- b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).**
- c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).**
- d) Result in inadequate emergency access.**

Impacts associated with Threshold (c) were determined to be less than significant in the Initial Study prepared for the proposed project (See **Appendix G**). As a consequence, no further analysis of impacts associated with Threshold (c) is provided below.

3.12.5 Impact Analysis

- a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.**

No Impact

No public transit facilities or services, no bicycle facilities, and no sidewalks are located on or next to the project site. Project development would not conflict with programs, plans, ordinances, or policies addressing the circulation system, and no impact would occur.

- b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).**

Significant And Unavoidable Impact

CEQA Guidelines section 15064.3(b) sets forth requirements for use of Vehicle Miles Traveled (VMT) as a method of determining the significance of transportation impacts. A VMT technical memorandum for the proposed project was completed by Michael Baker International on September 1, 2020 in accordance with the City of Bradbury VMT Guidance adopted on July 21, 2020.

Four screening thresholds were evaluated to determine whether project transportation impacts could be concluded to be less than significant without a detailed VMT analysis. The screening tests are briefly summarized below and described in further detail in the technical memorandum.

VMT Screening Tests

1) Screening Threshold for Small Projects



Projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than significant transportation impact, absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan.

The technical memorandum for the proposed project estimated project trip generation to be 168 trips per day using a trip generation rate from the Institute of Transportation Engineer’s Trip Generation Manual (10th Edition) and a daily trip rate for estate housing obtained from the City of San Diego. Thus, the project did not meet Screening Criterion Number 1.

2) Map-Based Screening for Residential and Office Projects

Residential and office projects located in areas with low VMT that exhibit similar features tend to exhibit similarly low VMT. The nature of the proposed project is consistent with the area land use within the City of Bradbury (low-density residential estates). However, this type of land use is not consistent with low VMT-generating uses; thus, the project does not satisfy Screening Criterion Number 2.

3) Presumption of Less Than Significant Impact Near Transit Stations

The project is not located within a Transit Priority Area (TPA) as identified by the Southern California Association of Governments (SCAG). A TPA is within one-half mile from major transit stops, that is, a location with an existing rail transit station or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. The project does not satisfy Screening Criterion Number 3.

4) Presumption of Less Than Significant Impact for Affordable Residential Development

The proposed project does not include affordable housing and thus does not meet Screening Criterion Number 4.

VMT Analysis

The following VMT thresholds are set forth in the City of Bradbury VMT Guidance:

- 1) Project Impact: A significant impact would occur if the VMT rate for the project would exceed the applicable baseline VMT rate.
- 2) Cumulative Impact: A significant impact would occur if the project would exceed the total regional VMT compared to the cumulative no project conditions.

The baseline VMT is that identified for residential land use in the Northwest region of the San Gabriel Valley Council of Governments (SGVCOG) territory is 16.29 VMT per person.²⁶

Project VMT generation was estimated using VMT per capita from the Southern California Association of Governments (SCAG) Year 2020 travel demand model for SCAG traffic analysis zone (TAZ) number 5892, which is coextensive with the City of Bradbury. The estimated VMT per capita

²⁶ The Northwest Region includes the cities of Arcadia, Bradbury, Duarte, La Canada Flintridge, Monrovia, San Marino, and Sierra Madre.



in TAZ 5892 in 2020 is 26.73, that is, greater than the baseline level of 16.29. Thus, project-level impacts would be significant.

d) Result in inadequate emergency access?

Less Than Significant

Based on citywide averages (SCAG, 2019) and assuming an average of approximately 2.5 to 3.0 vehicles per residential lot, a maximum of approximately 28 vehicles (2 vehicles per household) would be expected to use the project’s street at any given time, including during evacuation in an emergency. Private vehicles used for evacuation would travel on the proposed roadway across the west project site boundary, which would continue south and southwest till it intersected with existing Bliss Canyon Road just north of Long Canyon Road. An emergency access road from the east end of the proposed roadway in the southeast part of the project site to the existing flood control access road would be open to emergency vehicles only.

That additional traffic would not be expected to create a significant burden on the existing roadway, Bliss Canyon Road, that serves as the primary evacuation route from the section of the City where the project is located. Thus, the project would not substantially impair the adopted emergency response plan or emergency evacuation plan and the impact would be less than significant.

3.12.6 Mitigation Measures

Without implementation of mitigation measures, impacts associated with the following threshold would be significant:

b) Project operation would generate VMT exceeding City of Bradbury thresholds (that is, project operation would conflict with CEQA Guidelines section 15064.3(b)).

No feasible mitigation measures were identified.

The Technical Memorandum evaluated seven transportation demand management (TDM) strategies set forth by the Western Riverside Council of Governments (WRCOG) for applicability to the proposed project. A brief summary of the strategies and evaluation is presented below in **Table 3.12-1, Evaluation of Transportation Demand Management Strategies for Applicability to the Proposed Project**. As shown, all potential mitigation strategies for reducing project VMT impacts were determined to be infeasible.

**Table 3.12-1
EVALUATION OF TRANSPORTATION DEMAND MANAGEMENT STRATEGIES FOR
APPLICABILITY TO THE PROPOSED PROJECT**

Strategy and Description	Evaluation and Conclusion
Increase diversity of land uses: inclusion of mixed uses within projects or in the surrounding areas	Infeasible. Adding a retail or office component to the project would alter the fabric of the community such that it would be inconsistent with current residences and zoning. Additionally, there would be potential issues with development of larger retail or office buildings on this site including access for an increased



Strategy and Description	Evaluation and Conclusion
	number of vehicles and grading for larger buildings and parking.
<p>Provide pedestrian network improvements: creating a pedestrian network within the project and connecting to nearby destinations. For smaller projects this strategy would likely be the construction of network improvements that connect the project sites directly to nearby destinations.</p>	<p>Infeasible. Sidewalks are not proposed within the project and there are no sidewalks leading to the project site. The proposed project (rural, low-density housing) results in homes spread far apart along a steep winding road, not conducive to walking and bicycling. The area immediately surrounding the proposed project is primarily steep vacant land. Thus, the project, surrounding land uses and nearby destinations would not support the need for a pedestrian network.</p>
<p>Provide traffic calming measures and low-stress bicycle network improvements: Traffic calming creates networks with low vehicle speeds and volumes that are relatively conducive to walking and bicycling. Building a low-stress bicycle network produces a similar outcome.</p>	<p>Infeasible. The project site would include the development of circular roadway to provide access to the proposed residential estate home parcels. The circular roadway would operate as a low-speed facility and would not have cut-through access to other developed land uses. The vertical and horizontal curvature of the roadway would naturally calm traffic along the roadway. Additional traffic calming measures are not appropriate.</p>
<p>Implement car-sharing program: This strategy reduces the need to own a vehicle(s) by making it convenient to access a shared vehicle for those trips where vehicle use is essential.</p>	<p>Infeasible. The low-density residential nature of the project makes it a poor candidate for a car-sharing program. This type of measure requires private market support as well as regional or local agency implementation and coordination. Thus, it is not applicable for individual development projects unless an established program is in place.</p>
<p>Increase transit service frequency and speed: Focuses on improving transit service convenience and travel time competitiveness with driving. While fixed route rail and bus service could be enhanced, new forms of low-cost demand-responsive transit service could also be provided (such as rideshare apps—for example, Uber and Lyft—or taxis).</p>	<p>Infeasible. On-demand service for medical appointments is provided to City of Bradbury residents through Monrovia Dial-A-Ride. Otherwise, the project is not served by transit. The nature of the proposed development is not conducive to providing transit on-site beyond the currently available dial-a-ride service given its location within the foothills and low-density nature of the existing residences. This type of measure requires regional or local agency implementation and coordination and thus it is not applicable for individual development projects.</p>
<p>Encourage telecommuting and alternative work schedules: This strategy relies of effective internet access and speeds to individual project sites/buildings to provide the opportunity for telecommuting.</p>	<p>Infeasible. Telecommuting programs are employment-based strategies and are outside the control of the proposed project.</p>



Strategy and Description	Evaluation and Conclusion
Provide ride-sharing programs: This strategy focuses on encouraging carpooling and vanpooling by project site/building tenants.	Infeasible. Ridesharing programs are employment-based strategies and are outside the control of the project.

Source: Michael Baker International, 2020 (included as **Appendix T** to this document)

3.12.7 Level of Significance after Mitigation

Since no feasible mitigation measures were identified, project impacts on transportation would remain significant and unavoidable.

SECTION 3.13 – TRIBAL CULTURAL RESOURCES

3.13 Tribal Cultural Resources

Background information in this section is based in part on the Phase I Cultural Resources Inventory for the Chadwick Ranch Estates Project, City of Bradbury, Los Angeles County, California, prepared by UltraSystems Environmental Inc. (O’Neil and Doukakis, 2019), included as **Appendix N** of this document.

3.13.1 Relevant Policies and Regulations

Federal Regulations

There are no federal laws or regulations that pertain to this issue area.

State Regulations

The treatment of Tribal Cultural Resources (TCRs) is governed by state laws and guidelines. There are specific criteria for determining whether prehistoric sites or objects associated with TCRs are significant and thus protected by law. Some resources that do not meet archaeological cultural significance criteria may be considered significant by state criteria for TCRs. The laws and regulations seek to mitigate project impacts on significant TCRs.

California Environmental Quality Act (CEQA)

CEQA requires the lead agency to consider whether the project will have a significant effect on unique archaeological resources and to avoid unique archaeological resources when feasible or mitigate any effects to less than significant levels per California Public Resources Code (PRC) § 21083.2. The CEQA Statute (PRC § 21083.2(g)) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- 1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
- 2) Has a special and particular quality such as being the oldest of its type or the best available example of its type;
- 3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

California Assembly Bill 52 (Native American Consultation and Tribal Resources)

Assembly Bill (AB) 52 (California Public Resources Code Sections 21074 et seq.) designates “Tribal Cultural Resources” as a category of environmental resources that must be considered under the California Environmental Quality Act. The legislation imposes requirements on local agencies for meaningful consultation with California Native American tribes regarding projects that may have potential impacts on TCRs, as defined in PRC § 21074. TCR comprises a broad definition of what may be considered a TCR including sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either eligible or listed in the California Register of Historic Places (CRHP) or local register of historical resources, as defined in PRC § 5020.1(k) (CNRA, 2007), and includes a list of recommended mitigation measures. This requirement applies to projects with a NOP or notice of ND/MND filed on or after July 1, 2015.



California Senate Bill 18 (Native American Consultation and Tribal Resources)

Senate Bill (SB) 18 (Government Codes § 65352.3 and § 65362.4) requires local governments to consult with California Native American tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process. These consultation and notice requirements apply to adoption, amendment or updates of both general plans and specific plans or designation of open space. The purpose of the consultation is to avoid, protect, and/or mitigate impacts to TCRs when creating or amending these plans. The California Native American tribes are on the Native American Heritage Commission (NAHC) contact list. This requirement applies to the noted planning applications filed on or after March 1, 2005.

The legislation imposes requirements on local agencies for meaningful consultation with California Native American tribes regarding projects that may have potential impacts on TCRs, as defined in PRC § 21074. Tribes then have 90 days following notification to respond and to request consultation. There is no statutory limit on the duration of the consultation. Consultation means a meaningful process in a manner that is aware of all parties' cultural values and, where feasible, seeking agreement. SB 18 tribal consultation may conclude when both parties come to a mutual agreement concerning appropriate measures for preservation or mitigation; or when either the local government or tribe, acting in good faith and after reasonable effort concludes that mutual agreement cannot be reached.

Native American Remains

Section 15064.5(d) of the State CEQA Guidelines specifies procedures to be used when Native American remains are discovered. These procedures are discussed within PRC § 5097, as well as in the California Health and Safety Code § 7050.5.

PRC § 5097.98 addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction, establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project, and establishes the NAHC to resolve disputes regarding the disposition of such remains. It has been incorporated into § 15064.5(e) of the State CEQA Guidelines.

California Health and Safety Code

California Health and Safety Code § 7050.5 states that if human remains are discovered during construction on a project site, no further disturbance shall occur until a county coroner makes a determination of origin and disposition of the remains. If the county coroner determines the remains are not subject to his or her authority and recognizes the remains to be those of Native American, the county coroner must contact the NAHC within 24 hours.

Local Regulations

City of Bradbury General Plan

Please see the discussion of the General Plan Community Resources Element in **Section 3.4**, Cultural Resources, of this DEIR.



3.13.2 Existing Setting

An ethnographic overview of the project region and summary of the history of the Spanish/Mexican era in the region are in **Section 3.4, Cultural Resources**.

3.13.3 Methods

Methods used in the Phase I Cultural Resources Inventory, including Native American outreach, are described in **Section 3.4, Cultural Resources**. Note that Native American outreach conducted as part of the Cultural Resources Inventory was separate from AB 52 consultation between the City of Bradbury and Native American tribes regarding tribal cultural resources.

AB 52 and SB 18 Tribal Consultation

AB 52 requires meaningful consultation with California Native American Tribes on potential impacts on TCRs, as defined in PRC § 21074. TCRs are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either eligible or listed in the CRHR or local register of historical resources (CNRA, 2007).

As part of the AB 52 process, Native American tribes must submit a written request to the lead agency to be notified of projects within their traditionally and culturally affiliated areas. The lead agency must provide written, formal notification to those tribes within 14 days of deciding to undertake a project. The tribe must respond to the lead agency within 30 days of receiving this notification if they want to engage in consultation on the project, and the lead agency must begin the consultation process within 30 days of receiving the tribe's request. Consultation concludes when either (1) the parties agree to mitigation measures to avoid a significant effect on a TCR, or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.

The City drafted letters to the five tribes on the recommended list from the NAHC, informing them of the Chadwick Estates Project, as required under AB 52. The letters were sent by Jim Kasama, City Planner, City of Bradbury (the Lead Agency) on December 23, 2019 via certified mail to; the Gabrielino/Tongva San Gabriel Band of Mission Indians, the Gabrieleño Band of Mission Indians – Kizh Nation (Gabrieleño – Kizh Nation), the Gabrielino-Tongva Tribe, the Gabrielino/Tongva Nation, and the Gabrielino Tongva Indians of California Tribal Council. The San Fernando Band of Mission Indians was also contacted based on being contacted for a prior City of Bradbury project (T. Nelson, personal communication; February 17, 2020). A Specific Plan and General Plan Amendment, which would initiate SB 18 consultation, was included on the same letter (T. Nelson, personal communication; February 18, 2020) (see **Appendix N** for documentation). The letters conveyed that the recipient had 30 days from the receipt of the letter to request AB 52 consultation regarding the project. On February 24, 2020, the City sent follow-up emails to the four tribes asking if they wanted to participate in consultation.

On February 18, 2020, Chairperson Donna Yocum replied by email that the San Fernando Band of Mission “will defer said plans/project to the Gabrieleño Tribe.” The remaining four tribes were contacted by email and telephone voicemail message February 18, 2020, February 24, 2020, and March 6, 2020, asking if they wanted to conduct consultation. Telephone conversations were held by Ms. Nelson with Chairperson Anthony Morales of the Gabrieleño Tongva San Gabriel Band of Mission Indians, and with Chairperson Robert Dorame of the Gabrieleño Tongva Indians of California Tribal Council, both on March 6, 2020; neither of these tribes requested AB 52 consultation (see



Appendix N for documentation). There have been no further replies to date from the remaining two notified tribes.

The City of Bradbury was informed that: (1) the Gabrieleño – Kizh Nation had informed Mr. O’Neil on September 17, 2019 that they wished to have AB 52 consultation on the project; (2) had contacted O’Neil on September 18, 2019 requesting contact information for the project’s lead agency, which O’Neil provided the same day; and (3) again on October 3, 2019, the Tribal Specialist sent an email to Mr. O’Neil indicating that they would like to consult with the Lead Agency.

The Gabrieleño – Kizh Nation responded to the City’s letter in March 2020 and the City proceeded to schedule a consultation meeting to cover both the AB 52 and SB 18 process (T. Nelson, personal communication; March 31, 2020). An initial meeting was held via conference call on May 14, 2020 in which Chairperson Andrew Salas and tribal representative Matthew Teutimez participated. During the meeting the project was described, including what lands would be affected and what the construction work would entail. The findings of the cultural resources study were discussed in relation to the concerns expressed by the tribe. It was noted that the actual project site was in the foothills of the San Gabriel Mountains, several miles to the east from the location of *Aleupkingna* village as reported in the material provided by the tribe, as is the San Gabriel River and the Santa Anita Wash near the village site. While the project area would have been within the resource catchment sphere of *Aleupkingna* to the west and possibly *Ahwiinga* and *Guinibit* to the south, only short-term hunting and harvesting would have taken place here. The terrain of the project site precludes settlements and camps. The site was and remains filled with abundant natural resources of economic and medicinal value to the traditional society. The Tribe’s expressed concerns about the preservation of these natural resources was addressed by noting that the same plants located within the project boundary are also found in the adjacent Angeles National Forest, and that the project proponents plan to place approximately 70 percent of the project site in a nature reserve, including the riparian habitat along Bradbury Creek, utilizing only the southern less steep area for construction.

On June 4, 2020, the Gabrielino-Kizh Nation provided an email describing the tribe’s concerns for project impacts on tribal cultural resources in the immediate area, particularly that, in their words, “Due to the project site being located within and around a sacred village (*Aleupkingna*), adjacent to sacred water course, a major traditional trade route [sic], there is a high potential to impact Traditional Cultural Resources still present within the soil from the thousands of years of prehistoric activity that occurred within and around the Tribal Cultural landscape.” Along with the email the Tribe provided several historic maps of the project area, pages from anthropological sources describing the village in this region, as well as agency, professional and tribal statements regarding the potential for undocumented subsurface cultural resources and monitoring mitigation measures. At that time mitigation measures were prepared substantially using the Tribe’s wording and placed into the draft EIR.

The preliminary TCR Section of the Draft EIR was reviewed by the Gabrielino-Kizh Nation, and in a letter sent via email they commented on the TCR Section, requesting revisions to the mitigation measures concerning monitoring and the Coroner’s investigation if human remains were found. A call between the Gabrielino-Kizh Nation representatives (A. Salas and M. Teutimez), the City and the client was conducted. The content of the letter was discussed in light of excavation plans, and all parties agreed to make the revisions to the mitigation measures stipulated in the letter.

Construction related to the proposed project may have a direct impact on previously unidentified TCRs. Should construction or other personnel encounter any historical, archaeological, or TCR



material within the project area, the proposed project may result in potentially significant impacts (Impact TCR-a) ii).

Tribal Cultural Resources as defined in Public Resources Code § 5024.1(c)

There is no substantial evidence that TCRs, as defined by criteria set forth in PRC § 5024.1(c), are present on the project site.

3.13.4 Thresholds of Significance

Thresholds of significance for Tribal Cultural Resources are based on criteria found in **Appendix G** of the State CEQA Guidelines:

- a) Would the project cause a substantial adverse change in the significance of a TCR, defined in PRC § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:**
 - i) Listed or eligible for listing in the CRHR [California Register of Historic Resources], or in a local register of historical resources as defined in PRC § 5020.1(k), or**
 - ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC § 5024.1. In applying the criteria set forth in subdivision (c) of PRC § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

The Initial Study, included as Appendix G to this DEIR, substantiates that impacts related to threshold (a.i) would be no impact; this threshold is not addressed in the analysis below.

3.13.5 Impact Analysis

Would the project:

- a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:**
 - ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC § 5024.1. In applying the criteria set forth in subdivision (c) of PRC § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**



Less Than Significant With Mitigation Incorporated

No prehistoric or historic cultural resources were observed during the project pedestrian field survey. The project area is mostly pristine with little, if any, disturbed areas. The steep terrain throughout the project area suggests there is low potential that buried cultural deposits are located within the proposed project area. However, construction related to the proposed project may have a direct impact on previously unidentified CRHR-eligible cultural resources. To reduce potential impacts on previously unidentified cultural resources mitigation measures **TCR-1** through **TCR-3** are recommended. The City believes that the Gabrielino-Kizh Nation’s concerns—described above in **Section 3.13.3**—are met with the three mitigation measures below.

3.13.6 Mitigation Measures

MM TCR-1 Prior to the commencement of any ground-disturbing activity at the project site, the project applicant shall retain a Native American Monitor approved by the Gabrieleño Band of Mission Indians-Kizh Nation – the tribe that consulted on this project pursuant to Assembly Bill AB52 - SB18 (the “Tribe” or the “Consulting Tribe”). A copy of the executed contract shall be submitted to the City of Bradbury Planning and Building Department prior to the issuance of any permit necessary to commence a ground-disturbing activity. The Tribal monitor will only be present onsite during the construction phases that involve ground-disturbing activities. Ground-disturbing activities are defined by the Tribe as activities that may include, but are not limited to, pavement removal, potholing or auguring, grubbing, vegetation removals, boring, grading, excavation, drilling, and trenching, within the project boundary, including ridgeline soil and fill. Monitoring shall not be required for any work in bedrock. The Tribal Monitor will complete daily monitoring logs that will provide descriptions of the day’s activities, including construction activities, locations, soil, and any cultural materials identified. The Tribal Monitor shall be in communication with the construction foreman/supervisor on a daily basis and the Tribal Monitor shall determine when monitoring is not required and when monitoring is likely to resume. The City and Applicant shall be notified of the Tribal Monitor’s schedule changes. The onsite monitoring shall end when all ground-disturbing activities on the project site are completed, or when the Tribal Representatives and Tribal Monitor have indicated that all upcoming ground-disturbing activities at the Project site have little to no potential for impacting Tribal Cultural Resources.

MM TCR-2 Upon discovery of any Tribal Cultural Resources, construction activities shall cease in the immediate vicinity of the find (not less than 100 feet) until the find can be assessed. The developer will have a Secretary of the Interior qualified archaeologist on call as approved by the City of Bradbury to assess the discovery. Work in the immediate area of the find will not continue until the discovery has been evaluated by the archaeologist and Tribal monitor approved by the Consulting Tribe. They shall be afforded the necessary time and funds to recover, analyze, and curate the find(s). A treatment plan established for the resources shall be in accordance with CEQA Guidelines §15064.5(f) for historical resources and PRC §21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation is not feasible, treatment may include implementation of archeological data recovery excavation to remove the resource followed by laboratory processing and analysis. The archaeologist shall recommend

the extent of archaeological monitoring necessary to ensure the protection of any further resources that may be present in the project site. A Monitoring and Treatment Plan shall be prepared by the qualified archaeologist as deemed needed. Construction activities may continue on other parts of the site while evaluation and treatment of prehistoric or historical archaeological resources takes place.

MM TCR-3 If human remains and/or grave goods are encountered during excavations associated with this project, all work shall stop within a 50-foot radius of the discovery and the Los Angeles County Coroner shall be notified (§ 5097.98 of the Public Resources Code). The Coroner shall determine whether the remains are recent human origin or older Native American ancestry. If the coroner determines that the remains are prehistoric, they shall contact the NAHC. The NAHC shall be responsible for designating the Most Likely Descendant (MLD). The MLD (either an individual or sometimes a committee) shall be responsible for the ultimate disposition of the remains and grave/burial goods, as required by § 7050.5 of the California Health and Safety Code. The MLD shall make recommendations within 24 hours of their notification by the NAHC. These recommendations may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials (§ 7050.5 of the Health and Safety Code).

3.13.7 Level of Significance after Mitigation

Impacts to potential TCRs would be less than significant with the implementation of **MMs TCR-1 through TCR-3**. Compliance with **mitigation measures TCR-1 through TCR-3** would ensure that previously unknown TCRs and archaeological or historical artifacts are protected, evaluated, and recovered as determined by the appropriately qualified Native American representative and cultural resources expert. Implementation of these mitigation measures, in addition to adherence with applicable federal, state, and county regulations would reduce potential project impacts on TCRs to less than significant level.

SECTION 3.14 – UTILITIES AND SERVICE SYSTEMS



3.14 Utilities and Service Systems

3.14.1 Relevant Policies and Regulations

Public and privately-owned utility companies operate under a variety of laws and regulations, all designed to assure that the public has reliable, affordable access to the services that are required for everyday needs as well as longer-term objectives. Following are summaries of key policies and regulations relevant to the utilities and service systems that will serve the project.

Federal

There are no applicable relevant federal policies or regulations regarding utilities and service systems.

State

Urban Water Management Planning Act

The California Urban Water Management Planning Act (*California Water Code*, §§ 10610–10656) requires urban water suppliers that provide over 3,000 acre-feet of water annually (afy) or serve more than 3,000 or more connections to analyze the reliability of their water sources over a 20-year planning horizon. The Act requires urban water suppliers to prepare and update Urban Water Management Plans (UWMPs) that analyze the availability of water supplies to meet demands during normal, single-dry, and multiple-dry years, to encourage water conservation programs and create long-term planning obligations.

Water Conservation Act of 2009/Senate Bill 7

The Water Conservation Act of 2009 or Senate Bill 7 (SB X7-7) 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 Urban Water Management Plans, urban retail water suppliers must 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 water conservation 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 process 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, and 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 California Department of Water Resources (DWR) in 2010 pursuant to SB X7-7, established a water conservation target of 20 percent reduction in water use by 2020 compared to 2005 baseline use.



Executive Orders for Drought State of Emergency

In April 2014, the Governor proclaimed a continued state of emergency and asked that the State strengthen its ability to manage water and habitat effectively in drought conditions. He directed the DWR and SWRCB to expedite approvals of voluntary water transfers to assist farmers. The Governor also directed the CDFW to accelerate monitoring of drought impacts on winter-run Chinook salmon in the Sacramento River and its tributaries and to execute habitat restoration projects that will help fish weather the ongoing drought. In response to the increased threat of wildfire season, he called for streamlined contracting rules for the Governor’s Office of Emergency Services and the California Department of Forestry and Fire Protection (CAL FIRE) to purchase equipment and allowed landowners to quickly clear brush and dead, dying, or diseased trees that increase fire danger.

In December 2014, Executive Order B-28-14 extended the Governor’s January 2014 and April 2014 proclamations and extended the operation of the provisions in these proclamations to May 2016.

On April 1, 2015, in response to historically dry conditions, the Governor signed Executive Order B-29-15, which required a 25-percent reduction of urban potable water use throughout the State of California through February 28, 2016. The DWR was directed to lead a State-wide initiative, in partnership with local agencies, to collectively replace 50 million square feet of lawns and ornamental turf with drought-tolerant landscapes, and the California Energy Commission was asked to implement a State-wide appliance rebate program to provide monetary incentives for replacing inefficient household devices.

On November 13, 2015, the Governor signed Executive Order B-36-15 for additional actions to build on the State’s ongoing response to record dry conditions and assist recovery efforts from 2015’s devastating wildfires. On May 9, 2016, the Governor signed Executive Order B-37-16, which established a new water use framework for California that bolstered the state’s drought resilience and preparedness by establishing longer-term water conservation measures.

On April 7, 2017, the Governor signed Executive Order B-40-17, which ended the drought state of emergency in all California counties except Fresno, Kings, Tulare, and Tuolumne, where emergency drinking water projects will continue to help address diminished groundwater supplies. It maintains water reporting requirements and prohibitions on wasteful practices. The order was built on actions taken in Executive Order B-37-16, which remains in effect. In a related action, State agencies, including DWR, released a plan to continue making water conservation a way of life.

On May 10, 2021, the Governor signed a drought emergency proclamation establishing a drought state of emergency in the Klamath River, Sacramento-San Joaquin Delta and Tulare Lake Watershed counties where accelerated action is needed to protect public health, safety and the environment. In total, 41 counties are now under a drought state of emergency, representing 30 percent of the state’s population. Climate change-induced early warm temperatures and extremely dry soils have further depleted the expected runoff water from the Sierra-Cascade snowpack, resulting in historic and unanticipated reductions in the amount of water flowing to major reservoirs, especially in Klamath River, Sacramento-San Joaquin Delta and Tulare Lake Watershed counties. The Governor’s proclamation directs the State Water Board to consider modifying requirements for reservoir releases and diversion limitations to conserve water upstream later in the year to maintain water supply, improve water quality and protect cold water pools for salmon and steelhead.



California Integrated Waste Management Act (AB 939)

Sections 40050 to 40063 of the *California Public Resources Code* is the California Integrated Waste Management Act of 1989 (Assembly Bill [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.

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 CalRecycle to provide a report to the Legislature that recommends strategies to achieve the policy goal by January 1, 2014. AB 341 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. 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.

Title 24 Green Building Standards

The 2019 California Green Building Standards Code (Title 24, Part 11 of the *California Code of Regulations*), effective January 1, 2020, requires the use of green building principles and practices in site planning and building design to promote energy and water efficiency and conservation; material conservation and resource efficiency; and environmental quality. Also known as the CalGreen Code, the voluntary and mandatory standards in the Code apply to new low-rise residential buildings, privately owned non-residential buildings (i.e., theaters, restaurants, banks, offices, daycare centers, industrial buildings, laboratories, department stores, storage and accessory buildings); State-owned buildings; public schools; medical facilities; and additions/alterations to existing non-residential buildings. Mandatory measures include storm water pollution prevention, water conservation, and recycling and/or salvage of at least 65 percent of nonhazardous construction and demolition wastes.

Local

Sanitation Districts of Los Angeles County (LACSD)

The LACSD adopted a Wastewater Ordinance effective April 1, 1972 (which was amended on July 1, 1980; July 1, 1983; November 1, 1989; and July 1, 1998) to protect and finance the operation of its wastewater conveyance, treatment, and disposal facilities. The LACSD also adopted a Connection Fee Ordinance in 1981 (which was amended in 1984, 1990, 1992, 1997, and 2007). Companies that discharge industrial wastewater to the sewerage system are governed by both the Wastewater Ordinance and the Connection Fee Ordinance. These legal mechanisms establish the Districts' Industrial Wastewater Discharge Permit, Connection Fee, and Surcharge Programs. The Industrial Wastewater Discharge Permit Program allows for the regulation of industrial wastewater dischargers to protect the public health, environment, and the public sewerage system. The



Surcharge Program requires all industrial companies discharging to the Districts' sewerage system to pay their fair share of the wastewater treatment and disposal costs. The Connection Fee Program requires all new users of the Districts' sewerage system, as well as existing users that significantly increase the quantity or strength of their wastewater discharge, to pay their fair share of the costs for providing additional conveyance, treatment, and disposal facilities.

Los Angeles Countywide Integrated Waste Management Plan

The Los Angeles Countywide Integrated Waste Management Plan (CIWMP), adopted by the Los Angeles County Board of Supervisors in January 1998 and approved by CalRecycle in June 1999, outlines a means of addressing the County's long-term refuse disposal needs in compliance with AB 939. The CIWMP is composed of the Los Angeles Countywide Summary Plan, the Source Reduction and Recycling Element (SRRE) for the County, the Nondisposal Facility Element (NDFE) for the County, the Household Hazardous Waste Element (HHWE) for the County, and the Los Angeles Countywide Siting Element. Additionally, the Los Angeles Department of Public Works is responsible for creating an Annual Report, which serves as an annual update to the Summary Plan. The latest Annual Report for the County of Los Angeles is the 2018 Annual Report (County of Los Angeles, 2018).

Bradbury Municipal Code

A number of provisions in the City's Municipal Code pertain to utilities and service systems:

- Title 11, Chapter 2 outlines the City's Sanitary Sewer and Industrial Waste ordinance, adopting Division 2 (Sanitary Sewers and Industrial Waste) of Title 20 (Utilities) of the Los Angeles County Code.
- Title 13, Chapter 7 requires that all of the City's overhead utilities supplying electric, communication or similar or associated service shall be placed underground. It also allows for imposition of a Utility Users Tax as a vehicle to fund "the usual and current expenses of conducting the municipal government of the City."
- Title 17, Chapter 10 is entitled "Bradbury Water Conservation/Waste of Water Ordinance." The ordinance prohibits and declares unlawful the waste of water or excessive and unauthorized use of water in the city.

3.14.2 Existing Setting

Water Supplies

Cal-American Water Company (Cal-Am) provides domestic water service to Bradbury, including the Chadwick Ranch Estates project site. The City of Bradbury is in Cal-Am's Duarte service area, which spans approximately 10 square miles and encompasses parts of the cities of Azusa, Bradbury, Duarte, Irwindale, and Monrovia. Water supplies for the Duarte service area are from three sources: groundwater from the Main San Gabriel Groundwater Basin (Basin); surface water from the San Gabriel River that is used for recharging the Basin; and untreated water imported from northern California and the Colorado River, purchased from the Upper San Gabriel Valley Municipal Water District (USGVMWD), which is also used for recharging the Basin.



Each year the Main San Gabriel Valley Watermaster (Watermaster) establishes the Operating Safe Yield (OSY) for the Basin—that is, the amount of water that can be withdrawn without causing long-term decline of water levels—pursuant to a court judgment. Cal Am’s Duarte service area has a right to approximately 1.85 percent of the OSY for the Basin; this amount is projected to be 2,981 acre-feet per year (afy) from 2020 through 2035. Cal-Am can withdraw more than its right to groundwater; however, it must pay a Replacement Water assessment to the Watermaster for any exceedance. The Watermaster uses the Replacement Water assessment to purchase imported water from the USGVMWD for recharging the Basin. Cal-Am also has a right to 1,672 afy of San Gabriel River water under the aforementioned Judgment.

Surface water from the San Gabriel River was also historically used for irrigation in the Duarte service area; however, the irrigation system is being retired and irrigation water demand is forecast to end before 2020 (California-American Water Company, 2020).

Forecast Cal-Am Duarte service area water supplies over the 2020-2035 period are shown below in **Table 3.14-1, California-American Water Company Duarte Service Area Water Supplies, Acre-Feet per Year.**

**Table 3.14-1
CALIFORNIA-AMERICAN WATER COMPANY DUARTE SERVICE AREA WATER SUPPLIES,
ACRE-FEET PER YEAR**

Water Source	2020	2025	2030	2035
Groundwater, Main San Gabriel Groundwater Basin	2,981	2,981	2,981	2,981
Surface Water, San Gabriel River used for Basin recharge	1,672	1,672	1,672	1,672
Imported water used for Basin recharge	2,176	2,311	2,447	2,587
Total	6,830	6,964	7,101	7,240

¹ Source: Water Systems Consulting, Inc., 2016

Cal-Am forecasts that its water supplies in its Duarte service area will be reliable to meet water demands in normal, single-dry-year, and multiple-dry-year conditions over the 2020-2035 period. Population projections for Cal-Am’s service areas are based on census data, DWR’s Population Tool, and growth rates from SCAG’s Draft 2016 Growth Forecast adjusted for the District’s service area. Cal-Am forecasts that the population in its Duarte Service Area will increase from 29,625 in 2020 to 31,407 in 2035, an increase of 1,782 or approximately 6 percent (WSC, 2016).

Water Treatment

Groundwater from the Basin comprising part of the Duarte District’s water supplies is treated and/or blended by Cal-Am to meet water quality standards (WSC, 2016).

Wastewater

The project site is vacant; does not generate wastewater; and does not generate demand for wastewater treatment.



Storm Drainage

The site is drained by Bradbury Canyon Creek and Spinks Canyon Creek, which discharge into the Bradbury and Spinks Debris Basins, respectively. The debris basins are owned and maintained by the Los Angeles County Flood Control District (LACFCD; Q3 Consulting et.al., 2019a, p. 1). Both debris basins eventually drain into the San Gabriel River via the Santa Fe Dam; the San Gabriel River discharges into the Pacific Ocean in the City of Seal Beach (USEPA, 2020).

Solid Waste

In 2018, the latest year for which data are available, approximately 95 percent of the solid waste landfilled from the City of Bradbury was disposed of at the Azusa Land Reclamation Company (ALRC) facility in the City of Azusa. The ALRC facility has remaining capacity of 51,512,201n cubic yards; maximum daily disposal capacity of 8,000 tons; actual daily disposal capacity of 976 tons per day; residual daily disposal capacity of 7,024 tons per day; and an estimated closing date of 2045 (CalRecycle, 2020a; CalRecycle, 2020b; CalRecycle, 2020c).

Electricity

The project site is vacant and lacks electricity service. Southern California Edison Company (SCE) provides electric power for the City of Bradbury. Electrical power transmission infrastructure is available in the immediate project vicinity.

Natural Gas

The project site is vacant and lacks natural gas service. Southern California Gas Company (SoCalGas) is the primary distributor of retail and wholesale natural gas across Southern California, including the City of Bradbury. Gas transmission infrastructure is available in the immediate project vicinity.

Communications

There are a number of options for phone, internet, and television services with distribution infrastructure in the project vicinity. Therefore, the project would have a Less Than Significant Impact regarding telecommunications facilities.

3.14.3 Methods

Information regarding existing utility and service providers was obtained for the project site and surrounding areas. This information was utilized to analyze the project's potential impacts regarding water, wastewater treatment, storm drainage, electricity, natural gas, solid waste and telecommunications.

3.14.4 Thresholds of Significance

Appendix G of the State CEQA Guidelines identifies the following thresholds of significance for the assessment of impacts on utilities and service systems:



Would the project:

- a) **Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?**
- b) **Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?**
- c) **Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**
- d) **Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?**
- e) **Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?**

The Initial Study, included as Appendix G to this DEIR, determined that impacts related to thresholds (c) would be no impact and thresholds (d) and (e) would be less than significant. These impacts are not analyzed below.

3.14.5 Impact Analysis

- a) **Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?**

Less Than Significant Impact

Water

Currently, 12-inch domestic water service mains are in Bliss Canyon Road and Long Canyon Road. The existing Bradbury Tank, approximately 1,000 feet northwest of the intersection of Long Canyon Road and Bliss Canyon Road, is at a base elevation of 1,040 feet above mean sea level (amsl), with an overflow elevation of 1,059 feet amsl. The water main supplying the tank is 12 inches diameter.

Elements of the water system expansion required to accommodate the proposed project include tie-ins to an existing water main at the intersection of Long Canyon Road and Bliss Canyon Road, 8-inch and 12-inch water mains; water laterals to the proposed residential parcels; one 1-million-gallon water reservoir at a pad elevation of 1,230 feet above mean sea level (amsl); two domestic water pressure reducing valves; and one pumping station. The preliminary reservoir dimensions are 65 feet diameter and 40 feet height, giving an overflow elevation of 1,270 feet amsl. The reservoir size is based on 2,500 gallon per minute (gpm) fire flow for two hours; plus five days maximum daily water demand by the project for both domestic and irrigation uses. Additional information on the design and proposed operation of the reservoir is presented in Appendix U, *Chadwick Ranch Development Proposed Water System*. The proposed pumping station would contain two pumps each with 175 gpm capacity. Each pump would have capacity to deliver maximum daily water demand to the proposed project; the second pump would be for reliability when one pump was off-line. The two pressure reducing valves are recommended to be installed at elevations no higher than 1,090 feet amsl, and would reduce water pressure to acceptable levels (50 to 100 pounds per square inch) at



lots 5 through 14, which would range in elevation from 1,024 feet amsl (lot 5) to 900 feet amsl (lots 10 and 13).

All water lines serving the proposed project would be built within the pavement width of the project circulation system, including the water reservoir access road. Project development would require installation of fire hydrants; the number and spacing of hydrants would be determined during project design and must conform with requirements of California Fire Code Appendix C. Impacts of construction and operation of the proposed water lines would be part of the impacts of the whole project analyzed throughout **Section 3** of this DEIR; no additional impacts would occur.

Cal-Am will require the Project applicant to provide additional source water by either installing a new well or by contributing towards a new well that Cal-Am is already in the process of designing and constructing, depending on the timing of the project. Because of the uncertainty of how project timing compared with that of Cal-Am's well construction projects, it is unknown which option will be implemented and therefore it is too speculative to determine what possible impacts there could be if a well was constructed. Construction of a new well will be required to undergo an independent analysis to determine the applicability of CEQA or the required CEQA documentation.

Wastewater Treatment

The proposed project does not have access to a public sewer system and will incorporate Non-Conventional Onsite Wastewater Treatment Systems (NOWTS) on each individual lot. Prior to issuance of a building permit on any individual lot, the property owner shall be required to submit a Feasibility Report, prepared by a Qualified Professional, consistent with "Conventional and Non-Conventional Onsite Wastewater Treatment Systems – Requirements and Procedures" published by Los Angeles County Department of Public Health dated November 28, 2018. Given the proposed project rough grading, compacted fills with reduced percolation rates, slope stability and geologic conditions, the proposed NOWTS units will not use conventional leach fields or seepage pits. As a minimum, the Feasibility Report will include:

- Floor Plan
- Plot Plan
- Type and manufacturer of proposed NOWTS
- Type and location of dispersal system (assumed to be pressurized subsurface drip dispersal system) along with test results for infiltration rates
- Proposed location and flowline elevations for a dry sewer lateral (for future use) extending from the residential unit to 5 feet beyond the property line into the private street right-of-way

Building permit issuance shall require approval of final plans for NOWTS prepared by a Qualified Professional. The plans for the proposed project shall also include leak test and startup inspection procedures, final inspection guidelines and startup procedures as generally defined in Chapter 12 of *Conventional and Non-Conventional Onsite Wastewater Treatment Systems – Requirements and Procedures*. Impacts of installation and operation of the NOWTS would be less than significant after compliance with the Requirements and Procedures specified above.

Storm Water Drainage

The Chadwick Ranch Estates project has been designed to collect runoff from each residential pad and some of the open space areas along the main project roadway and direct such runoff to buried storm drains in the main project roadway. Ultimately, the collected runoff is conveyed in a



southeasterly direction and then discharged into one of two desilting/retention basins along the eastern boundary of the project site and a water quality basin at the south end of the developed area onsite. The basins have been designed to accommodate runoff resulting from a 100-year storm event.

Stormwater improvements built as part of the proposed project would be mandated to comply with the City's Storm Water Ordinance, NPDES and Regional Water Quality Control Board requirements. Thus, impacts due to new storm drain facilities associated with the proposed project would be less than significant.

Electric Power

Electric power for the City of Bradbury is provided by SCE. Although the proposed project site is vacant, electrical power transmission infrastructure is available in the immediate project vicinity. SCE typically utilizes existing utility corridors to reduce environmental impacts, and has energy-efficiency programs to reduce energy usage and maintain reliable service throughout the year (Southern California Edison, 2019). The project would be constructed in accordance with all applicable Title 24 regulations, and would not necessitate the construction or relocation of electric power facilities. Therefore, a Less Than Significant Impact would occur.

Natural Gas

Southern California Gas Company is the primary distributor of retail and wholesale natural gas across Southern California, including the City of Bradbury. The proposed project site is vacant, but, as with electrical power transmission infrastructure, gas distribution pipelines are located near the site. Other than project-related tie-ins to nearby natural gas distribution pipelines, no natural gas facilities would have to be constructed or relocated to accommodate the proposed project. Therefore, a Less Than Significant Impact would occur in this regard.

Telecommunications Facilities

There are a number of options for phone, internet, and television services with distribution infrastructure in the project vicinity. Therefore, the project would have a Less Than Significant Impact regarding telecommunications facilities.

- b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?**

Less Than Significant Impact with Mitigation Incorporated

Cal-American Water Company (Cal-Am) provides domestic water service to Bradbury, including the Chadwick Ranch Estates project site. The City of Bradbury is in Cal-Am's Duarte service area. Water supplies for the Duarte service area are from three sources: groundwater from the Main San Gabriel Groundwater Basin (Basin); surface water from the San Gabriel River that is used for recharging the Basin; and untreated water imported from northern California and the Colorado River, purchased from the Upper San Gabriel Valley Municipal Water District (USGVMWD), which is also used for recharging the Basin. Forecast Duarte service area water supplies for 2020 amount to 6,830 afy; supplies are forecast to gradually increase to 7,240 afy in 2040. Cal-Am forecasts that its water supplies in its Duarte service area will be reliable to meet water demands in normal, single-dry-year, and multiple-dry-year conditions over the 2020-2035 period (WSC, 2015). Cal Am forecasts that the population in its Duarte District will increase from 29,625 in 2020 to 31,407 in 2035, an increase of 1,782 or approximately 6 percent (WSC, 2016). The forecast population increase due to project development, 42 persons, is within the forecast population increase in the Duarte District. Cal-Am is



requiring the well to enhance groundwater pumping capacity. Project water demand is estimated at 150 percent of estimated project wastewater generation. Project wastewater generation per house is estimated at 380 gallons per day (gpd; this analysis assumes each house will have an average of six bedrooms) (City of Los Angeles, 2006).²⁷ Thus, project water demand is estimated at 570 gpd per house or 7,980 gpd. Cal-Am forecasts that it will have sufficient water supplies to meet project water demands. However, Cal-Am requires additional groundwater well capacity to meet project water demands. Cal-Am will require the Project applicant to provide additional source water by either installing a new well or by contributing towards a new well that Cal-Am is already in the process of designing and constructing, depending on the timing of project development. This impact would be significant. The requirement to install a new well or contribute toward funding construction of a new Cal-Am well is set forth as Mitigation Measure USS-1 below.

3.14.6 Mitigation Measures

The following impact would be significant without implementation of mitigation:

USS-b: Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Mitigation Measure

MM USS-1 Before issuance of a grading permit for the project, the Project applicant must either install a new well or contribute funding towards a well that Cal-Am is in the process of designing and constructing.

3.14.7 Level of Significance after Mitigation

Implementation of mitigation measure **USS-1** would reduce utilities and service systems impacts to less than significant.

²⁷ City of Los Angeles water demand information is used here, as Cal-American Water Company water demand information is for typical-sized residential units (WSC, 2021) and does not apply to the estate-sized residential units that would be developed on the project site.

**SECTION 3.15 – FIRE PROTECTION SERVICES AND
WILDFIRE HAZARDS**



3.15 Fire Protection Services and Wildfire Hazards

Introduction

This section of the EIR provides an analysis of the project’s potential impacts with regards to wildfire risks. In 2018, wildfire was added to the State CEQA Guidelines Appendix G Checklist to address factors that could expose people or structures to fire or post-fire flooding or landslides, impair emergency response, or require installation of infrastructure that could exacerbate fire risk or result in temporary or ongoing impacts to the environment. The analysis in this section is based on the California Department of Forestry and Fire Protection (CAL FIRE) fire hazard information, the Conceptual Fire Protection Plan for Chadwick Ranch Estates (FPP) (Dudek, 2020) included as **Appendix J** to this DEIR and the Biological Resources Evaluation (BRE) (GLA, 2020) conducted for the project and included in **Appendix M** of this DEIR.

The Fire Protection Plan (FPP) provides a detailed analysis of the project, the potential risk from wildfire, and potential impacts on the Los Angeles County Fire Department (LACoFD), as well as an analysis on meeting or exceeding the requirements of Los Angeles County. Further, the FPP provides requirements, recommendations, and project design features to address identified hazards and to reduce the risk and potential impacts to acceptable levels, as determined by the LACoFD.

This section also analyzes consistency of the project with applicable county and city emergency response plans, evacuation plans, and designated disaster routes.

3.15.1 Relevant Policies and Regulations

The following policies and regulations provide the background and regulatory framework within which fire protection and wildfire-related issues are to be considered.

Federal

National Cohesive Wildland Fire Management Strategy

The National Cohesive Wildland Fire Management Strategy (Cohesive Strategy) was created in response to requirements of the Federal Land Assistance, Management, and Enhancement (FLAME) Act of 2009. The Cohesive Strategy is a collaborative process with all levels of government and nongovernmental organizations, as well as the public, to seek solutions to wildland fire management issues (Forests and Rangelands, 2020). Three primary factors are identified in addressing the wildland fire problems:

1. Restoring and maintaining resilient landscapes. The strategy must recognize the current ecosystem health and variability of resilient landscapes from geographic area to geographic area, including climate change. Because landscape conditions and needs vary depending on local climate and fuel conditions, among other elements, the strategy will address landscapes on a regional and sub-regional scale.
2. Creating fire-adapted communities. The strategy will offer options and opportunities to engage communities and work with them to become more resistant to wildfire threats, and respond in the event of a wildfire emergency.



3. Responding to wildfires. This element considers the full spectrum of fire management activities and recognizes the differences in missions among local, state, tribal and federal agencies. The strategy offers collaboratively developed methodologies to move forward (Forests and Rangelands, 2020).

State

Senate Bill 1241 (Kehoe, 2012)

In 2012, Senate Bill 1241 (SB 1241) passed, requiring that all future general plans address fire risk in state responsibility areas and very high fire hazard severity zones in their safety element. In addition, the bill requires cities and counties to make certain findings regarding available fire protection and suppression services before approving a tentative map or parcel map (California Legislative Information, 2012). Senate Bill 1241 also required the Office of Planning and Research, the Natural Resources Agency, and CAL FIRE to develop “amendments to the initial study checklist of the [CEQA Guidelines] for the inclusion of questions related to fire hazard impacts for projects located on lands classified as state responsibility areas, as defined in §4102, and on lands classified as very high fire hazard severity zones, as defined in subdivision (i) of §51177 of the Government Code.” (Pub. Resources Code, § 21083.01).

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) of 1970 (CEQA; Public Resources Code, §§ 21000-21178), applies to discretionary projects proposed to be carried out or approved by public agencies. In 2018, the State CEQA guidelines Appendix G checklist was updated with new questions related to wildfire, pursuant to Senate Bill 743 (State Senator Steinberg, 2013), and Senate Bill 1241 (State Senator Kehoe, 2012). It was determined that hazards associated with wildfire require special consideration and that lead agencies must “discuss any inconsistencies between the proposed project and applicable general plans” related to a project’s potential environmental impacts in a project’s environmental review (State CEQA Guidelines § 15125[d].) The questions in the new wildfire CEQA Guidelines Appendix G focus on the effects of new projects in creating or exacerbating wildfire risks (California Natural Resources Agency, 2018a).

2017 State of California General Plan Guidelines

The 2017 edition of the General Plan Guidelines (GPG) (OPR, 2017) is a resource to help planners accomplish their respective community’s priorities and vision while meeting larger state goals, increasing community collaboration, and improving competitiveness for funding opportunities. The GPG policy recommendations focus on four key themes; climate change, economics, healthy communities, and equitable opportunities. The GPG includes development goals and public policy relative to the distribution of future land uses, both public and private, and it provides tools for communities to utilize in updating their general plans. The GPG requires the safety element of county and city plans to include identification of policies and mitigation for the protection of the community from any unreasonable risks associated with wildland and urban fires (OPR, 2017).

California State Hazard Mitigation Plan

The California State Hazard Mitigation Plan (SHMP) represents the state’s primary hazard mitigation guidance document - providing an updated analysis of the state’s historical and current hazards, hazard mitigation goals and objectives, and hazard mitigation strategies and actions. Chapter 8 of the



2018 SHMP (California Governor’s Office of Emergency Services [CalOES], 2018) addresses wildfire hazards. According to the SHMP, wildfire, and particularly wildland-urban interface (WUI) fire, has represented the third greatest source of hazard to California, both in terms of recent state history as well as the probability of future destruction of greater magnitudes than previously recorded (CalOES, 2018).

2018 Strategic Fire Plan for California

The 2018 Strategic Fire Plan for California (California Fire Plan) (CAL FIRE, 2018) is the state's road map for reducing the risk of wildfire. The Fire Plan is a cooperative effort between the State Board of Forestry and Fire Protection and the California Department of Forestry and Fire Protection. The purpose of the Strategic Fire Plan is to provide CAL FIRE with appropriate guidance for adequate statewide fire protection of state responsibility areas. The 2018 Plan focuses on (1) fire prevention and suppression activities to protect lives, property, and ecosystem services, and (2) natural resource management to maintain the state’s forests as a resilient carbon sink to meet California’s climate change goals and to serve as important habitat for adaptation and mitigation. The goals of the 2018 Strategic Fire Plan’s vision revolve around fire prevention, natural resource management, and fire suppression efforts (CAL FIRE, 2018). Major components of the plan are:

- Improve the availability and use of consistent, shared information on hazard and risk assessment;
- Promote the role of local planning processes, including general plans, new development, and existing developments, and recognize individual landowner/homeowner responsibilities;
- Foster a shared vision among communities and the multiple fire protection jurisdictions, including county-based plans and community-based plans such as Community Wildfire Protection Plans (CWPP);
- Increase awareness and actions to improve fire resistance of man-made assets at risk and fire resilience of wildland environments through natural resource management;
- Integrate implementation of fire and vegetative fuels management practices consistent with the priorities of landowners or managers;
- Determine and seek the needed level of resources for fire prevention, natural resource management, fire suppression, and related services; and
- Implement needed assessments and actions for post-fire protection and recovery.

Government Code § 51175-51189 (Very High Fire Hazard Severity Zones)

California Government Code § 51175-51189 classifies lands in the state in accordance with whether a very high fire hazard is present so that public officials are able to identify measures that will retard the rate of spread, and reduce the potential intensity of, uncontrolled fires that threaten to destroy resources, life, or property, and to require that those measures be taken. It gives direction to local agencies regarding designation of very high fire hazard severity zones in its jurisdiction. It allows local agencies to include areas as very high fire hazard severity zones within their jurisdiction that were not identified as very high fire hazard severity zones by CAL FIRE. It establishes various mitigation strategies to reduce risk associated with wildland fire, such as building standards that



provide for comprehensive space and structure defensibility to protect structures from fires spreading from adjacent structures or vegetation and vegetation from fires spreading from adjacent structures (California Legislative Information, 2019e). Section 51182 requires defensible space extending 100 feet from structures.

California Public Resources Code Sections 4201-4204

California Public Resources Code Sections 4201 et. seq. require California Department of Forestry and Fire Protection to classify fire hazard severity zones within state responsibility areas, that is, areas where the state is responsible for the costs of wildfire prevention and suppression.

California Public Resources Code Sections 4290 et seq.

California Public Resources Code (PRC) § 4290 authorizes the California Board of Forestry to adopt fire safety regulations related to defensible space applicable to state responsibility area lands, and to lands classified and designated as very high fire hazard severity zones. The regulations shall include all of the following: road standards for fire equipment access; standards for signs identifying streets, roads, and buildings; minimum private water supply reserves for emergency fire use; and fuel breaks and greenbelts.

PRC § 4291 requires that brush, flammable vegetation, or combustible growth within 100 feet of buildings be removed. Vegetation that is more than 30 feet from the building, less than 18 inches high, and important for soil stability, may be maintained; as may single specimens of trees or other vegetation that is maintained so as to manage fuels and not form a means of rapid fire transmission from other nearby vegetation to a structure.

California Code of Regulations, Title 24, Part 9, California Fire Code

Requirements in the California Fire Code (CFC) are for building and equipment design, such as fire-rated construction, alarm systems, sprinkler systems, and means of egress; requirements for specific land uses, including airports, dry cleaners, gas stations, and automotive service businesses; hazardous materials; fire flow requirements; and fire hydrant spacing. The CFC is updated on a three-year cycle, and the 2019 CFC took effect on January 1, 2020.

California Code of Regulations, Title 24, Part 2, California Building Code

The most recent building standard adopted by the legislature and used throughout the state is the 2019 version of the CBC, often with local, more restrictive amendments that are based on local geographic, topographic, or climatic conditions. The CBC is updated on a three-year cycle, and the 2019 CBC took effect on January 1, 2020.

Requirements for structures in Fire Hazard Severity Zones are in Chapter 7A of the California Building Code, “Materials and Construction Methods for Exterior Wildfire Exposure,” and Chapter 49 of the California Fire Code, *Requirements for Wildland-Urban Interface Fire Areas*. Requirements in these two chapters cover: roofing; attic ventilation; exterior walls; exterior windows and glazing; exterior doors; decking; protection of underfloor, appendages, and floor projections; and ancillary structures.



California Code of Regulations, Title 14, Sections 1270 et seq.

California Code of Regulations, Title 14, Sections 1270 et seq. governing roadways for fire access; standards for signs identifying streets, roads, and buildings; minimum private water supply reserves for emergency fire use; and fuel breaks and greenbelts.

Local

County of Los Angeles Operational Area Emergency Response Plan

The Los Angeles County Office of Emergency Management (OEM) is the day-to-day Los Angeles County Operational Area coordinator for the entire geographic area of the county. This broad responsibility includes maintaining an approved Operational Area Emergency Response Plan (ERP) (Los Angeles County Office of Emergency Management, 2012). The ERP addresses the Los Angeles County Operational Area’s planned response to extraordinary emergency situations associated with natural and man-made disasters and technological incidents. The operational concepts in this plan focus on potential large-scale disasters typically requiring responses by multiple agencies/jurisdictions. The ERP specifies roles and responsibilities of various jurisdictions and agencies respecting emergency responses; procedures and responsibilities for continuity of government; and mutual aid procedures.

County of Los Angeles All-Hazard Mitigation Plan

Further assessments of potential hazards and County resources available for responding to hazards are contained in the County of Los Angeles All-Hazard Mitigation Plan (AHMP) adopted by the County Board of Supervisors in 2019. The AHMP includes a vulnerability analysis for many types of hazards including earthquakes, floods, fires, and manmade hazards including terrorism and civil unrest; goals and objectives for strategies for mitigating hazards; proposed strategies and actions for reducing vulnerability to identified hazards; and lists of facilities and equipment available for responding to disasters.

Los Angeles County Fire Department Strategic Fire Plan

The Los Angeles County Fire Department Strategic Fire Plan 2017-2021 (Los Angeles County Fire Department, 2018) identifies and prioritizes pre-fire and post-fire management strategies and tactics meant to reduce the loss of values at risk within the county. The plan states that addressing wildfire potential continues to be a top priority and a thorough understanding of the wildfire environment is essential in understanding fire severity potential in Los Angeles County. A major element of the California Strategic Fire Plan is an intensive assessment process graphically depicting fuels, weather, and assets at risk in a Geographic Information System (GIS) program. The GIS layers are continually field-validated and used to identify areas within or adjacent to the WUI most at risk. The WUI areas are the geographical intersection of two disparate systems, wildland and structures, where the risk of wildfires spreading from vegetation to structures, or vice-versa, is higher than in other areas.

City of Bradbury Municipal Code

Chapter 3 of the Bradbury Municipal Code contains the city’s Fire Code, which adopts the Los Angeles County Fire Code, as amended and in effect March 1st, 2017 to be the city’s fire code. The Los Angeles County Fire Code adopts the California Fire Code and International Fire Code by reference. Although



the change is not yet codified, the City is using the 2019 Fire Code as adopted by the County of Los Angeles.

City of Bradbury General Plan

The Health and Safety Element of the Bradbury General Plan includes a discussion of fire hazards, stating that a very high risk for wildfire exists in areas having steep slopes that are covered with chaparral vegetation and where there is limited access for fire control equipment. Bliss Canyon Road is identified as one of the City’s Primary Evacuation Routes.

The majority of the City of Bradbury is located within a Very High Fire Hazard Severity Zone established by the Los Angeles County Fire Department. The entire City lies within a Local Responsibility Area. California Public Resource Code § 4291 requires that homeowners provide fuel modification to 100 feet around their buildings to create a defensible space for firefighters and to protect their homes from wildfires. Residents must reduce dry fuel around the perimeter of any structure and comply with the adopted codes that provide standards for mitigating fire hazards.

The following Goals, Objectives and Policies contained in the Bradbury General Plan address fire safety-related issues.

- Safety Goal 5** To minimize the risk to lives and property due to fire hazards.
- Safety Objective 7** Ensure that adequate service levels of fire protection are maintained in the City.
- Safety Policy 14** Continue to support programs to reduce fire hazards within the community.
- Safety Policy 15** Provide appropriate fire-fighting equipment, personnel and peak load water supply.
- Safety Policy 18** Require all existing and new development to install and maintain adequate smoke detection systems.
- Safety Policy 19** All new development to install fire sprinkler systems.
- Safety Action 2** Promote public education about fire safety at home.
- Safety Action 4** Update the hillside development standards which include fire prevention design measures.
- Safety Action 8** Conduct public outreach on wildfire prevention awareness.

The General Plan includes the following Implementation Action Programs that address fire safety-related issues.



3.15.2 Existing Setting

Fire Hazard Severity Zones

The project site lies within a Very High Fire Hazard Severity Zone (VHFHSZ), as designated by the Los Angeles County Fire Department (LACoFD) and California Department of Forestry and Fire Protection (CAL FIRE), as depicted in **Figure 3.15-1, Very High Fire Hazard Severity Zone in the City of Bradbury**. Fire hazard designations are based on topography, vegetation, and weather, amongst other factors. The project site is in a Local Responsibility Area, meaning that local governments have financial responsibility for wildfire prevention and suppression.

Wildfire risk in an area is assessed based on five major factors: fuel, topography, weather, resources exposed to wildfire, and wildlife effects on those resources. Fuel, topography, and weather together comprise the three major factors of the *wildfire potential* of an area (LACCEO, 2014).

Fuel

Wildfires burn in most types of vegetation—forests, shrublands, and grasslands; wildfires were often formerly referred to as *forest fires*, which could be misleading. Vegetation types onsite include forests, woodland, chaparral, and ornamental (see **Section 3.3, Biological Resources**, of this DEIR for further explanation); all are potentially fuel for wildfire. Chaparral vegetation is highly flammable. Many chaparral species require fire to spawn regeneration. Many species invite fire through the production of plant materials with large surface- to-volume ratios, volatile oils, and through periodic die-back of vegetation (PVE and RHE 2013).

Topography

Topography influences the movement of air, thereby directing a fire course. For example, the rate of wildfire spread upslope increases as the grade increases (LACOA, 2019). The project site is on the southern foot of the San Gabriel Mountains; the project site has a south slope with an average grade of approximately 25 percent. The topography onsite contributes considerably to the wildfire hazard onsite.

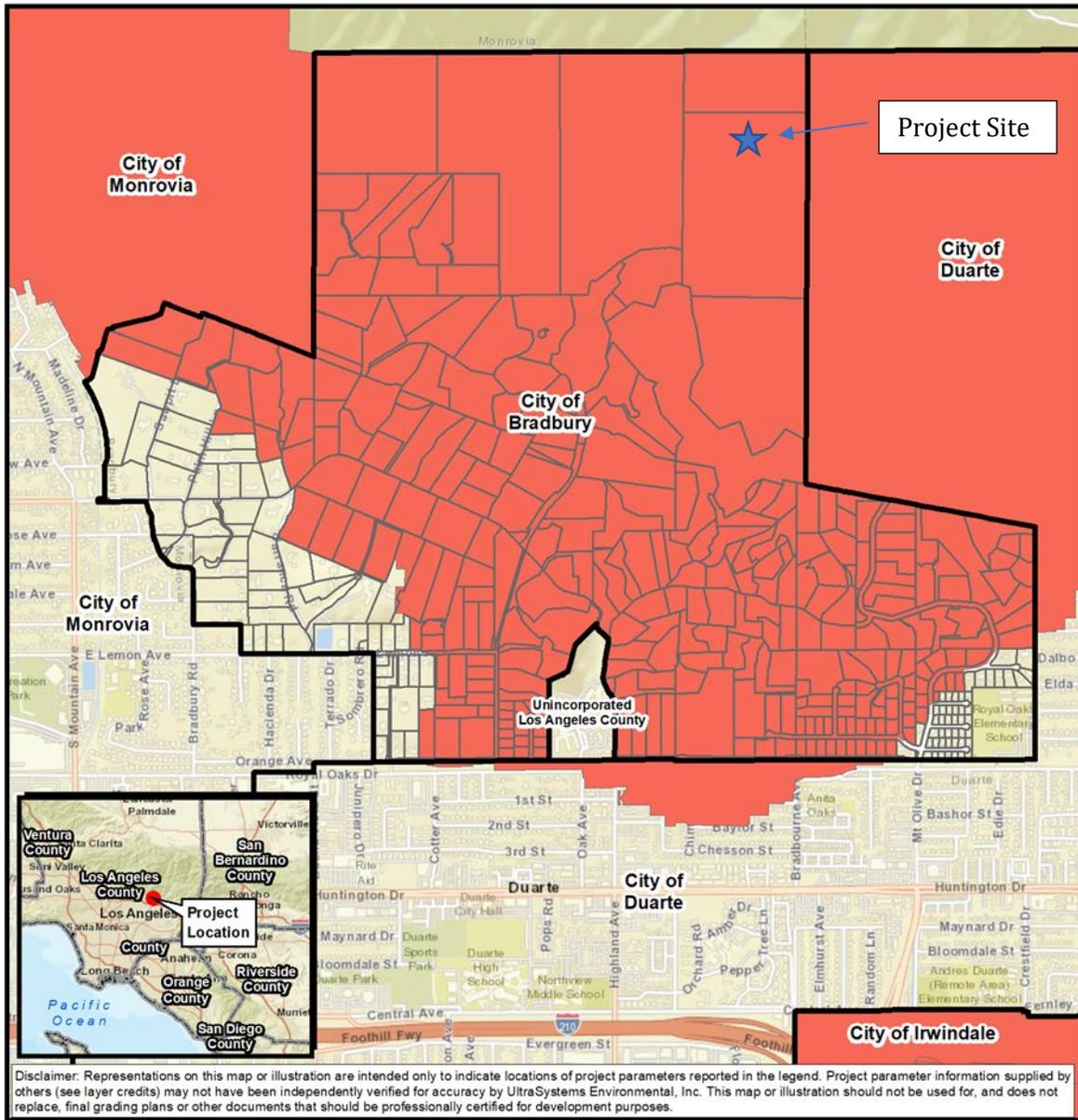
Climate and Weather

The project site, like much of Southern California, is influenced by the Pacific Ocean and a seasonal, migratory subtropical high-pressure cell known as the “Pacific High.” Wet winters and dry summers with mild seasonal changes characterize the Southern California climate. This climate pattern is occasionally interrupted by extreme periods of hot weather, winter storms, or dry, easterly Santa Ana winds. The average high temperature for the project area is approximately 74°F, with daily highs in the summer and early fall months (July–October) exceeding 95°F. Precipitation typically occurs between December and March with average rainfall of 18 inches (Western Regional Climate Center, 2019).



❖ SECTION 3.15 – FIRE PROTECTION SERVICES AND WILDFIRE HAZARDS ❖

Figure 3.15-1
VERY HIGH FIRE HAZARD SEVERITY ZONE IN THE CITY OF BRADBURY



N

Scale: 1:18,000

0 750 1,500 Feet

0 120 240 Meters

Legend

- City Boundaries
- Parcels in Bradbury
- Fire Hazard Severity Zones in LRA (CAL FIRE November 2020)**
- Very High

Chadwick Ranch Estates Project

Very High Fire Hazard Severity Zone in the City of Bradbury

UltraSystems
LIVERMORE • DUBLIN • SACRAMENTO • STOCKTON



Typically, the highest fire danger in southern California coincides with Santa Ana winds. The Santa Ana wind conditions are a reversal of the prevailing southwesterly winds that usually occur on a region-wide basis near the end of fire season during late summer and early fall. They are dry, warm winds that flow from the higher desert elevations in the east through the mountain passes and canyons. As they converge through the canyons, their velocities increase. Consequently, peak velocities are highest at the mouths of canyons and dissipate as they spread across valley floors. Localized wind patterns on the Project Sites are strongly affected by both regional and local topography.

Resources Exposed to Wildfire

Resources on the project site exposed to wildfire are limited to the vegetation onsite. No built environment resources, and no cultural resources, are present onsite (see **Section 3.4**, *Cultural Resources*, of this DEIR for further discussion).

Wildfire Effects on Resources

Frequent wildfires reduce recovery of shrubs and trees— especially shrubs and trees that must produce seeds to regenerate after fire—and increase invasion of nonnative grasses, that is, tend to convert native shrublands to nonnative grassland (USGS 2012). Nonnative grasses are generally more flammable than the chaparral and sage scrub vegetation that is replaced, and burn more frequently; thus, such conversion exacerbates wildfire hazards (UC ANR, 2009).

Wildfire Causes

Humans were responsible for igniting 84 percent of wildfires in the United States between 1992 and 2012 (Balch, Jennifer, et al. 2017). The three most common types of causes of human-caused wildfires are debris burning (logging slash, farm fields, trash, etc.), arson, and equipment use (PBI 2007). Lightning is the major natural cause of wildfire in the United States (Balch, Jennifer, et al. 2017).

Wildfire Suppression

Wildfire suppression involves a combination of passive measures, put in place before a fire starts, and active suppression measures. Active measures involve fire engines, crews, bulldozers, airplanes, helicopters, and command elements. Passive measures consist of defensible space, fire-resistant landscaping, fire resistant construction, good housekeeping, sufficient water onsite for firefighting, egress routes for evacuating residents, and ingress routes for firefighters (LACCEO, 2014).

Wildfire suppression strategy in Los Angeles County is centered on an aggressive initial attack aimed at quickly extinguishing the fire. Suppression efforts begin with establishing a secure starting point (anchoring). Firefighters attack the fire from the sides (flanking). Firefighting resources are committed to protecting assets in front of the fire, while additional resources are moved into areas the primary fire has already passed through to protect assets from residual embers and fire (LACCEO, 2014). Controlled fires, or burnouts, are used in establishing fire lines and, in some cases, to consume fuel between a fire line and the edge of the fire.

After a fire is contained within a fire line, firefighters extinguish hot spots near the fire line with water from fire engines and helicopters. Ground crews then move through the burned area with water and hoes extinguishing hot or glowing embers and checking under stumps and logs for embers (Idaho Firewise 2018).



While wildfire is a necessary component of local ecosystems, in most cases, unchecked wildfire is no longer a viable fire/fuel management option in Los Angeles County due to the widespread intermixing of developed land uses in wildlands. Uncontrolled fires must be quickly extinguished. Prescribed or controlled burns are used in place of uncontrolled wildfire (LACCEO, 2014).

Wildfire History

According to available data from the CAL FIRE in the Fire and Resource Assessment Program (FRAP) database, 93 fires have burned within 5 miles of the Project site since the beginning of the historical fire data record. Recorded wildfires within 5 miles range from 10.1 acres to 43,049.9 acres (1924 San Gabriel Fire) and the average fire size is approximately 1,546 acres (not including the 1924 San Gabriel Fire or fires smaller than 10 acres). The 2020 Bobcat Fire (approximately 115,998 acres) is the most recent fire, which burned approximately 1 mile north of the Project Site. Two fires have burned on the project site. LACoFD may have data regarding smaller fires (less than 10 acres) that have occurred on the site that have not been included herein. Fire history for the general vicinity of the project site is illustrated in the map in Appendix B, *Fire History Map*. Based on an analysis of this fire history data set, specifically the years in which the fires burned, the average interval between wildfires within 5 miles of the Project site was calculated to be one year with intervals ranging between 0 (multiple fires in the same year) to 9 years.

Based on this analysis, it is expected that there will be wildland fires within 5 miles of the Project site at least every nine (9) years and on average, every 1.25 years, as observed in the fire history record. Based on fire history, wildfire risk for the Project site is associated primarily with a Santa Ana wind-driven wildfire burning or spotting onto the site from the north or east, although a fire approaching from the south during more typical on-shore weather patterns is possible. The proximity of the Project to large expanses of open space to the north, northwest, and northeast and the terrain within the San Gabriel Mountains, including multiple sub-drainages and canyons, has the potential to funnel Santa Ana winds, thereby increasing local wind speeds and increasing wildfire hazard in the Project vicinity.

Fire Facilities

The Los Angeles County Fire Department (LACoFD) provides fire protection and emergency medical services to the City of Bradbury including the project site. Fire Station 44 would provide initial response; however, Stations 29, 32, 48, and 169 within LACoFD's Division 2 are available to service the Projects, if needed (Dudek, 2020). The five stations are described below in **Table 3.15-1, LACoFD Fire Stations Serving the City of Bradbury**.



**Table 3.15-1
LACoFD FIRE STATIONS SERVING THE CITY OF BRADBURY**

Station	Location	Equipment	Staffing
29	14334 Los Angeles Street, Baldwin Park	1 Paramedic Engine Company 1 Paramedic Squad Truck 1 Quint 1	3-Person Engine company 2-Person Paramedic Squad 4-Person Quint
32	605 North Angeleno Avenue, Azusa	1 Paramedic Engine Company 1 Paramedic Squad Truck	4-Person Engine Company 2 Person Paramedic Squad
44	1105 Highland Avenue, Duarte	1 Paramedic Engine Company 1 Assessment Engine Company	3-Person Engine Company 4-Person Assessment Engine Company
48	15546 Arrow Highway, Irwindale	1 Engine Company	4-Person Engine Company
169	5112 North Peck Road, El Monte	1 Engine Company	3-Person Engine Company

Source: Dudek, 2020

Emergency Response Planning

The emergency response plan in effect for the City of Bradbury is the Los Angeles County Operational Area Emergency Response Plan (ERP) approved by the County Board of Supervisors in 2012. The ERP addresses responses to extraordinary emergency situations associated with natural and man-made disasters and technological incidents typically requiring responses by multiple agencies/jurisdictions.

Further assessments of potential hazards and resources available for responding to hazards are contained in the County of Los Angeles All-Hazard Mitigation Plan (AHMP) adopted by the County Board of Supervisors in 2014; a public draft of an updated AHMP was issued in 2019. The AHMP includes a vulnerability analysis for many types of hazards including earthquakes, floods, fires, and manmade hazards including terrorism and civil unrest; goals and objectives for strategies for mitigating hazards; proposed strategies and actions for reducing vulnerability to identified hazards; and lists of facilities and equipment available for responding to disasters.

3.15.3 Methods

To develop the analysis in this section the following documents were reviewed: the Draft Fire Protection Plan for the project (Appendix J; Dudek, 2020); adopted emergency response plans and emergency evacuation plans relevant to the project site; Biological Resources Evaluation (GLA, 2020) conducted for the project and included in **Appendix M**; review and summary of prior environmental



documents pertaining to the project site; an evaluation of standard environmental record sources contained within federal, state and local environmental databases; an evaluation of additional environmental record sources obtained from local regulatory departments/agencies; a qualitative evaluation of the physical characteristics of the project site through a review of published topographic maps and area observations to characterize existing conditions; an evaluation of past site and adjacent/nearby property uses through a review of historical aerial photographs and topographic maps; and a physical inspection of the project site.

3.15.4 Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the Project would have a significant impact related to Wildfire if it is located in or near state responsibility areas or lands classified as very high fire hazard severity zones and it would:

- a) **Substantially impair an adopted emergency response plan or emergency evacuation plan (see also Threshold (f) from Hazards and Hazardous Materials).**
- b) **Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.**
- c) **Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.**
- d) **Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.**
- e) **Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires (Threshold (g) from Hazards and Hazardous Materials).**

3.15.5 Impact Analysis

- c) **Substantially impair an adopted emergency response plan or emergency evacuation plan (see also Threshold (f) from Hazards and Hazardous Materials).**

Less Than Significant Impact

The two emergency response plans in effect for the City of Bradbury—the Los Angeles County ERP and AHMP—are described above in **Section 3.15.1**. The ERP specifies roles and responsibilities of various jurisdictions and agencies respecting emergency responses; procedures and responsibilities for continuity of government; and mutual aid procedures. Project development would not interfere with implementation of the ERP or the AHMP Project Site Access and Evacuation Route

The project site is relatively isolated and surrounded by heavily vegetated lands on three sides and residential development and flood control facilities to the southwest, south and southeast. Most areas north of Royal Oaks Drive North in the City of Bradbury, including the project site, are located in a VHFHSZ, and are at significant risk in the event of a wildland fire.



The project's circulation plan consists of a two-way, 42-foot-wide street running through most of the development area, providing access to and from all 14 residential lots. (See **Figure 3.15-3, Project Circulation Plan**) The project plan includes a single access/egress point to the project that runs from the intersection of Long Canyon Road and Bliss Canyon Road across LACFCD lands; the proposed street would feed traffic directly onto Bliss Canyon Road. An emergency access roadway would connect the proposed street to an existing flood control roadway that passes next to the south project site boundary. Bliss Canyon Road is one of the city's Primary Evacuation Routes, as identified on **Figure 3.15-4, City of Bradbury Emergency Plan June 2012**.

Long Canyon Road and Bliss Canyon Road are two-lane roadways classified as local streets in the City of Bradbury General Plan. The City of Bradbury General Plan does not provide capacity information for roadway classifications. Typically, according to the Highway Capacity Manual (6th edition), single lane roadways can accommodate up to 1,900 vehicles per hour, per lane. Bliss Canyon Road is a private roadway with a much narrower right-of-way than two-lane roads built per General Plan specifications. Discounting this capacity for road conditions has resulted in capacities ranging between 1,100 and 1,500 vehicles per hour on similar roads as Long Canyon and Bliss Canyon Roads.

Dudek, who prepared the Fire Protection Plan and is an expert in this area has provided that an average rate of 2.2 vehicles per household should be used for evacuation plans, yielding approximately 31 vehicles that would be expected to use the project's roadway during evacuation in an emergency. That additional traffic would not be expected to create a significant burden on the existing roadway, Bliss Canyon Road, that serves as the primary evacuation route from the vicinity of the project site since it represents only 2.1 to 2.8 percent of the road's discounted vehicle capacity. Thus, the project would not substantially impair the adopted emergency response plan or emergency evacuation plan and impacts in this regard would be less than significant.

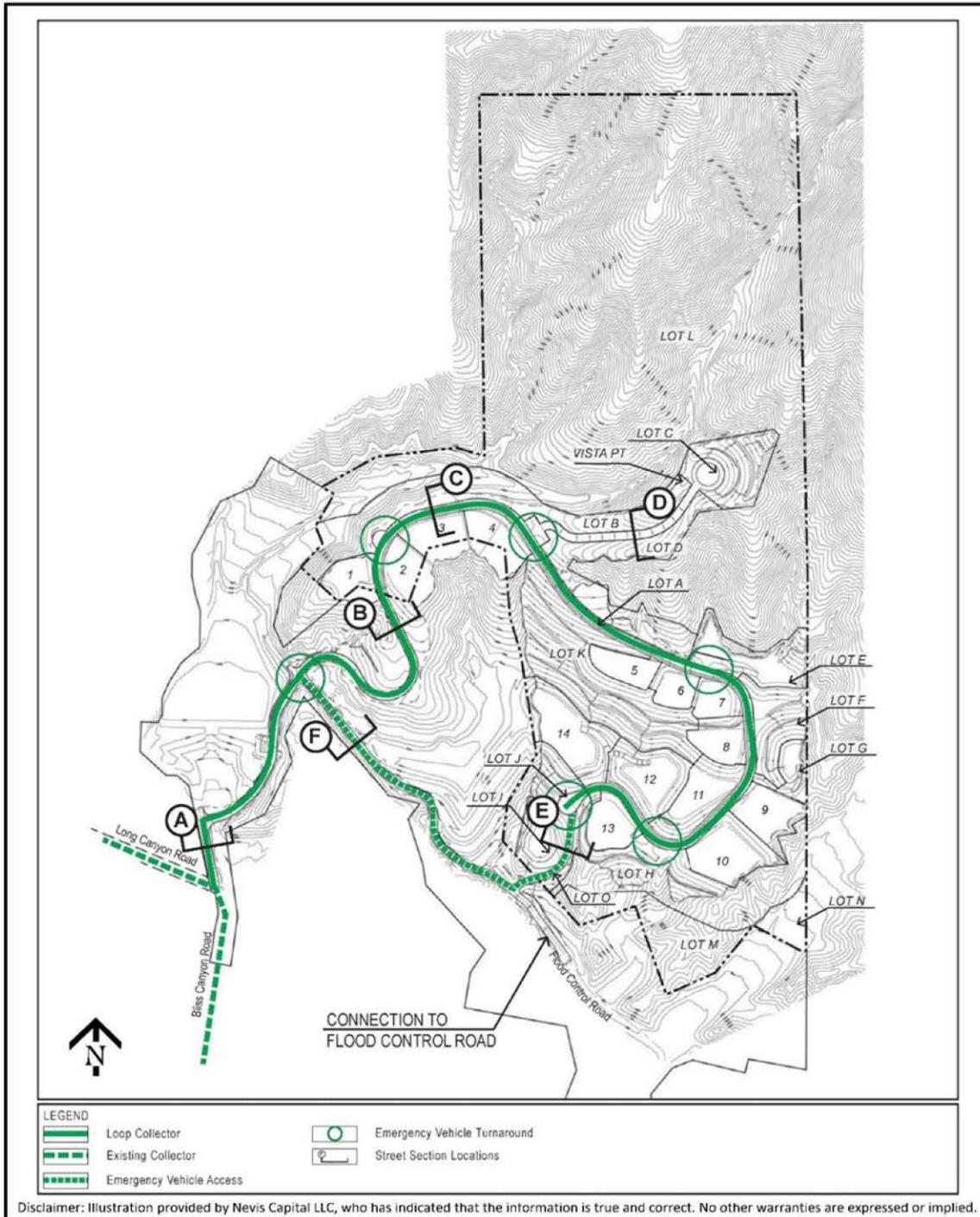
- b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.**

Less Than Significant Impact with Mitigation Incorporated

Most areas north of Royal Oaks Drive North in the City, including the project site, are considered to be in a VHFHSZ, and are at significant risk in the event of a wildland fire. Conditions onsite contributing to high wildfire risks include slopes; vegetation; dry, hot weather during summer and early autumn; and periodic prevailing Santa Ana winds. Project construction would introduce ignition sources onto the project site including sparks from construction equipment. Project operation would introduce ignition sources onto the project site including sparks from landscaping equipment. Thus, project development could expose project occupants to pollutant concentrations to a significant extent from a wildfire or the uncontrolled spread of a wildfire.

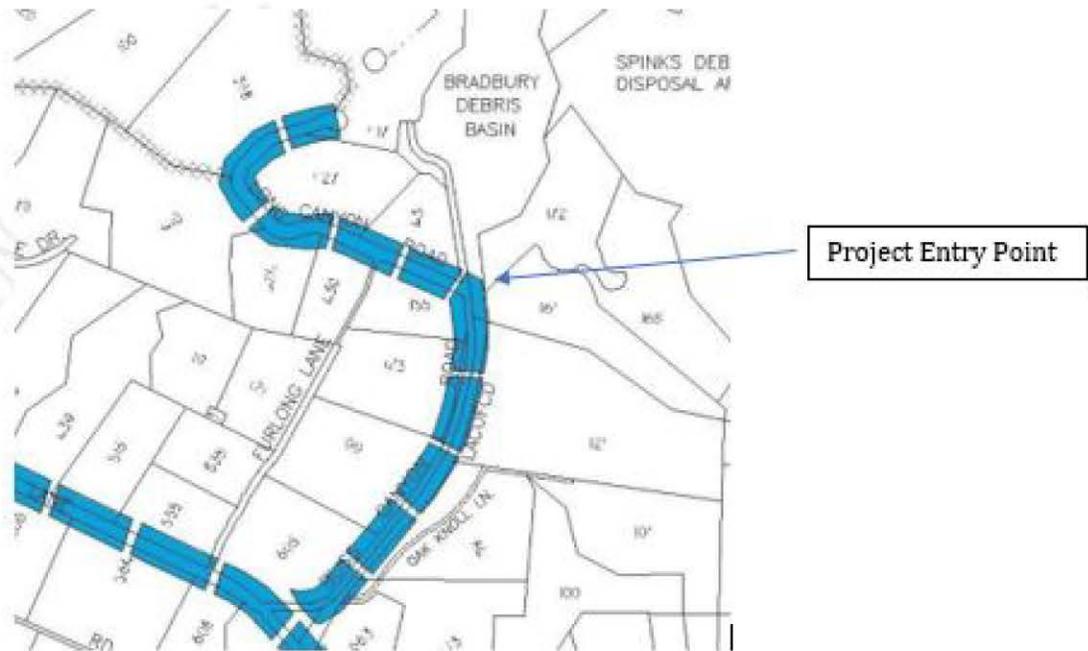
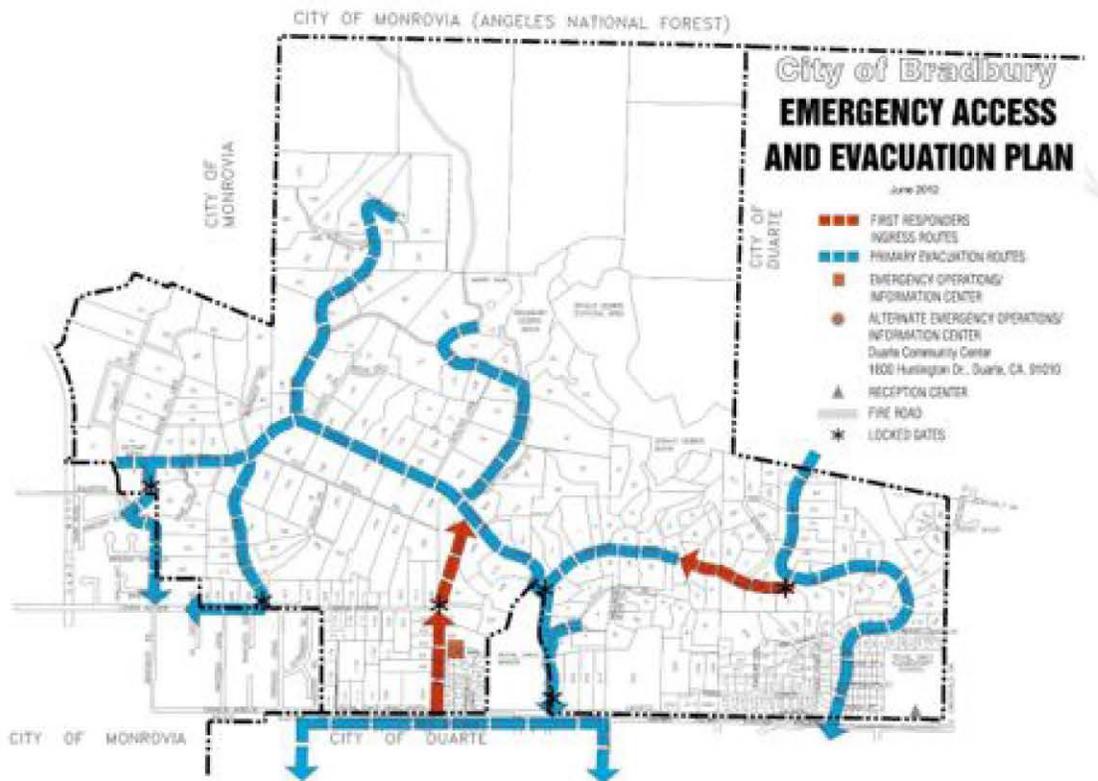
As determined during the analysis in the project FPP, the existing project site has characteristics that, under adverse weather conditions (hot, dry, and windy), could facilitate fire spread. Under extreme conditions, wind-driven wildfires from the east/northeast are likely to cast embers onto the site. Once the project is built, the Chadwick Ranch Estates on-site fire potential would be lower than existing conditions due to fire safety requirements that would be implemented on the project site. The proposed residential structures would be built using ignition-resistant materials pursuant to the most recent County Fire and Building Codes (Building Code Chapter 7A) – focusing on structure ignition resistance from flame impingement and flying embers in areas designated as high fire hazard areas. This would be complemented by:

Figure 3.15-3
PROJECT CIRCULATION PLAN



Sources: Nevis Capital LLC, May 24, 2021.

Figure 3.15-4
CITY OF BRADBURY EMERGENCY PLAN JUNE 2012





- site-wide, ignition resistant landscapes,
- perimeter fuel modification zone,
- improved water availability, capacity, and delivery system,
- project Area firefighting resources,
- fire department access throughout the developed areas,
- monitored defensible space/fuel modification,
- interior, automatic fire sprinkler systems in all structures,
- monitored interior sprinklers in applicable structures,
- fire response travel times based on County response guideline, and
- other components that would provide properly equipped and maintained structures with a high level of fire ignition resistance (Dudek, 2020).

Ignition Resistant Construction

The FPP sets forth requirements for ignition-resistant construction including the following:

- CBC Chapter 7A requirements including specifications for roofing; attic ventilation; exterior walls; exterior windows and glazing; exterior doors; decking; protection of underfloor, appendages, and floor projections; and ancillary structures.
- New class-A fire-rated roof and associated assembly.
- Attic roof vents must be ember-resistant and would require either ember-resistant roof vents or a minimum 1/16-inch mesh and shall not exceed 1/8-inch mesh for side ventilation.
- Multi-pane window glazing with a minimum of one tempered pane, fire-resistance rating of not less than 20 minutes when tested according to NFPA or be tested to meet the performance requirements of State Fire Marshal Standard 12-7A-2.
- Automatic, Interior Fire Sprinkler System to code by occupancy type for all dwellings.
- Modern infrastructure, access roads, and water delivery system.

Fuel Modification Zones

The fuel modification zones (FMZs) specified in the FPP for the proposed project would extend 200 feet out from structures. FMZs would be required abutting the northern, western, and eastern portions of the development area, that is, the sides of the development area exposed to native, unmaintained vegetation. FMZs are not required on the south, southeast, and southwest sides of the



development area because those sides of the development area are next to an existing residential community with landscapes that function as FMZ equivalent.

Zone A: From structure outward at least 30 feet

Zone A is an irrigated, limited planting area measured from the outermost edge of the structure or appendage outward to 30 feet (horizontal distance), or to the property line for perimeter lots adjacent to native vegetation.

1. Zone A shall be planted with plants from Appendix D: Acceptable Plant List by Fuel Modification Zone (included in **Appendix J** to this DEIR). Plant selection for Zone A should consist of small herbaceous or succulent plants less than two to three feet in height or regularly irrigated and mowed lawns.
2. Plants identified as “Target” or undesirable plants (Appendix E: Fuel Modification Zone Undesirable Plant List included in **Appendix J** to this DEIR) by LACoFD shall not be planted within Zone A.
3. Trees shall be spaced to allow a minimum 10-foot canopy clearance at full maturity to the structure.
4. Inorganic mulches, such as gravel, shall be used within 10 inches of the structure.
5. A 5-foot-wide pathway shall be provided around and abutting any structures for firefighter access.

Zone B – From outer edge of Zone A to 100 feet from structure

Zone B is the area (which may be irrigated or not irrigated) measured horizontally from the outer edge of Zone A to 100 feet from the structure or to the property line, whichever is first.

1. Zone B shall be planted with slightly higher plant density than Zone A as long as landscape does not create any horizontal or vertical fuel ladders (e.g., fuel which can spread fire from ground to trees).

Exception: Screen plantings are permissible if used to hide unsightly views.

2. Trees found in Appendix D (included in **Appendix J** to this DEIR) can be planted, if they are Zone B appropriate and the tree canopies at maturity are not continuous.
3. Plants identified as “Target” or undesirable plants by LACoFD shall not be planted within Zone B.
4. Woody plant species taller than 3 feet in height at maturity shall not be planted directly underneath any tree canopy.
5. Zone B may not be landscaped, but it is still subject to brush clearance standards



Zone C – Thinning Zone (from outer edge of Zone B to 200 feet from structure)

Zone C is considered a thinning zone and is any FMZ greater than 100 feet from structures. When provided, either by conditions of development, voluntary by the property owner, or required by the LACoFD, this zone is more of a progressive thinning zone to lessen spread of fire as it approaches the primary FMZ adjacent to structures. The amount of fuel reduction and removal should take into consideration the type and density of fuels, aspect, topography, weather patterns, and fire history. For the proposed project, the thinning zone will include a minimum of 50 percent fuel reduction, on average, throughout the 100-foot-wide Zone C. In no case shall Zone C be less than 100 feet wide. Thinning of less than 50 percent of the existing condition may be acceptable where erosion is of high concern, but the average cover throughout the Zone C will be reduced by 50 percent, resulting in approximately 50 percent ground cover by plant canopy.

Conclusion

The goal of the FPP is to enable structures to survive fire with little intervention from firefighting forces. Operational impacts would be significant. Implementation of mitigation measures HAZ-1, requiring implementation of Fuel Modification Zone C (which is not required by regulations); and HAZ-2, setting forth certain landscaping requirements for fuel modification zones and landscaped areas, would reduce operational impacts to less than significant.

Construction impacts would be significant. Implementation of mitigation measures **HAZ-1** through **HAZ-3**, requiring pre-construction fuel reduction; and **HAZ-4**, requiring preparation and implementation of a construction fire protection plan, would reduce construction impacts to less than significant.

- c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.**

Less Than Significant Impact with Mitigation Incorporated

The project site is in a VHFHSZ. Accordingly, the project would be required to adhere to the requirements outlined by LACoFD.

Proposed Infrastructure

The circulation system would be routed around the perimeter of the project site, providing a fire break adjacent to the FMZs, an added safeguard and setback buffer against fires. The road system provides access for emergency services from both Bliss Canyon and the Woodlyn Lane community via LACoFD roads near the Spinks Debris Basin. The neighboring uses, access, terrain, and other factors were considered during the planning and design of the proposed project. Roads have been carefully sited to reinforce the community’s rural character and provide adequate access for emergency services.

Project development would also involve installation of water lines, sewer mains, and electrical and natural gas infrastructure. All those utilities would be underground. Use of the utilities during operation of the planned residences would not increase wildfire hazard on or next to the project site. Construction of the underground utilities could involve a small temporary increase in fire hazard onsite—such as from sparks from construction equipment. Project operation would not contribute



substantially to wildfire hazard on or next to the project site. Implementation of Mitigation Measures HAZ-1, HAZ-3, and HAZ-4 would reduce construction impacts to less than significant.

Fuel Modification Zones

Fire risk analysis conducted as part of the FPP for the proposed project resulted in the determination that wildfire has occurred and will likely occur near the project area again, but the proposed project would provide ignition-resistant landscapes (drought tolerant and low-fuel-volume plants) and ignition-resistant structures, and defensible space with implementation of specified fire safety measures (refer to the impact analysis for Threshold (b) for further discussion of FPP fire protection measures). Based on modeling and analysis of the project area to assess its unique fire risk and fire behavior, it was determined that the Los Angeles County standard of 100-foot-wide fuel modification zones (FMZs) would help considerably to set the site's structures back from off-site fuels. Based on site-specific findings and as part of the FPP's conservative approach, the fuel modification zone has been extended to provide additional defensible impingement or radiant heat space buffering. The FMZs for Chadwick Ranch Estates Project would be maintained in perpetuity by a funded Homeowner's Association (HOA), or similarly funded entity. A code-exceeding fuel modification zone of 200 feet would be implemented. This 200-foot-wide FMZ, when properly maintained, would effectively minimize the potential for structure ignition from direct flame (Dudek, 2020, p. 2). Implementation of FMZ Zone C, the code-exceeding portion of the FMZ, is required by Mitigation Measure HAZ-1 set forth below. This impact would be less than significant after implementation of the FPP and mitigation measures HAZ-1, HAZ-3, and HAZ-4.

- d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.**

Less Than Significant Impact

Large-scale wildfires dramatically alter terrain and ground conditions. Normally, vegetation absorbs rainfall, reducing runoff. However, wildfires leave the ground charred, barren, and unable to absorb water, creating conditions ripe for flash flooding and mudflow. Flood risk remains significantly higher until vegetation is restored up to 5 years after a wildfire. Flooding after fire is often severe, as debris and ash left from the fire can form mudflows which can cause significant damage (FEMA, 2012).

Historical data indicates that 93 fires have burned within 5 miles of the Project site. Thus, it is expected that there will be wildland fires within 5 miles of the Project site at least every nine (9) years and on average, every 1.25 years, as observed in the fire history record. Based on fire history, wildfire risk for the Project site is associated primarily with a Santa Ana wind-driven wildfire burning or spotting onto the site from the north or east, although a fire approaching from the south during more typical on-shore weather patterns is possible.

Post-fire slope instability is a substantial hazard in and near the project site; for instance, a mudflow in San Gabriel Canyon near the City of Azusa in January 2021 trapped several drivers in their cars until Caltrans cleared the road (losangeles.cbslocal.com, 2021).



Project site drainage: Existing and Post-Project

Existing drainage onsite is via surface flow into Bradbury and Spinks debris basins. Project design includes the installation of four modular wetland system units next to the southern project site perimeter.

The proposed project would be developed pursuant to applicable policies, regulations and guidelines established by the City of Bradbury and County of Los Angeles as formally set forth in the Chadwick Ranch Estates Specific Plan. Project construction and operation would include implementation of the project FPP. The risks associated with downslope or downstream flooding or landslides as a result of runoff, post fire slope instability or drainage changes are taken into account in the proposed project's development plan, which uses cluster development concepts and conservation easements to dedicate open space, most of which is very near the Angeles National Forest.

Clustering the project would result in fewer ecological and environmental impacts compared to using conventional development design practices; the concept reduces impacted areas and protects existing steep slopes.

The project design would result in less stormwater runoff into wetlands, and impervious surface coverage would be reduced as a result of clustering the proposed lots. The undisturbed open space in the development plan will be dedicated to a conservancy to be named, and will ensure that 57 percent of the site remains undisturbed in perpetuity (TRG, 2019).

Thus, the risk of downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes from the proposed project may actually be below the existing level. Therefore, the impacts would be less than significant.

- e) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires (Threshold (g) from Hazards and Hazardous Materials).**

Less Than Significant with Mitigation Incorporated

Development projects generally can affect wildfire risk on and next to a project site in any combination of three ways: 1), add fuel, such as vegetation and buildings, to the site; 2), add resources—such as buildings and people—to the site that could be exposed to wildfires; and 3), change the effects of wildfire on those resources (such as planting fire-resistant vegetation, and requiring ignition-resistant building materials and methods).

Fuel and Fuel Modification Zones

The project fire protection plan (FPP) prescribes fuel modification zones (FMZs) 200 feet wide—that is, 100 feet wider than that required by City code.

Zone A is an irrigated, limited planting area measured from the outermost edge of the structure or appendage outward to 30 feet (horizontal distance), or to the property line for perimeter lots adjacent to native vegetation. Zone A shall be planted with small herbaceous or succulent plants less than two to three feet high; tree canopies must be at least 10 feet from the structure.



Zone B is the area (which may be irrigated or not irrigated) measured horizontally from the outer edge of Zone A to 100 feet from the structure or to the property line, whichever is first. Zone B shall be planted with slightly higher plant density than Zone A as long as landscape does not create any horizontal or vertical fuel ladders (e.g., fuel which can spread fire from ground to trees). Tree canopies may not be continuous.

Zone C is considered a thinning zone and is any FMZ greater than 100 feet from structures. This zone is more of a progressive thinning zone to lessen spread of fire as it approaches the primary FMZs next to structures. For the proposed project, the thinning zone will include a minimum of 50 percent fuel reduction, on average, throughout the 100-foot-wide Zone C.

Project development would reduce wildland vegetation in the development area and the FMZs. Zone A would be irrigated. Vegetation that would be grown in the FMZs

Ignition-Resistant Construction

The FPP sets forth requirements for ignition-resistant construction including the following:

- CBC Chapter 7A requirements including specifications for roofing; attic ventilation; exterior walls; exterior windows and glazing; exterior doors; decking; protection of underfloor, appendages, and floor projections; and ancillary structures.
- New class-A fire-rated roof and associated assembly.
- Attic roof vents must be ember-resistant and would require either ember-resistant roof vents or a minimum 1/16-inch mesh and shall not exceed 1/8-inch mesh for side ventilation.
- Multi-pane window glazing with a minimum of one tempered pane, fire-resistance rating of not less than 20 minutes when tested according to NFPA or be tested to meet the performance requirements of State Fire Marshal Standard 12-7A-2.
- Automatic, Interior Fire Sprinkler System to code by occupancy type for all dwellings.
- Modern infrastructure, access roads, and water delivery system.

The goal of the FPP is to enable structures to survive fire with little intervention from firefighting forces.

Operational impacts would be significant. Implementation of mitigation measures **WF-1**, requiring implementation of Fuel Modification Zone C (which is not required by regulations); and **WF-2**, setting forth certain landscaping requirements for fuel modification zones and landscaped areas, would reduce operational impacts to less than significant.

Construction impacts would be significant. Implementation of mitigation measures **WF-1**; **WF-3**, requiring pre-construction fuel reduction; and **WF-4**, requiring preparation and implementation of a construction fire protection plan, would reduce construction impacts to less than significant.

3.15.6 Mitigation Measures

Impacts related to the following thresholds would be significant before mitigation:



WF-b: expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire

WF-c: Require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.

WF-e (Hazards and Hazardous Materials -g): Expose people or structure to significant risk of loss, injury or death involving wildland fires.

Mitigation Measures

MM W-1 Before combustible materials are brought onto the project site, the project applicant shall have fuel reduced in all three fuel modification zones (zones A, B, and C). Zone C shall extend 100 feet wide from the outer edge of Zone B (which shall be 100 feet from structures or at the property line, whichever is closer to structures). Zone C shall include a minimum of 50 percent fuel reduction, on average. Thinning of less than 50 percent of the existing condition may be acceptable where erosion is of high concern, but the average cover throughout Zone C shall be reduced by 50 percent, resulting in approximately 50 percent ground cover by plant canopy.

MM W-2 Plants used in the fuel modification areas or landscapes shall include drought-tolerant, fire resistive trees, shrubs, and groundcovers. The planting list and spacing shall be reviewed and approved by LACoFD and included on submitted landscape plans. The plantings shall be consistent with LACoFD’s Suggested Plant Reference Guide (refer to Appendix D of the project Fire Protection Plan). The suggested plant reference guide provides examples of plants that are less prone to ignite or spread flames to other vegetation and combustible structures during a wildfire. Additional plants may be added to the landscape plant material palette with the approval from LACoFD.

MM W-3 Prior to combustible materials being brought on site, perimeter fuel modification areas must be implemented and approved by the LACoFD. Upon commencement of construction existing flammable vegetation shall be reduced by 50% on vacant lots. Dead fuel, ladder fuel (fuel which can spread fire from ground to trees), and downed fuel shall be removed and trees/shrubs shall be properly limbed, pruned, and spaced per this plan.

MM W-4 Prior to commencement of construction activities the project applicant shall have a fire protection consultant or fire protection engineer prepare a construction fire protection plan (CPPP) designating fire safety measures to reduce fire risks during project construction. The plan may include the following measures: fire watch/ fire guards during hot works and heavy machinery activities, hose lines attached to hydrants or a water tender, red flag warning weather period restrictions, required on-site fire resources, and others as determined necessary.

3.15.7 Level of Significance after Mitigation

Implementation of mitigation measures **W-1** through **W-4** would reduce wildfire hazard impacts to less than significant.

SECTION 4.0 – CUMULATIVE IMPACTS

4.0 CUMULATIVE IMPACTS

4.1 Introduction

This section of the EIR describes the cumulative impacts of the proposed project. Section 15355 of the State CEQA Guidelines defines a cumulative impact as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. The individual effects may be changes resulting from a single project or several separate projects.

The State CEQA Guidelines (in §15130[b]) provide the following guidance for conducting an adequate cumulative impact analysis:

“The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.”

The purpose of a cumulative impact analysis is twofold:

- 1) Ensure that a lead agency considers the long-term environmental consequences of decision making by disclosing impacts that may be limited when examined individually but are significant in combination with others.
- 2) Determine whether the project itself would cause a “cumulatively considerable” (and thus significant) contribution to these cumulatively significant impacts.

When a lead agency is examining a project with an incremental effect that is not cumulatively considerable, the lead agency need not consider that effect significant, but must provide a basis for this conclusion. The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the project’s incremental effects are cumulatively considerable (see §§ 15064, 15065, 15130[a], 15130[b], and 15355 of the State CEQA Guidelines).

4.2 Methodological Approach

Section 15130(b)(1) of the State CEQA Guidelines describes two elements which are necessary to an adequate discussion of significant cumulative effects: 1) a list of past, present, and probable future projects (the “list approach”); or, 2) a summary of projections contained in an adopted local, regional or statewide planning document such as a general plan, regional transportation plan or emissions reductions plan, or certified EIR for such a planning document (the “plan approach”). Typically, the list approach is employed for construction projects while the plan approach is used for programmatic projects. A construction project is just that. It is where physical improvements are constructed per approved plans and specifications on a specific parcel, in a particular way, and typically in accord with a definitive schedule to completion. On the other hand, the plan approach is used where the project undergoing environmental review is more programmatic in nature, such as a policy



document. Such documents may facilitate eventual construction but don't directly authorize or approve it.

The proposed Chadwick Ranch Estates project includes applications for the approval of a General Plan Amendment, Change of Zone, and Specific Plan. These are generally considered programmatic in nature. However, the project also includes applications for a Tentative Tract Map with attendant grading and conceptual drainage plans and a Tree Removal Permit, among others. Approvals such as these involve precise activities on the ground and as such classify the project type as a construction project. After considering the foregoing, in addition to the project location, onsite and proximal environmental resources, distance to surrounding land uses both inside and outside the City of Bradbury, among other factors, the Lead Agency determined that the list approach would be the most appropriate method by which to assess potential cumulative impacts.

4.3 Related Projects

Surrounding jurisdictions and other agencies were contacted to identify projects which might interact with the proposed project to yield a potentially significant cumulative impact. **Tables 4.3-1** and **4.3-2**, *Related Projects – City of Duarte* and *Related Projects – City of Monrovia*, respectively, identify those projects in each jurisdiction with the greatest potential to interact with the proposed project to yield potentially significant cumulative effects. For the purpose of this section, the identified projects are at various points in the approval/permitting and/or construction process, but are not yet operational. The projects were identified when the NOP was published in February 2020.²⁸ The location of each related project is depicted on **Figure 4.3-1**, *Related Projects Location Map*. As shown, no related projects are located within one mile of the proposed project or in the City of Bradbury. All related projects are within one to three miles of the project site in the urbanized areas of the cities of Duarte and Monrovia and are located primarily along major roadways. None of the related projects are in the foothills. When fully built out, the projects in **Tables 4.3-1** and **4.3-2** below collectively comprise would result in the development of nearly 3,600 multi-family residences, more than 1.66 million square feet of commercial uses, and 709 hotel and motel rooms.

²⁸ The lists of related projects are considered part of the environmental baseline for the project, that is, conditions when the NOP was published (CEQA Guidelines Section 15125).



**Table 4.3-1
RELATED PROJECTS – CITY OF DUARTE**

Exhibit 4.3-1 Reference	Project Name	Location	Residential SFR	Residential MFR	Commercial Sq. Ft.	Lodging (Rooms)	Other	Current Status
CITY OF DUARTE								
D1	The Huntington	1405-37 Huntington Drive	-	161	3,500	-	2,100 sf live/work space	Under Construction
D2	Oliva MFD	946-962 Huntington Drive	-	25	-	-	-	Unknown
D3	Duarte Inn Motel & Commercial Center	1200-1202 Huntington Drive	-	-	-	-	Renovation	Under Construction
D4	Meditation Temple	2632 Royal Oaks Drive	-	-	-	-	Demo/Reconstruction	Under Construction
D5	Senator’s Lounge	1525 Huntington Drive	-	-	5,200	-	Restaurant	Under Construction
D6	Residences at Duarte Station	1700 &1750 Business Center Drive	-	619	-	-	Duarte Station SP (TOD)	Demolition Completed, Not Yet Constructed
D7	Hawthorne Suites by Wyndham	1230 Huntington Drive	-	-	-	178	Town Center SP	Demolition Completed, Not Yet Constructed
D8	Huntington/Buena Vista	1303 Huntington Drive	-	-	8,500	-	Construction of two new buildings	Not Yet Constructed, Pending Plan Check
D9	New Commercial Bldg.	2137 Huntington Drive	-	-	6,580	-	33-car parking lot	Demolition Completed, Grading Completed, Under Construction
D10	New Hope Village Hotel	1500 Duarte Road	-	-	-	150	5-story, 115,022 sq. ft.	Currently Under Construction
D11	Graff Park/Parking Structure	1500 Duarte Road	-	-	-	-	1,007 Parking Stalls in-structure, 97 surface parking stalls, new private park	Under Construction
D12	Town Center Specific Plan	1200 Huntington Drive	-	800	703,000	450	Projects D1, D7 and D8 already approved under this Specific Plan	Not Constructed, Pending Plan Check
D12a	Town Center Specific Plan Remaining Capacity	1200 Huntington Drive	-	639	691,000	272	Project D12 less Projects D1, D7 and D8	Not Constructed, Pending Plan Check
D13	Multiple-Family Development	928 Huntington Drive	-	16	-	-	-	Pending demolition and plan check submittal
D14	The Residences at Duarte Station	1700 and 1750 Business Center Dr.	-	619	-	-	-	Pending plan check submittal. Demolition anticipated early 2020
D15	City of Hope Specific Plan	1500 Duarte Road	-	-	1,018,293	-	Project D10 approved under Specific Plan. 90,000sf MOB approved under Specific Plan (in Irwindale)	Medical Office Building under construction
D15a	City of Hope Specific Plan Remaining Capacity	1500 N. Duarte Road	-	-	457,271	-	-	
D16	Multiple-Family Development	1401 Santo Domingo Drive	-	20	-	-	-	In Site Plan Design Review Process.
CITY OF DUARTE SUBTOTAL			0	2,099	1,643,073	600		
CITIES OF DUARTE AND MONROVIA GRAND TOTAL			0	3,597	1,663,573	709		

Sources: City of Duarte, personal communication, Nick Baldwin, Associate Planner, 24FEB20;

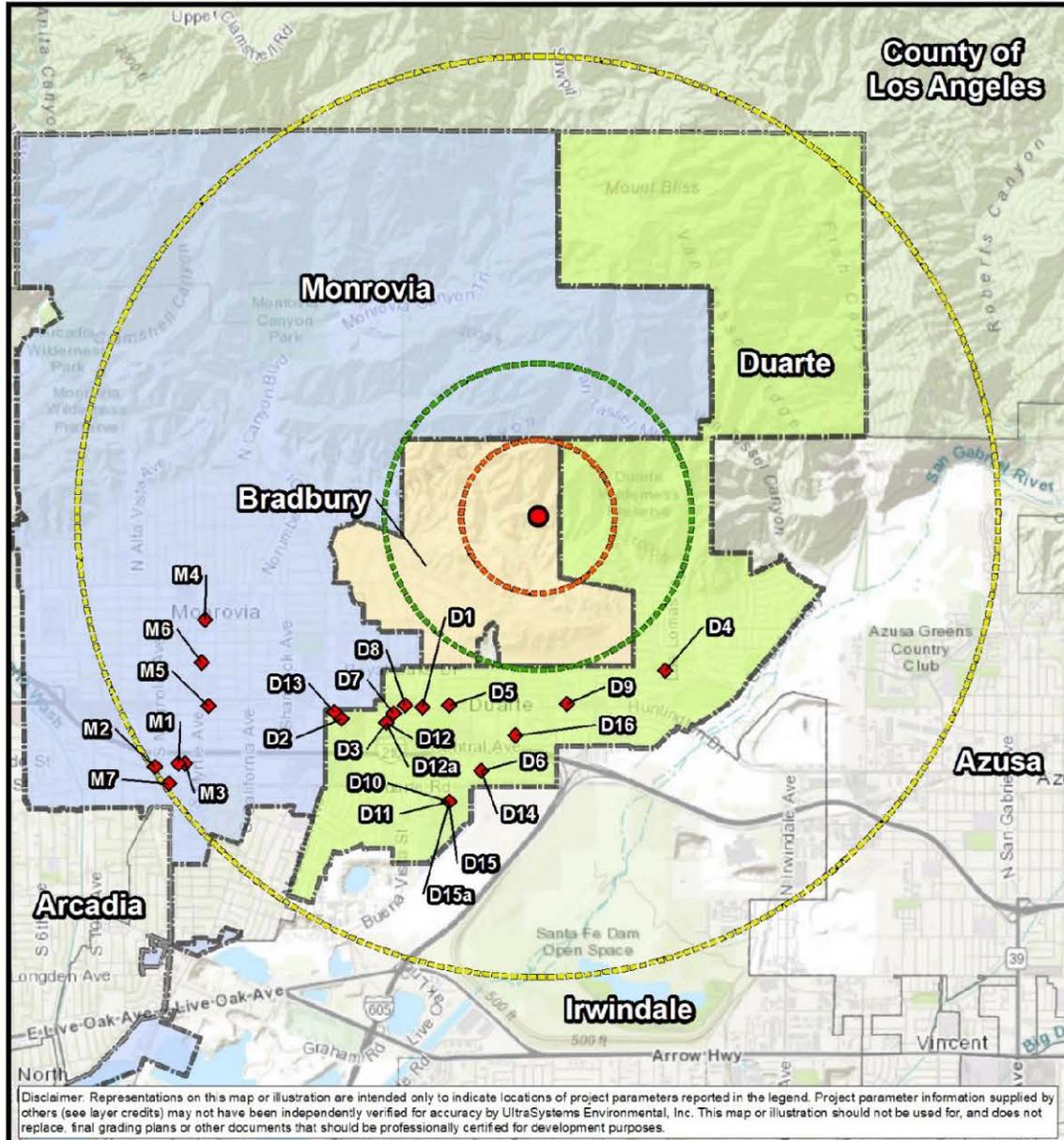


**Table 4.3-2
RELATED PROJECTS – CITY OF MONROVIA**

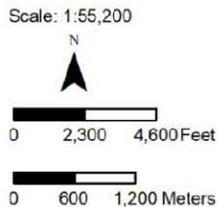
Exhibit 4.3-1 Reference No.	Project Name	Location	Residential SFR	Residential MFR	Commercial Sq. Ft.	Lodging (Rooms)	Other	Current Status
CITY OF MONROVIA								
M1	Arroyo at Monrovia Station Specific Plan	NW corner of the West Pomona at South Primrose	-	302	7,000	-	-	Pending Plan Check, Not Yet Constructed
M2	Alexan Foothills Specific Plan	1625 South Magnolia Avenue	-	436	-	-	-	Pending Plan Check – Not Constructed
M3	127 Pomona Specific Plan	123-145 West Pomona Avenue	-	310	10,000	-	-	Pending Plan Check – Not Constructed
M4	Monrovia Lime LLC Adapt. Re-Use	115-127 East Lime Avenue	-	-	-	-	Self-Storage	Pending Plan Check – Not Constructed
M5	Monrovia Towneplace Suites by Marriott	SE Corner of the Huntington Drive/Myrtle Avenue Intersection	-	-	-	109	-	Pending Plan Check – Not Constructed
M6	Avalon Monrovia Specific Plan	NE Corner of the Myrtle/West Walnut Avenues Intersection	-	154	3,500	-	-	Under Construction
M7	Station Square South Specific Plan	225 West Duarte Road	-	296	-	-	-	Pending Plan Check – Not Constructed
CITY OF MONROVIA SUBTOTAL			0	1,498	20,500	109	-	
CITIES OF DUARTE AND MONROVIA GRAND TOTAL			0	3,597	1,663,573	709	-	

Sources: City of Monrovia, personal communication, Austin Arnold, Associate Planner, 24FEB20; UltraSystems, 2/2020; 5/2020.

**Figure 4.3-1
RELATED PROJECT LOCATION MAP**



Path: \\GIS\SSV\K\gis\Projects\023_Bradbury\Map\023_Bradbury_4.3.1_Related_Projects_2021_03_10.mxd, Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community, UltraSystems Environmental, Inc. 2021



- Legend**
- Chadwick Ranch Estates Project Location
 - ◆ Related Project Location
 - Half-Mile Radius
 - 1-Mile Radius
 - 3-Mile Radius

Note: See Tables 4.3-1 and 4.3-2 for the list of Related Project Locations. Locations D1 through D16 are located in Duarte. Locations M1 through M7 are located in Monrovia.

**Chadwick Ranch Estates Project
Related Projects Location Map**



4.4 Cumulative Impact Analysis

4.4.1 Aesthetics

The proposed project is located along the northern urban fringe of the City of Bradbury on land exhibiting highly varied topography and vegetation types, including trees. The proposed project is physically separated from the non-hillside urban areas within Monrovia and Duarte by both intervening topography and mature vegetation. No significant long-term impacts on aesthetics that cannot be mitigated have been determined to occur as a consequence of project build-out. A short-term unmitigable impact on the visual character of the project site and its surroundings would occur until all landscaping is in. Vegetation to be planted onsite—both in common areas and on individual residential lots—would mitigate the impact as the vegetation matures. Due to the distance of the project site from related project sites, no significant cumulative construction-phase impact on visual character would occur. Due to the physical separation and visual screening between the project site and identified related projects, no significant cumulative effects on aesthetics would occur. This determination applies equally to impacts on scenic vistas and scenic quality, view shed intrusion, and the introduction of new sources of light and glare and/or nighttime illumination.

4.4.2 Air Quality

The project site is located within the South Coast Air Basin (SCAB), a 6,600-square-mile area encompassing all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. Local climate is characterized by warm summers, mild winters, infrequent rainfall, moderate daytime onshore breezes, and moderate humidity. Concentrations of ozone and other pollutants tend to be lower along the coast, where the constant onshore breeze disperses pollutants toward the inland valleys of the SCAB and adjacent deserts. The management, planning, and the establishment and enforcement of rules and regulations aimed at improving air quality in the SCAB is the responsibility of the South Coast Air Quality Management District (SCAQMD).

Air quality monitoring within the SCAB occurs all year long. Based on like geographic, topographic, and meteorological characteristics, the SCAQMD has divided the SCAB into source receptor areas (SRAs). The project site is located in SRA 9, East San Gabriel Valley. The monitoring location most representative of the project site and the projects on the related projects list is the Azusa Monitoring Station located approximately three miles southeast of the project site. Monitoring results are compared to national and state ambient air quality standards established by the U.S. Environmental Protection Agency (USEPA) and California Air Resources Board (CARB), respectively. First quarter (2020) monitoring within the Los Angeles County portion of the SCAB indicate that the general area is in Federal and State Nonattainment for Ozone and Fine Particulate Matter (2.5 microns) and in Maintenance (Serious) and Nonattainment for Particulate Matter (10 microns), respectively.

The proposed project involves extensive grading over a one-year period. According to the project applicant, it is estimated that approximately one million cubic yards of earth materials would be moved and balanced onsite, thus requiring no earth materials export or import. The grading operation would generate fugitive dust and short-term, intermittent criteria pollutant emissions. In addition, diesel equipment/vehicles would generate diesel particulate matter known by the State of California to contain toxic contaminants. Operational emissions associated with the proposed project would be derived from mobile, energy, and area sources. Both construction and operational emissions were estimated employing the CalEEMod Version 2016.3.2 (CAPCOA, 2017) and EMFAC2014 (v1.0.7) air quality models. As discussed in **Section 3.8**, based on the air quality

modeling, neither construction nor operational emissions associated with the proposed project would exceed SCAQMD daily emissions thresholds.

According to the CEQA Guidelines, a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved air quality attainment or maintenance plan.²⁹ As described above, the proposed project would not exceed any of the SCAQMD daily criteria pollutant thresholds. In general, cumulative *regional* impacts of construction and operation of all projects in the SCAB at any given time are accounted for in the AQMP. The proposed project is compliant with the AQMP therefore the incremental contribution of the project to regional emissions would not be cumulatively considerable.

4.4.3 Biological Resources

The area considered for cumulative impacts is the San Gabriel Mountains plus the San Gabriel Valley. The San Gabriel Valley spans approximately 374 square miles in eastern Los Angeles County and is mostly urbanized. The San Gabriel Mountains encompass approximately 970 square miles in central and eastern Los Angeles County. Most of the San Gabriel Mountains are protected within the Angeles National Forest, and much of that also within the San Gabriel Mountains National Monument, and thus are not subject to development. All of the related projects are in the San Gabriel Valley and not in the San Gabriel Mountains (see **Figure 4.3-1**). Most related projects are on developed sites; some are on vacant land; none of the related project sites consist of native habitat.³⁰ Other projects would impact special-status species both directly and indirectly through habitat modification, sensitive natural communities, riparian habitats, and wetlands. Other projects would impact nesting birds and wildlife movement and migration corridors; and resources protected by local ordinances. No natural community conservation plan or multi-species habitat conservation plan is present in the region, and no impact to such a plan would occur. Other projects would be required to comply with the laws and regulations protecting biological resources discussed in this Section. Other projects would be required to implement all feasible mitigation measures to reduce impacts remaining after implementation of regulatory requirements. Cumulative impacts to biological resources are expected to be less than significant after implementation of mitigation by the affected projects. Project impacts to biological resources would not be cumulatively considerable after implementation of such mitigation.

4.4.4 Cultural Resources and Tribal Cultural Resources

The project site was surveyed for cultural resources with negative results for the presence of archaeological, historical, and Native American tribal resources. However, due the known historical presence of Native Americans in the San Gabriel Mountains and foothills, subsurface archeological and/or tribal cultural resources could be uncovered during project grading operations. Such an occurrence would be a potentially significant impact to Cultural Resources, Tribal Cultural Resources, or both and mitigation measures have been developed to reduce impacts to less than significant. Related projects would also involve grading and excavation activities and could significantly impact historical, archaeological, or tribal cultural resources that may be on or buried in soil under those sites. Each related project would be required to have their potential impacts on cultural resources and tribal cultural resources evaluated during their environmental review pursuant to CEQA. If

²⁹ CEQA Guidelines, § 15064(h)(3).

³⁰ Conditions on related project sites were checked by comparing the related projects map, Figure 4.3-1, to an ArcGIS.com map using imagery basemap (ArcGIS.com, 2021).

warranted, each related project would be required to implement mitigation measures specific and appropriate to their respective sites. There is substantial distance and intervening topography between the project site and the sites of the related projects. Since potentially significant effects on cultural and/or tribal cultural resources are site specific and given the extent of separation between the site of the proposed project and those of the related projects considered herein, no significant or potentially significant cumulative effects on cultural and tribal cultural resources would occur.

4.4.5 Geology and Soils

As indicated previously, the related projects evaluated in this assessment of cumulative impacts are all located more than a mile from the site of the proposed project. Whereas the project site contains incised drainages and steep slopes, the related projects are proposed on relatively level lands on the floor of the San Gabriel Valley. Except for having a general susceptibility to seismic-related effects in common, the near surface geotechnical conditions of the site of the proposed project and those underlying each site where a related project is proposed are unrelated. Therefore, no significant cumulative effects on Geology and Soils would occur.

4.4.6 Greenhouse Gas Emissions

As discussed in **Section 3.13**, the GHG emissions estimates for the proposed project include: (1) area sources (e.g., landscaping-related fuel combustion sources); (2) energy use associated with residences; (3) water and wastewater; (4) solid waste; (5) mobile sources (e.g., passenger vehicles and trucks); and (6) construction activity. The operational emissions consist of the first five categories, while emissions associated with construction are one-time only. The typical types of GHG gases emitted from developments such as the proposed project are CO₂, CH₄, and N₂O. The total GHG emissions from construction activity is estimated at 1,281 MT CO₂e, which would amortize to 42.7 MT CO₂e per year. The total annual GHG emissions for the proposed project, which includes construction-related GHG emissions, is estimated at 341 MT CO₂e. The impacts of the proposed project on greenhouse gas emissions are not considered to be significant.

The GHG impacts analysis presented in **Section 3.7** of this document is by nature cumulative, as no single project could generate enough GHG emissions to noticeably change the global climate. The determinations of Less Than Significant Impacts in **Section 3.7** are for cumulative impacts.

4.4.7 Hydrology and Water Quality

The proposed project would alter the current drainage patterns onsite due to grading and would increase onsite runoff volumes due to the construction of impervious surfaces. The project would also accept offsite flows in a manner similar to what occurs at present. The site drainage plan contains storm water conveyance facilities, retention basins and water quality basins sized to accommodate a 100-year storm, and, in accordance with an approved NPDES permit, would employ a variety of methods to ensure that both the quantities and quality of downstream discharges are at no greater volumes and of no reduced water quality than under existing conditions.

All related projects are situated at elevations below the project site. Each would generate contaminants that could pollute storm water, during both construction and operations phases. Each related project would add impervious surfaces, and thus could impact both runoff and groundwater recharge. As with the proposed project, each related project would be required to meet Los Angeles County requirements regarding drainage and runoff, and requirements governing water quality set forth in the Los Angeles County Low-Impact Development Manual that is used by the cities of Duarte

and Monrovia. Cumulative hydrology and water quality impacts would be less than significant after regulatory compliance by other projects and the proposed project and impacts of the proposed project would not be cumulatively considerable.

Since the proposed project would be designed to meet or exceed all regulatory agency standards with regard to storm water runoff volumes and water quality, the proposed project would not cause substantial water pollution or violate water quality standards. Thus, the proposed project would have no significant cumulative impacts regarding hydrology and water quality.

4.4.8 Land Use and Planning

Section 3.9 of this Draft EIR discusses land use and planning. The assessment in **Section 3.9** centers on whether or not the proposed project would divide an established community or cause a significant impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The City of Bradbury General Plan, Development Code, and Design Guidelines govern land use development within the City. Due to the low-density rural residential character of the entire City, numerous steep slopes and hillsides, and presence of heavily vegetated natural areas, especially along the City's northern areas, the City's General Plan, Development Code and Design Guidelines comprise inter-related guidelines and regulations aimed at minimizing the environmental effects of land use development. With regard to the proposed project, site development would occur pursuant to a Specific Plan, a type of development policy planning and regulatory document that has standards for development that either meet or exceed those in the three aforementioned City land use control documents, but for a specific area. Since the proposed project will be developed pursuant to the land use plans, policies and controls set forth in a Specific Plan, no significant impacts to Land Use and Planning are expected.

With regard to cumulative impacts on Land Use and Planning, it is noted that none of the related projects identified at the outset of this section are located in the City of Bradbury. All are located at least a mile from the project site, in either the City of Monrovia or City of Duarte. Those jurisdictions have their own land use plan, policy and control documents which guide development within their respective city limits and which, like those adopted by the City of Bradbury for projects under their jurisdiction, were also adopted in part to minimize or avoid adverse environmental effects. Therefore, no cumulative impacts on land use and planning would occur.

4.4.9 Noise

The proposed project would generate noise during both construction and operations. Construction noise would be attributable to equipment, machinery, and vehicle use. Operational noise would primarily be attributable to vehicular traffic on area roadways as well as equipment used during landscaping, gardening, and other domestic activities in residential areas. Construction noise may occasionally be perceived as significant by nearby residents depending on location, the nature of the construction activity, and its duration. However, such impacts have been determined to be short-term and less than significant with mitigation.

The nearest related project to the proposed project site is the Meditation Temple at 2632 Royal Oaks Drive in the City of Duarte, approximately 1.3 miles to the south (see **Table 4.3-1** and **Figure 4.3-1**). Therefore, project construction noise impacts would not combine with impacts of related projects to cause significant cumulative impacts, and project impacts would not be cumulatively considerable.



No significant operational impacts on noise are expected.

The proposed project site is separated from all related projects by intervening topography and distance (more than one mile). This renders the potential for there being an overlap in noise attributable to the proposed project and any associated with any individual related project as highly unlikely. As a consequence, no significant cumulative noise impacts are anticipated.

4.4.10 Public Services/Utilities and Service Systems

This section addresses the potential for significant or potentially significant cumulative impacts to occur on Public Services and Utilities and Service Systems. It is noted that Fire Protection, a subset of Public Services, is discussed separately along with Wildfire Hazards in **Section 4.4.11** below. The Initial Study (See Appendix G to this DEIR) prepared for the proposed project found that either no impact or a Less Than Significant Impact would occur with regard to police protection, schools, parks, library services, wastewater treatment, storm water drainage, electric power, natural gas, telecommunications facilities, and solid waste disposal. It further found that with mitigation, impacts would be less than significant on water. In the latter regard, mitigation is being provided at the behest of Cal-American Water Company (Cal-Am), the domestic water purveyor for the City of Bradbury and surrounding area. The mitigation primarily involves adding a well to compliment the system of extraction wells and water distribution facilities that Cal-Am presently has in the San Gabriel Valley Groundwater Basin or contributing towards a new well that Cal-Am is in the process of designing and constructing, depending on the timing of the project. Each related project, as it comes on line, would be required to address its own water infrastructure needs. Given this, the project would not result in any significant cumulative water infrastructure related impacts.

4.4.11 Fire Protection Services and Wildfire Hazards

The area considered for cumulative impacts to fire protection services and wildfire hazards is the cities of Bradbury, Duarte, and Monrovia. Parts of each of the three cities are in the San Gabriel Mountains, and the balance of each city is in the San Gabriel Valley. Most of the City of Bradbury and much of the cities of Duarte and Monrovia are in Very High Fire Hazard Severity Zones mapped by the California Department of Forestry and Fire Protection (CAL FIRE)—partly in local responsibility areas and partly in federal responsibility area within the Angeles National Forest. Much of the portions of the three cities in the San Gabriel Valley are within wildland-urban interface area mapped by the University of Wisconsin-Madison (UW, 2021).

The Los Angeles County Fire Department (LACoFD) serves the cities of Bradbury and Duarte; one fire station, Station 44, is in the City of Duarte; none are in the City of Bradbury (Los Angeles County, 2021). The cities of Bradbury and Duarte are both within the service area of LACoFD Battalion 16, which spans part of the north-central San Gabriel Valley and part of the central San Gabriel Mountains. Battalion 16 includes eight fire stations: 29, 32, 44, 48, 97, 152, 153, and 154 (LACoFD, 2021). The Monrovia Fire Department, with two stations, serves the City of Monrovia. Far larger firefighting resources are available in the event of a major wildfire. The LACoFD, one of the largest public safety agencies in the world, operates 173 fire stations. LACoFD also participates in the California Fire Service and Rescue Emergency Mutual Aid System. A California Master Cooperative Wildland Fire Management and Stafford Act Response Agreement is also in place between CAL FIRE and several federal agencies.

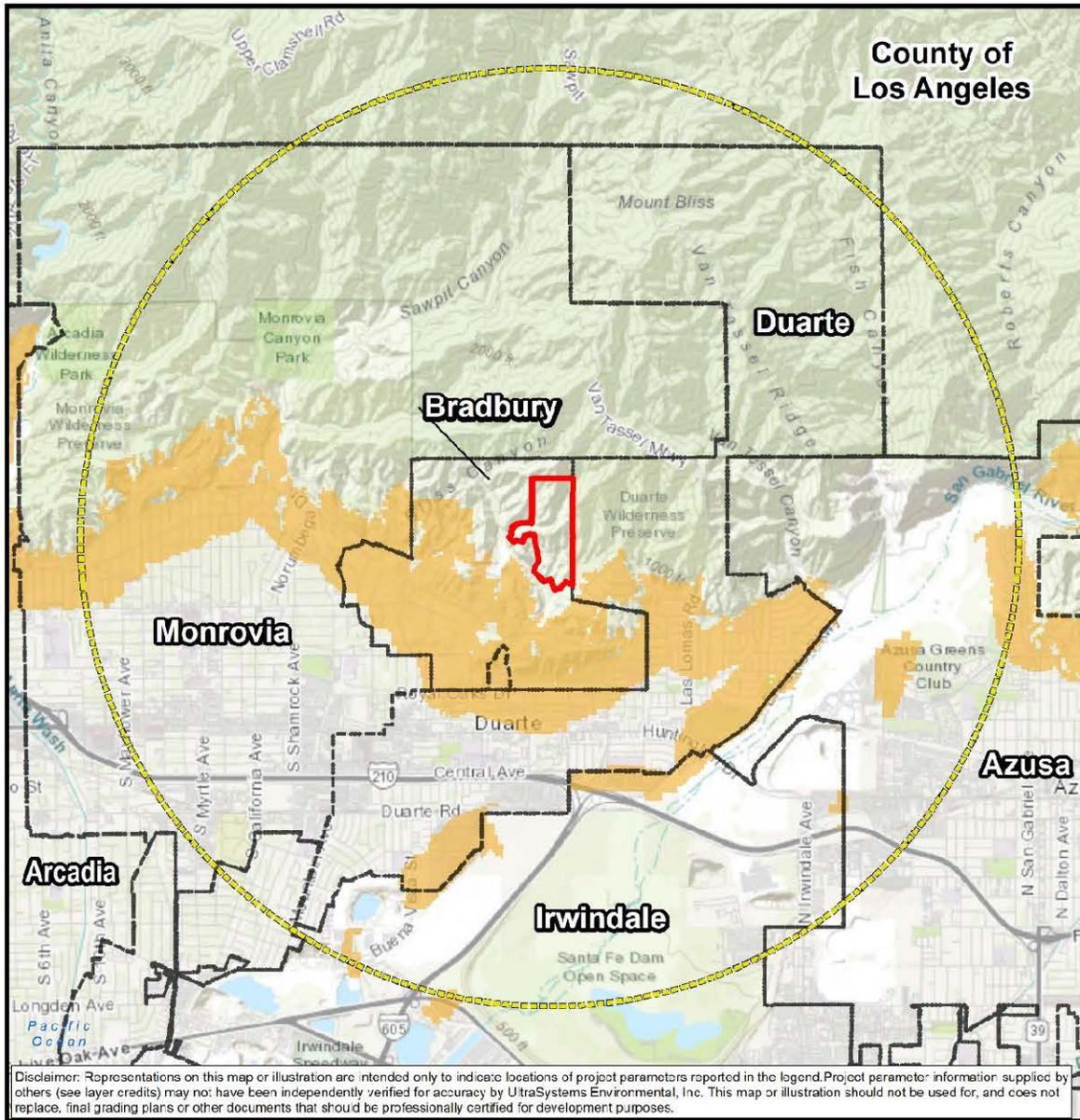


Project development would reduce wildfire hazard on the project site, compared to existing conditions, through ignition-resistant construction and fuel modification zones that would be 200 feet wide—exceeding code requirements.

Other projects would increase the numbers of residents, workers, and visitors in the three cities, as well as the total building area. Many related projects are within wildland-urban interface area where wildfire hazard is greater than in other urbanized parts of the San Gabriel Valley (see **Figure 4.4-1**). Other projects would thus increase demands for fire protection and emergency medical services. However, each new project that is located in a wildland-urban interface areas will also be required to evaluate fire protection and risks and meet restrictive fire can building codes. Also, other projects would pay property taxes, part of the revenues of which would be allocated to LACoFD fire and emergency medical services in the cities of Bradbury and Duarte, and part to the Monrovia Fire Department. Cumulative impacts would be less than significant after payment of property and sales taxes. Project impacts would not be cumulatively considerable.

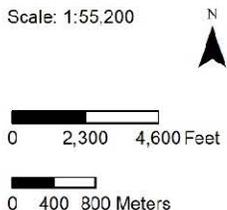
The City of Bradbury is most vulnerable to fire hazards in its wildland interface area which runs along the entire northern border of the City. The area includes existing residential properties, vacant lands, as well as the proposed project site. All streets north of Royal Oaks Drive North in the city are designated as being in a Very High Fire Hazard Severity Zone (VHFHSZ) and are at significant risk in the event of a wildland fire.

**Figure 4.4-1
WILDLAND-URBAN INTERFACE AREA**



Disclaimer: Representations on this map or illustration are intended only to indicate locations of project parameters reported in the legend. Project parameter information supplied by others (see layer credits) may not have been independently verified for accuracy by UltraSystems Environmental, Inc. This map or illustration should not be used for, and does not replace, final grading plans or other documents that should be professionally certified for development purposes.

Path: \\0130VR\gis\Projects\7023_Bradbury\MapData\7023_Bradbury_2_20_X_WUI_2021_1_0_05.mxd. Service Layer Credits: Sources: Esri, HERE, Garmin, UGOS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community. Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community. CaFire FRAP, 2015-2019. UltraSystems Environmental, Inc., 2021. October 05, 2021



Note: Data presented includes WUI Intermix and Interface combined.

Chadwick Ranch Estates Project
Wildland Urban Interface (WUI)



SECTION 5.0 – OTHER CEQA CONSIDERATIONS



5.0 OTHER CEQA CONSIDERATIONS

§15126 of the State CEQA Guidelines requires an EIR to address the subjects identified below.

- a) Significant Environmental Effects of the Proposed Project;
- b) Significant Environmental Effects Which Cannot be Avoided if the Proposed Project is implemented;
- c) Significant Irreversible Environmental Changes Which Would be Involved in the Proposed Project Should it be Implemented;
- d) Growth-Inducing Impact of the Proposed Project;
- e) The Mitigation Measures Proposed to Minimize the Significant Effects;
- f) Environmental impacts of mitigation measures; and
- g) Alternatives to the Proposed Project.

Subjects a), e), and f) are addressed in **Section 3.0, *Environmental Setting, Impacts and Mitigation Measures***, of this Draft EIR while subject f) is addressed in **Section 6.0, *Alternatives to the Proposed Project***. The remaining subjects are addressed in Sections 5.1 through 5.3 which follow.

In accordance with State CEQA Guidelines § 15128, the EIR shall also contain a brief statement indicating reasons the various possible significant effects of a project were determined not to be significant and not discussed in detail in the Draft EIR. All impacts identified as Less than Significant with Mitigation Incorporated or Potentially Significant have been addressed in the Draft EIR. The reasons for not discussing impacts identified as Less than Significant or No Impact are included in the Initial Study which is Appendix G.

5.1 Significant Environmental Effects Which Cannot be Avoided if the Proposed Project is implemented

Section 3.0 of this draft EIR discusses the potential significant effects associated with the proposed project for the following environmental topics: Aesthetics, Air Quality, Biological Resources, Cultural Resources, Energy, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Public Services, Transportation, Tribal Cultural Resources, Utilities and Service Systems, and Fire Protection Services/Wildfire Hazards. Based on the results of the impact analyses discussed under each environmental topic, it was concluded that even after the implementation of required mitigation measures, significant and unavoidable environmental effects would remain regarding transportation and construction noise and that there would be a temporary aesthetic impact until the landscaping grew in.

Aesthetics

A short-term significant and unavoidable impact on the visual character of the project site and its surroundings would occur at the completion of site grading. Vegetation to be planted onsite—both in common areas and on individual residential lots—would mitigate the impact as the vegetation

matured. No long-term significant and unavoidable impact on visual character of the project site and surroundings would occur.

Noise

Mitigation measures for noise would reduce construction noise exposures. Nevertheless, some short-term significant impacts would likely occur on some days and at some locations during construction. The severity of the impact at any given time would depend upon the heavy construction equipment used onsite, its nearness to sensitive receivers, the effectiveness of the mitigation measures, and the presence or absence of buildings that block the path of the noise.

Transportation

The significance of transportation impacts centers on the fact that the proposed project would generate more than 110 daily trips, the VMT significance threshold. Since no mitigation measures are available to reduce the impact to a less than significant level, this impact would remain significant and unavoidable.

5.2 Reasons Why the Project is Being Proposed, Notwithstanding Significant Unavoidable Impacts

In addition to identification of a project's significant unavoidable impacts, §15126.2(c) of the CEQA Guidelines requires that where there are impacts which cannot be alleviated without imposing an alternative design, the implications and reasons why the project is being proposed notwithstanding their effect should be described.

As discussed immediately above, the only permanent significant impact is to VMT. Noise and aesthetics are both temporary in nature as noise impacts only take place during the construction period and the aesthetics impact will be less than significant with full build-out and landscaping. No matter how the property is developed, there will be temporary aesthetic impacts. Additionally, no matter how the property is developed, the flood control road that runs along the western edge of the property will have to be developed to Los Angeles County Fire road street standards, creating temporary noise impacts during construction.

VMT can only be avoided by a project with less density; the project would have to be reduced by more than 33 percent to nine units to fall below the screening threshold for VMT.

The City's General Plan and zoning allows for the development of the applicant's land with a Specific Plan. The project uses cluster development to minimize impacts as follows:

- Project development would minimize impacts to topography, biological resources, and the visual character of the site and surroundings by clustering development; by locating residential building pads so as to preserve landforms, such as ridgelines and watercourses, to the greatest extent possible; to screen roadways by existing topography and mature landscaping; and by locating building pads and roadways so that impacts to visual character of the site and surroundings would be minimized by mature landscaping.
- Project development would reduce wildfire hazard on the project site, compared to existing conditions, through ignition-resistant construction and fuel modification zones that would be 200 feet wide—exceeding code requirements.

- Project development permanently preserves natural open space by creating a 64.5-acre conservation easement for open space that will be managed by a steward in perpetuity.

5.3 Significant Irreversible Environmental Changes Which Would be Caused by the Proposed Project

Section 15126.2(d) of the State CEQA Guidelines requires that an EIR discuss “any significant irreversible environmental changes which would be involved in the proposed action should it be implemented.” It defines an irreversible impact as an impact that uses nonrenewable resources during the initial and continued phases of the project. Irreversible impacts can also result from damage caused by environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such consumption is justified. Section 15126.2(d) of the State CEQA Guidelines 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.

Development of the proposed project would require the use of nonrenewable energy resources during both construction and operations. Petroleum, oil and lubricants (POL) and paving materials would be used by construction vehicles and equipment during site preparation, grading, infrastructure installation and other construction activities. It is noted that similar types of POL and architectural coatings would be used during the construction of each residential estate until the project is fully built out, albeit in substantially smaller quantities compared to the use of similar resources during initial site-wide construction.

The development of approximately 48 acres with residential lots, a roadway, a reservoir, debris basins, and a water quality basin would be unlikely to be reversed or returned to a less intensive use in the future. Therefore, the development of 48 acres is considered an irreversible environmental change.

With regard to operations, the fourteen residential estates would utilize nonrenewable energy resources such as gasoline, natural gas and others. However, they would do so to an extent typical of such uses; such impact, therefore, would not be a significant irreversible impact.

Construction and implementation of the proposed project would involve the commitment of building materials, and energy, commensurate with that of other projects of similar nature and magnitude. Construction of the Project would require use of water, timber, steel, sand, gravel and other minerals and natural resources. Although this is not an unusual demand for these resources, it nonetheless is an incremental increase in demand for nonrenewable resources. Nonrenewable energy resources would be used during construction and subsequent operation of the Project. This commitment of energy resources would be a long-term obligation, as, once the project site has been developed, it is highly unlikely that the land could be returned to its original condition. However, as discussed in **Section 3.5**, Energy, of this document regarding energy conservation, impacts resulting from increased energy usage would be considered less than significant.



5.3.1 Building Materials and Solid Waste

Construction of the Project would require the use of resources that may be considered non-renewable or not quickly replenished. These resources would include lumber and other forest products, aggregate materials used in concrete and asphalt (e.g., sand, gravel and stone), metals (e.g., steel, copper and lead), and petrochemical construction materials (e.g., plastics). As discussed in **Section 2.0, Project Description**, the Project would use a variety of building materials.

The project would also utilize sustainable planning and building strategies and would incorporate the use of environmentally-friendly materials, such as non-toxic paints and recycled finish materials wherever possible. Thus, the consumption of non-renewable building materials such as lumber, aggregate materials, and plastics would be reduced.

Solid waste generated during construction of the Project could include paper, cardboard, metal, plastics, glass, concrete, lumber scraps and other materials. Project construction would comply with §5.408 (Construction Waste Reduction, Disposal, and Recycling) of the 2019 California Green Building Standards Code (CALGreen; Title 24, California Code of Regulations, Part 11), which requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse. CALGreen is adopted by reference as §17.09.010 of the City of Bradbury Municipal Code. Non-hazardous recyclable debris would be salvaged for diversion from landfills. Use and disposal of nonrenewable building materials by project construction would comply with regulations and would be typical of other residential uses. Therefore, such use and disposal would not be a significant irreversible change.

5.3.2 Water

Construction of the proposed project would require the typical use of water for activities such as concrete mixing and dust control. The project includes the development of water lines to provide an adequate water flow to the project site for water service and fire suppression needs during project operation. Use of water during construction would be temporary and amounts needed for dust control would be considered de minimis.

Cal-American Water Company (Cal-Am)'s Duarte Service Area provides water to the City of Bradbury and would serve the project. Water supplies for the Duarte service area are from three sources: groundwater from the Main San Gabriel Groundwater Basin (Basin); surface water from the San Gabriel River that is used for recharging the Basin; and untreated water imported from northern California and the Colorado River, purchased from the Upper San Gabriel Valley Municipal Water District (USGVMWD), which is also used for recharging the Basin. Cal-Am forecasts that its water supplies in its Duarte service area will be reliable to meet water demands in normal, single-dry-year, and multiple-dry-year conditions over the 2020-2035 period. Groundwater is treated and/or blended to meet water quality standards (WSC, 2016).

Project operational water demands are estimated at 570 gallons per day (gpd) per residential lot or 7,980 gpd total. Cal-Am forecasts that it will have sufficient water supplies to meet project water demands. Project water demands would not be a significant irreversible environmental change. As stated above, Cal-Am will require the Project applicant to provide additional source water by either installing a new well or by contributing towards a new well that Cal-Am will already be in the process of designing and constructing, depending on the timing.



5.3.3 Energy Consumption

During construction of the project, non-renewable fossil fuels would represent the primary energy source, and thus the existing finite supplies of these resources would be incrementally reduced. During project construction, trucks and construction equipment would be required to comply with the ARB's anti-idling regulations. ARB's In-Use Off-Road Diesel-Fueled Fleets regulation would also apply. Vehicles driven to or from the project site (delivery trucks, construction employee vehicles, etc.) are subject to fuel efficiency standards established by the Federal Government. Therefore, project construction activities regarding fuel use would not result in wasteful, inefficient, or unnecessary use of energy. A relatively small amount of electricity would be used for power drills and other equipment during construction. This analysis assumes that an onsite portable diesel-fueled generator will supply the electricity.

Project operation would use natural gas for space and water heating; electricity for domestic needs, street lighting, and conveyance and treatment of water; and gasoline for on-road motor vehicles. The project site is in the service areas of the Southern California Gas Company (natural gas) and Southern California Edison (electricity). The project would comply with all applicable regulations and codes that require achievement of various levels of energy efficiency in building operation. These include (1) CCR Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24); and (2) the 2019 CalGreen. Single-family homes built with the 2019 standards will use about 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards. Once rooftop solar electricity generation is factored in, homes built under the 2019 standards will use about 53 percent less energy than those under the 2016 standards. This will reduce greenhouse gas emissions by 700,000 metric tons over three years, equivalent to taking 115,000 fossil fuel cars off the road. Nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades (CEC, 2018).

Continued use of energy resources is consistent with the anticipated growth within the City and the general vicinity and would not result in energy consumption requiring a significant increase in energy production for the energy provider. Therefore, project energy demands would not be a significant irreversible environmental change.

5.3.4 Conclusion

Based on **Sections 5.3.1** through **5.3.3** above, construction and operation of the project would require an irretrievable commitment of resources that are limited, slowly renewable, or non-renewable, and consequently limit the availability of these resources, including the project site, for other uses or for future generations. However, the consumption of these resources for the Project would not be considered substantial and would be consistent with regional and local growth forecasts and development goals for the area. These resources would not be used in a wasteful manner and would not be depleted much more quickly than existing conditions. Therefore, project construction and operation would not cause significant irreversible environmental changes.

5.4 Growth-Inducing Impact of the Proposed Project

CEQA requires a discussion about ways the proposed project may be growth-inducing. CEQA Guidelines §15126.2(d) identifies a project as growth inducing if it would foster population growth or construction of additional housing (directly or indirectly) in the surrounding environment. New residents are direct growth, which have a secondary effect of increasing business activity in the region.



A project may indirectly induce growth at a local level by increasing demand for additional goods and services associated with employment or population growth. The proposed project would contribute to economic growth in that those employed in construction activities or in project operational activities likely would purchase goods and services in the region. However, any increase would be marginal and accommodated by existing providers of goods and services. Therefore, it is unlikely that new physical impacts to the environment would result because of the plentiful available retail services in the project vicinity. CEQA indicates that growth inducement is not necessarily detrimental, beneficial or of little significance to the environment.

Growth-inducing potential of a project would be considered significant if one of two conditions would result from project development and/or operation. Significant growth-inducement would occur if development fosters growth or a concentration of population in excess of what is assumed in pertinent master plans, land use plans, or in projections made by regional planning agencies such as the Southern California Association of Governments. Additionally, significant growth-inducement would occur if a project provides infrastructure or service capacity to accommodate growth beyond levels currently permitted by local or regional plans and policies. Furthermore, growth induced by a project may be considered significant if it can be demonstrated the potential growth substantially affects the environment in another way. The proposed project would be consistent with the Bradbury General Plan land use and zoning designations, as well as all applicable development standards. Estimated population growth due to project buildout is within the regional population forecast for the City of Bradbury. While developable vacant land is present west of the project site in the northernmost part of the City of Bradbury, proposed project development would involve roadway and infrastructure improvements within the proposed project site and along a segment of Flood Control District roadway extending south to Bliss Canyon Road; the roadway and infrastructure improvements would serve the proposed project site and, due to their locations, would not substantially facilitate development of other vacant developable parcels in the City. Therefore, no substantial growth inducement would result from project development or operation.

5.5 Secondary Environmental Impacts of Mitigation Measures

Mitigation measures can be classified in four groups respecting the potential for the measures to cause secondary environmental impacts:

1. Measures that would be implemented during project construction
 - a. Measures implemented onsite
 - b. Measures implemented offsite
2. Measures that would be implemented during operation of the future residences
 - a. Measures implemented onsite
 - b. Measures implemented offsite



**Table 5.5-1
ASSESSMENT OF SECONDARY ENVIRONMENTAL IMPACTS OF MITIGATION MEASURES**

Mitigation Measure (Summary)	Implementation				Impact Assessment
	During construction	During operation of residences	Onsite	Offsite	
Biological Resources					
<p>MM BIO-1 Project development could impact nesting birds. As feasible, Project activities that could disturb active nests or otherwise disrupt nesting activities, including but not limited to the removal or trimming of vegetation, the removal of structures, and the general disturbance of the ground surface, should be conducted outside of the nesting season, which is generally identified as February 1 through September 15. If avoidance of the nesting season is not feasible, then a qualified biologist shall conduct a nesting bird survey within seven days prior to any disturbance of the site. Since some raptor species can begin nesting as early as January 1, trees with the potential to support raptors should be surveyed if the habitat is to be removed after January 1. If active nests are identified, the biologist shall establish suitable buffers around the nests, and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests. The buffer size should vary as a function of</p>	X		X		<p>No significant impact. For example, buffer fences could interfere with overland wildlife movement; but such movement would already be deterred by disturbances and ground clearance (loss of cover) from construction.</p>



❖ SECTION 5.0 – OTHER CEQA CONSIDERATIONS ❖

Mitigation Measure (Summary)	Implementation				Impact Assessment
	During construction	During operation of residences	Onsite	Offsite	
the type of bird that is nesting (raptor versus non-raptor), the level of disturbance, and other factors such as the terrain and other vegetation separating the construction activity from the active nest.					
MM BIO-2 Project development could impact bat roosting habitat. As feasible, the removal of potential bat roosting habitat (i.e., trees) shall be avoided during the bat maternity season (April 1 through July 31). If avoidance of the maternity season is infeasible, then pre-construction bat surveys shall be performed prior to the removal of any trees with the potential to support bats. If individual trees are determined to be maternity roosts, then those trees shall be avoided until after July 31.	X		X		No impact. Avoiding disturbance of trees identified as bat maternity roosts during the bat maternity season would not have significant secondary impacts.
MM BIO-3 Project development would impact potential jurisdictional waters including riparian habitat. Prior to the disturbance of jurisdictional waters, the Project proponent shall obtain a CWA Section 404 permit from the Corps and a Section 401 Water Quality Certification from the Regional Board, as well as a Lake and Streambed Alteration Agreement from CDFW. The Project proponent shall purchase	X	X	X	X	No impact. Offsite mitigation would be within existing mitigation banks and would be preservation, creation, and/or enhancement of waters.



❖ SECTION 5.0 – OTHER CEQA CONSIDERATIONS ❖

Mitigation Measure (Summary)	Implementation				Impact Assessment
	During construction	During operation of residences	Onsite	Offsite	
mitigation credits from an approved mitigation bank to offset impacts at a minimum 1:1 ratio. The actual mitigation ratio will be determined through coordination with the Corps, Regional Board, and CDFW during the permitting process. The final replacement ratio may be offset through the preservation of existing jurisdictional waters within the Project's open space.					
<p>MM BIO-4 To mitigate the removal to 346 protected native trees and the encroachment of 57 protected native oak trees the project applicant shall have 806 trees or shrubs planted within and/or adjacent to the project site. To mitigate direct impacts to 25 non-native (significant) trees (16 due to removal and 9 due to encroachment), the Project shall plant another 25 native trees, for a total of 831 replacement trees.</p> <p>Based on the current Landscape Plan a total of 472 trees (269 coast live oak, 197 scrub oak, and 6 sycamores) can be accommodated within the project site, and within portions of the offsite improvement areas. Most coast live oak trees would be planted along the entry road and the main road through the Specific Plan;</p>	X		X	X	No significant impact. Replacement trees planted onsite would be planted within the project development footprint and planting replacement trees would not disturb native habitat. It is expected that replacement trees planted offsite would be planted within existing mitigation areas that were already somewhat disturbed.



❖ SECTION 5.0 – OTHER CEQA CONSIDERATIONS ❖

Mitigation Measure (Summary)	Implementation				Impact Assessment
	During construction	During operation of residences	Onsite	Offsite	
<p>however, a number of oak trees will be planted around some of the housing pads in HOA maintained areas, which will provide more of a clustered appearance. The scrub oak individuals will be planted in slope revegetation areas along the access roads but will also be planted on revegetated slopes within HOA maintained areas. In addition to the specific tree/shrub locations identified on the Landscape Plan, the Project will also restore approximately 7.66 acres, including 4.30 acres identified on the Landscape Plan as Habitat Restoration Area and 3.36 acres of remedial grading areas to be restored within Lots L, M, and N. It is likely that the balance of replacement trees/shrubs can be accommodated in these additional restoration areas. However, it should be noted that mitigation for the trees that cannot be replanted on site will be replaced through off-site mitigation (project proponent owned/deeded, mitigation bank, or other in-lieu fee with available lands), as determined by the City Arborist. Furthermore, it should be noted, that all mitigation requirements (species, location, ratio, and size) are at the discretion of the City Arborist. Thus, the applicant shall work with the City to identify off-site</p>					



❖ SECTION 5.0 – OTHER CEQA CONSIDERATIONS ❖

Mitigation Measure (Summary)	Implementation				Impact Assessment
	During construction	During operation of residences	Onsite	Offsite	
mitigation (project proponent owned/deeded, mitigation bank, or other in-lieu fee with available lands) in case the 831 replacement trees cannot all be sufficiently accommodated within the project site. Table 3.3-11 presents the number of trees impacted by type and recommended mitigation.					
Cultural Resources					
<p>MM CUL-1 If archaeological or historical resources are encountered during implementation of any phase of the project, the Project Archaeologist will be allowed to temporarily divert or redirect grading or excavation activities near the find in order to evaluate the find.</p> <p>If historical materials are found during grading, a qualified historian shall be retained by the City to evaluate and make appropriate recommendations on the disposition of any historical artifacts in consultation with the City's local historical experts as determined appropriate by the City. The disposition of any archaeological resources shall be governed by mitigation measure CUL-3.</p>	X		X		No impact. A temporary halt to ground disturbance in part of the site, and evaluation of the find by a historian, would not cause secondary impacts.



❖ SECTION 5.0 – OTHER CEQA CONSIDERATIONS ❖

Mitigation Measure (Summary)	Implementation				Impact Assessment
	During construction	During operation of residences	Onsite	Offsite	
<p>MM CUL-2 Prior to the start of any project-related grading, the following note shall be placed on the Conditions of Approval:</p> <p>“If any suspected archaeological resources are discovered during ground-disturbing activities and the archaeological monitor or Tribal representatives are not present, the construction supervisor is obligated to halt work in a 100-foot radius around the find and call the Project Archaeologist and appropriate Tribal representatives to the site to assess the significance of the find.”</p>	X		X		No impact. the measure requires text be included in the project Conditions of Approval, which would not cause environmental impacts.
<p>MM CUL-3 The Project Archaeologist shall monitor project-related grading per mitigation measure CUL-1. Any archaeological resources that are uncovered during grading shall be recorded and/or removed in consultation and cooperation with the City and appropriate Native American tribal representatives.</p> <p>[See Section 3.4, Cultural Resources, for full text]</p>	X		X		No impact. Monitoring, a temporary halt to ground disturbances in case of a find and recording and/or removal of resources would not cause secondary impacts.
<p>MM CUL-4 If human remains are encountered during any project-related ground-</p>	X		X		No impact. The temporary halting of disturbance on part of the project site, and possible removal of human remains



❖ SECTION 5.0 – OTHER CEQA CONSIDERATIONS ❖

Mitigation Measure (Summary)	Implementation				Impact Assessment
	During construction	During operation of residences	Onsite	Offsite	
<p>disturbing activities, the project applicant and county Coroner shall comply with California Health and Safety Code § 7050.5 and California Public Resources Code § 5097.98</p> <p>[See Section 3.4, Cultural Resources, for full text]</p>					from the site, would not cause environmental impacts.
Geology and Soils					
<p>MM GEO-1 Before the commencement of ground disturbance, the project proponent shall retain a qualified paleontologist to be on-call for the duration of ground-disturbing activities. If paleontological resources are uncovered during construction activities, the contractor shall halt construction activities in the immediate area and notify the City of Bradbury. The on-call paleontologist shall be notified and afforded the necessary time and funds to recover, analyze, and curate the find(s). Subsequently, the paleontologist shall remain onsite periodically for the duration of the ground disturbance to ensure the protection of any other resources that may be in the area.</p>	X		X		No impact. the temporary halting of disturbance on part of the site, and recovery of fossils, would not cause environmental impacts.
Noise					
<p>MM N-1 The construction contractor will use the following</p>	X		X		No impact. Implementation of the required limitations on type, time of use, and



❖ SECTION 5.0 – OTHER CEQA CONSIDERATIONS ❖

Mitigation Measure (Summary)	Implementation				Impact Assessment
	During construction	During operation of residences	Onsite	Offsite	
<p>source controls, in response to complaints and when ambient noise monitoring of complainant's exposure shows exceedance of local standards, except where not physically feasible:</p> <ul style="list-style-type: none"> • Use of noise-producing equipment will be limited to the interval from 8:00 a.m. to 5:00 p.m., Monday through Friday. • For all noise-producing equipment, use types and models that have the lowest horsepower and the lowest noise generating potential practical for their intended use. • The construction contractor will ensure that all construction equipment, fixed or mobile, is properly operating (tuned-up) and lubricated, and that mufflers are working adequately. • Have only necessary equipment onsite. • Use manually-adjustable or ambient 					<p>maintenance of equipment used onsite would not cause adverse environmental impacts.</p>



❖ SECTION 5.0 – OTHER CEQA CONSIDERATIONS ❖

Mitigation Measure (Summary)	Implementation				Impact Assessment
	During construction	During operation of residences	Onsite	Offsite	
sensitive backup alarms.					
<p>MM N-2 The contractor will use the following path controls, in response to complaints and when ambient noise monitoring of complainant's exposure shows exceedance of local standards, except where not physically feasible:</p> <ul style="list-style-type: none"> • Install portable noise barriers, including solid structures and noise blankets, between the active noise sources and the nearest noise receivers. • Temporarily enclose localized and stationary noise sources. • Store and maintain equipment, building materials and waste materials as far as practical from as many sensitive receivers as practical. 	X		X		No significant impact. Installation and operation of the required path controls would not cause environmental impacts. Noise barriers would not block overland wildlife movement because many disturbances would already be present onsite during project construction, deterring wildlife movement through site.
Tribal Cultural Resources					
<p>MM TCR-1 Prior to the commencement of any ground-disturbing activity at the project site, the project applicant shall retain a Native American Monitor approved by the</p>	X		X		No impact. Monitoring of ground disturbances would not cause environmental impacts.



❖ SECTION 5.0 – OTHER CEQA CONSIDERATIONS ❖

Mitigation Measure (Summary)	Implementation				Impact Assessment
	During construction	During operation of residences	Onsite	Offsite	
<p>Gabrieleño Band of Mission Indians-Kizh Nation;</p> <p>[prescribes methods for Native American monitoring; See Section 3.13, Tribal Cultural Resources, for full text]</p>					
<p>MM TCR-2</p> <p>Upon discovery of any Tribal Cultural Resources, construction activities shall cease in the immediate vicinity of the find (not less than 100 feet) until the find can be assessed.</p> <p>[prescribes procedures for disposition of resources and further monitoring.</p> <p>See Section 3.13, Tribal Cultural Resources, for full text]</p>	X		X		No impact. Preservation or recovery of resources, and further monitoring, would not cause environmental impacts.
<p>MM TCR-3</p> <p>If human remains and/or grave goods are encountered during excavations associated with this project, all work shall stop within a 50-foot radius of the discovery</p> <p>[specifies requirements in state laws governing accidental discovery of human remains.</p> <p>See Section 3.13, Tribal Cultural Resources, for full text]</p>	X		X		No impact. Implementation of options for disposition of human remains and/or grave goods per recommendation of the Most Likely Descendant—such as scientific removal and nondestructive analysis—would not cause environmental impacts.
Utilities and Service Systems					



❖ SECTION 5.0 – OTHER CEQA CONSIDERATIONS ❖

Mitigation Measure (Summary)	Implementation				Impact Assessment
	During construction	During operation of residences	Onsite	Offsite	
MM USS-1 Before issuance of a grading permit for the project, the Project applicant must either install a new well or contribute funding towards a well that Cal-Am is in the process of designing and constructing.	X			X	At this point it is unknown if the applicant will build a well or contribute money and therefore, the impacts of that mitigation are too speculative to determine.
Wildfire Hazards and Fire Protection Service					
MM W-1 Before combustible materials are brought onto the project site, the project applicant shall have fuel reduced in all three fuel modification zones (zones A, B, and C). Zone C shall extend 100 feet wide from the outer edge of Zone B (which shall be 100 feet from structures or at the property line, whichever is closer to structures). Zone C shall include a minimum of 50 percent fuel reduction, on average. Thinning of less than 50 percent of the existing condition may be acceptable where erosion is of high concern, but the average cover throughout Zone C shall be reduced by 50 percent, resulting in approximately 50 percent ground cover by plant canopy.	X		X		The fuel modification zone is part of the project site. Fuel modification is part of the proposed project and would be implemented to reduce wildfire risks. Impacts of fuel reduction to, for instance, biological resources are addressed in Section 3.3, <i>Biological Resources</i> , of this DEIR. No additional impact would occur.
MM W-2 Plants used in the fuel modification areas or landscapes shall include drought-tolerant, fire resistive trees, shrubs, and groundcovers. The planting list and spacing shall be	X	X	X		The selection of plants to be planted in the fuel modification zones would not cause adverse impacts.



❖ SECTION 5.0 – OTHER CEQA CONSIDERATIONS ❖

Mitigation Measure (Summary)	Implementation				Impact Assessment
	During construction	During operation of residences	Onsite	Offsite	
reviewed and approved by LACoFD and included on submitted landscape plans. The plantings shall be consistent with LACoFD's Suggested Plant Reference Guide (refer to Appendix D of the project Fire Protection Plan). The suggested plant reference guide provides examples of plants that are less prone to ignite or spread flames to other vegetation and combustible structures during a wildfire. Additional plants may be added to the landscape plant material palette with the approval from LACoFD.					
MM W-3 Prior to combustible materials being brought on site, perimeter fuel modification areas must be implemented and approved by the LACoFD. Upon commencement of construction existing flammable vegetation shall be reduced by 50% on vacant lots. Dead fuel, ladder fuel (fuel which can spread fire from ground to trees), and downed fuel shall be removed and trees/shrubs shall be properly limbed, pruned, and spaced per this plan.	X	X	X		The analysis of MM W-1 applies to this Measure also.
MM W-4 Prior to commencement of construction activities the project applicant shall have a fire protection consultant or fire protection engineer	X		X		Implementation of the proposed construction fire risk reduction measures would not cause adverse impacts.



❖ SECTION 5.0 – OTHER CEQA CONSIDERATIONS ❖

Mitigation Measure (Summary)	Implementation				Impact Assessment
	During construction	During operation of residences	Onsite	Offsite	
prepare a construction fire protection plan (CPPP) designating fire safety measures to reduce fire risks during project construction. The plan may include the following measures: fire watch/ fire guards during hot works and heavy machinery activities, hose lines attached to hydrants or a water tender, red flag warning weather period restrictions, required on-site fire resources, and others as determined necessary.					

**SECTION 6.0 – ALTERNATIVES TO THE PROPOSED
PROJECT**



6.0 ALTERNATIVES TO THE PROPOSED PROJECT

6.1 Statutory Basis

Public Resources Code §21002.1 indicates that EIRs must identify ways to mitigate or avoid the significant effects that a project may have on the environment. EIRs do that in two ways. Pursuant to §15126.4 of the State CEQA Guidelines, **Section 3.0** of this Draft EIR identifies feasible mitigation measures designed to avoid or reduce the significant or potentially significant effects of the proposed project on a topic-by-topic basis. This section (**6.0**) of the EIR also discusses ways to avoid or substantially lessen the significant adverse impacts of the proposed project. However, it does so through the consideration and discussion of alternatives to the proposed project. State CEQA Guidelines §15126.6 states the following in this regard:

“(a) Alternatives to the Proposed Project. An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason. (Citizens of Goleta Valley v. Board of Supervisors (1990) 52 Cal.3d 553 and Laurel Heights Improvement Association v. Regents of the University of California (1988) 47 Cal.3d 376).”

State CEQA Guidelines §§15126.6(a) through (f) provide guidance regarding the content requirements in alternatives analyses provided in an 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 objectives, 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 (NOP) is published, 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)].
- “Rule of reason. The range of alternatives required in an EIR is governed by a ‘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.....” [§15126.6(f)].

- “Feasibility. 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) (1)].
- 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)].
- “An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative” [§ 15126.6(f) (3)].

Per State CEQA Guidelines §15126.6(d), additional significant effects of the alternatives are discussed in less detail than are the significant effects of the project as proposed.

6.2 Project Objectives

In **Section 2.0, *Project Description***, several project objectives provided by the Project Applicant were presented. These objectives assist the Lead Agency in the development of project alternatives, the assessment of alternative-related impacts, and aid decision-makers in their review of the project. The objectives of the proposed project are to:

- Develop the Chadwick Ranch Estates property in accordance with formal regulations, standards, guidelines and other land use plans, policies and controls specific to the site and compatible with surrounding uses.
- Utilize cluster development techniques in the design to preserve natural and historic resources of the Angeles National Forest.
- Conserve hillside open space adjacent to the Angeles National Forest.
- Create view lots strategically designed so that the roadways can be screened by the existing topography and mature landscaping.
- Establish design guidelines and development standards that allow development of flat pads that accommodate development of large residential estates to complement the existing community.
- Create a framework for responsible entitlement of some of the last remaining parcels in the City of Bradbury.

6.3 Summary of the Proposed Project’s Significant/Potentially Significant Effects

Section 3.0 of this draft EIR discusses the potential significant effects associated with the proposed project. The significant environmental impacts associated with the proposed project concern three topical issues: Aesthetics, Transportation and construction noise.

The Aesthetics-related significant effect concerns the time period extending from the completion of site grading and installation of infrastructure to full build out with mature vegetation. Graded areas



for lots and certain cut and fill slopes will be visible from surrounding residential areas, particularly from Duarte Mesa. As a consequence, it was found that during this period the effect on visual quality will be significant, albeit in the short- to intermediate-term. Once the project has been fully developed and when associated vegetation has matured, the interim significant impact on visual quality will diminish to a less than significant level. The short- to intermediate-term significant impact on visual quality will be mitigated by the project's design as landscape vegetation matures.

The proposed project would be inconsistent with several Sustainable Communities Strategy (SCS) strategies, particularly within the categories *Focus Growth Near Destinations & Mobility Options* and *Promote a Green Region*. No feasible mitigation measures are available that would reduce this impact to less than significant; thus, this impact would be significant and unavoidable.

The significance of Transportation impacts centers on the fact that the proposed project would generate more than 110 daily trips, the VMT significance threshold. There are no mitigation measures available to reduce the impact to a less than significant level thus rendering this impact significant and unavoidable.

Finally, with regard to Noise, mitigation measures for noise would appreciably reduce noise exposures. Nevertheless, some short-term significant impacts will likely occur on some days and at some locations during construction. The severity of the impact at any given time will depend upon the composition of the set of heavy onsite construction equipment used onsite, its nearness to sensitive receivers, the effectiveness of the mitigation measures, and the presence or absence of buildings that block the path of the noise. Construction noise impacts would be significant and unavoidable.

6.4 Alternatives Considered But Rejected From Further Consideration

Alternative Location

In accordance with State CEQA Guidelines §15126.6(f)(2), an alternative location for a project should be considered if development of another site is feasible and if such development would avoid or substantially lessen the significant impacts of the project. Factors that may be considered when identifying an alternative site location include the size of the site, its location, the General Plan land use designation, and availability of infrastructure. State CEQA Guidelines §15126.6(f)(2)(A) states that a key question in addressing an off-site alternative is “whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location.”

The City of Bradbury is exclusively a residential community. Many of the single-family residences can be classified as estates. These are characterized by large lot sizes, large custom-built residences (typically greater than 5,000s.f. in size) often with an accessory dwelling unit and other accessory structures. As such, the City of Bradbury affords its resident population with an exclusivity and urban scape highly prized by, and affordable to, an extremely small and select segment of the home buyer marketplace. With little exception this is true for all estate properties within the City. The site of the proposed project is in the northernmost and as yet undeveloped portion of the City. However, it is noted that nearly all of the non-project site lands in this area have topographic, vegetation, drainage and other physical attributes similar to those on the site of the proposed project. As a consequence, moving the proposed project to an off-site location within the remaining undeveloped land in the City would be expected to result in significant impacts comparable to those associated with the proposed project. As such, an Alternative Project Location, while able to meet the objectives of the proposed



project, was considered but rejected from further analysis due to the absence of any appreciable reduction in the degree of significant impacts determined to result from the proposed project.

Further, one of the other factors for feasibility of an alternative is “whether the proponent can reasonably acquire, control or otherwise have access to the alternative site.” The applicant does not have access to or control of any alternative site.

Reduced Density Alternative – Six (6) Estate Residential Lots

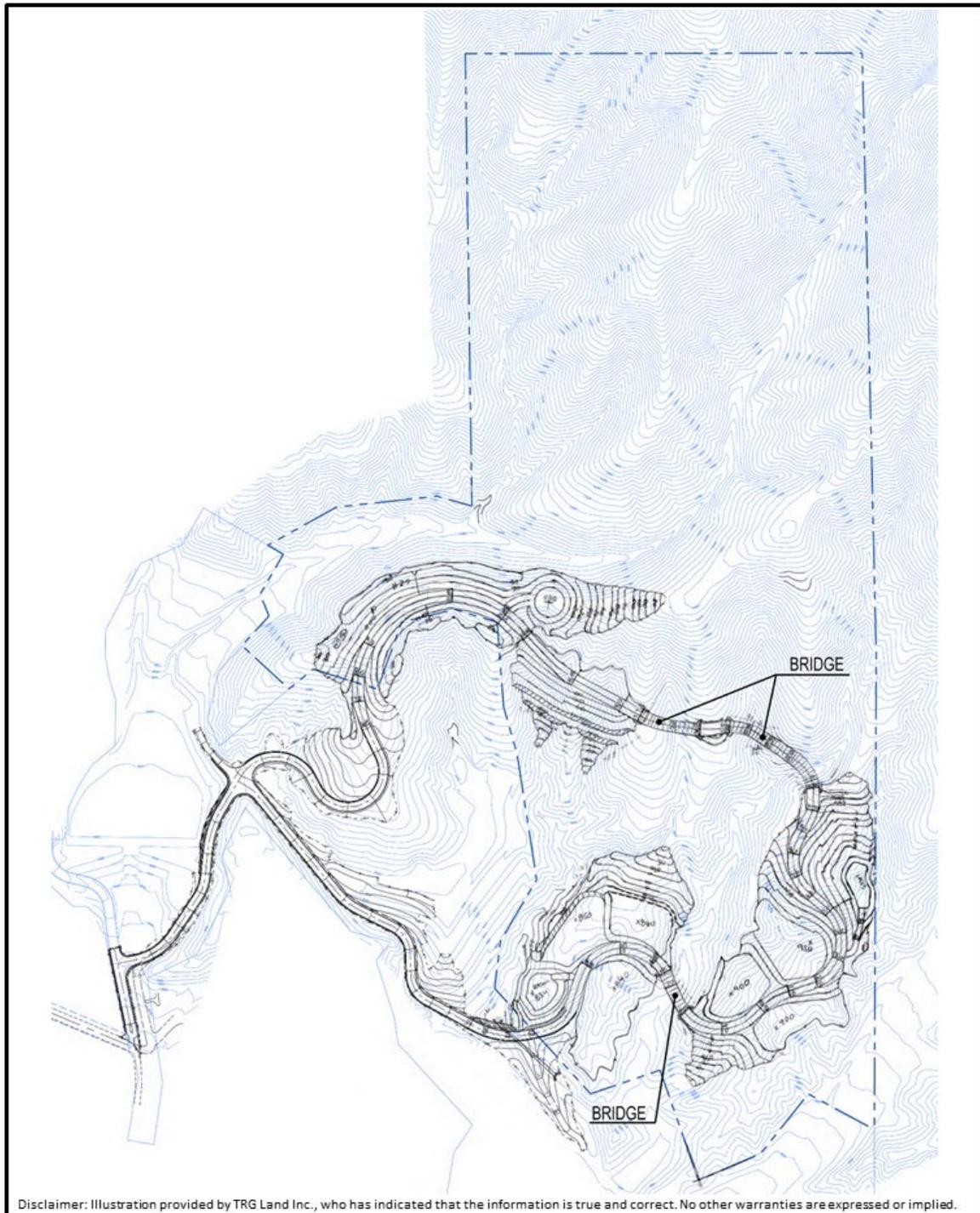
The Lead Agency consulted with the project Applicant to develop an alternative which would reduce the identified significant VMT effects of the proposed project to a less than significant level and yet meet most or all of the objectives of the proposed project. The initial result was an alternative with six residential estate lots. The spatial relationships between the residential estate lots, circulation system and other associated development features for this alternative are shown on **Figure 6.4-1, Site Plan – Six Residential Estate Lot Alternative**. As depicted, the six estate residential lots would be in the southeast quadrant of the development area of the project site. This alternative’s circulation system would have an alignment and points of ingress and egress similar to that of the proposed project as proposed in the Initial Study in February 2020. The reservoir in this alternative would be at an elevation of approximately 1,110 feet, lower than that in the proposed project. This alternative would also include three bridges, the longest of which would be approximately 375 feet long and 80 feet above grade. In order to be implemented, a substantial volume of earth materials would require export off-site for disposal.

This alternative substantially reduces the area of surface disturbance attributable to grading when compared to the proposed project. With regard to Aesthetics, the reduction in disturbed area associated with this alternative would be expected to reduce the extent of the short- to intermediate-term significant impacts on visual quality when compared to those attributable to the proposed project. However, the inclusion of three bridges into the design of this alternative will introduce man-made elements that will remain visible in the long-term. This constitutes a long-term significant impact on visual quality that is unavoidable and not mitigatable.

With regard to Transportation, this alternative would generate a volume of average daily trips that, unlike the proposed project, falls below the threshold of significance for VMT. With regard to Biological Resources, the reduction in disturbed area associated with grading will result in the removal of fewer oak trees, and less critical habitat and wetland losses. However, while reduced, the impacts would remain significant prior to mitigation and like with the proposed project, can be mitigated. As indicated previously, this alternative does reduce the disturbed area footprint site-wide. However, due primarily to the grading required to implement this alternative, a variety of significant short-term impacts which would not occur with the proposed project are anticipated. This conclusion is based on the following:

- Grading for the six estate residential lot alternative will require the export of 436,000 cubic yards of earth materials. Assuming 10 cubic yards per dump truck, a total of 43,600 dump truck loads would be required to export this earthwork volume to an off-site location for disposal. Considering that each export dump truck returns empty, a total of 87,200 dump truck trips can be expected to occur during the grading operation alone.
- Assuming a one year grading operation (52 weeks) and a five day work week working 8 hours per day, the rate of dump trucks on Bradbury roadways during a normal work day will approximate 41 per hour or more than one every two minutes.

Figure 6.4-1
SITE PLAN – SIX RESIDENTIAL ESTATE LOT ALTERNATIVE



Sources: TRG Land Inc., July 17, 2020.

Chadwick Ranch Estates Project

Site Plan - Alternative 2

6 Units





The foregoing earth materials export activity will result in substantial noise, air quality, GHG emissions, and public safety concerns on a nearly continuous basis for about one year on roadways in the City of Bradbury.

The Six Residential Estate Lot Alternative meets the objectives of the proposed project and does reduce the significance of some impacts attributable to the proposed project, namely on Biological Resources and Transportation. However, since this alternative also creates a long-term unavoidable significant impact on Aesthetics through construction of three bridges and would subject local residents to significant short-term construction-related impacts for the better part of a year, the Lead Agency rejects the Six Residential Estate Lot Alternative. Thus, this alternative will not be evaluated further.

6.5 Alternatives Considered and Evaluated

The alternatives to the proposed project evaluated in this Draft EIR are: 1) **Alternative 1 – No Project/No Action Alternative** as required pursuant to Sections 15126.6(e) (1) and (2) of the State CEQA Guidelines; and, 2) **Alternative 2 –Reduced Density Alternative - Nine (9) Residential Estate Lots** an alternative which meets the objectives of the proposed project. Descriptions and an environmental analysis of each alternative follow.

6.5.1 Description of Alternative 1 – No Project/No Action Alternative

Under the No Project/No Action Alternative, it is assumed that no development of any kind would occur on the project site and that existing environmental conditions on the project site are those which were present at the time that the Notice of Preparation was circulated for the proposed project. Section 15126.6(e)(3)(B) of the CEQA Guidelines states in part that, “in certain circumstances, the No Project Alternative means ‘no build’ wherein the existing environmental; setting is maintained.” Accordingly, for the purposes of this analysis, Alternative 1, the No Project Alternative, assumes that the project would not be approved, no new permanent development would occur within the project site, and the existing environment would be maintained.

6.5.2 Environmental Analysis - Alternative 1 No Project/No Action Alternative

Aesthetics

Under the No Project Alternative, no construction activities would occur and no changes in the visual character of the project site would result. As such, Alternative 1 would avoid all impacts of the proposed project related to Aesthetics including: adverse effects on a scenic vista or scenic resources and the degradation of existing visual quality or character.

Air Quality

Alternative 1 would not involve any form of construction nor create any long-term operational land uses. Therefore, this alternative would not result in any construction or operational emissions. Thus, the No Project Alternative would eliminate all air quality impacts that would otherwise occur with the proposed project. This Alternative would not: conflict with or obstruct implementation of SCAQMD’s Air Quality Management Plan; violate any air quality standard; contribute to a projected air quality violation; contribute to cumulative emissions of any criteria pollutants; or, create any objectionable odors.



Biological Resources

Alternative 1 would not involve any form of construction nor create any long-term operational land uses. Therefore, this alternative would not result in any direct, indirect, short-term or long-term construction or operations-related impacts on Biological Resources. As such, the No Project Alternative would eliminate all impacts on Biological Resources that would otherwise occur with the proposed project.

Cultural and Tribal Cultural Resources

Alternative 1 would not involve any form of construction nor create any long-term operational land uses. Therefore, this alternative would not result in any direct, indirect, short-term or long-term construction or operations-related impacts on either Cultural or Tribal Cultural Resources. Thus, the No Project Alternative would preclude the occurrence of any impacts to Cultural or Tribal Cultural Resources that would otherwise occur with the proposed project.

Energy

Alternative 1 would not involve any form of construction nor create any long-term operational land uses. Therefore, this alternative would not result in any direct, indirect, short-term or long-term construction or operations-related impacts on Energy. Thus, the No Project Alternative would eliminate all impacts on Energy that would otherwise occur with the proposed project.

Geology and Soils

Alternative 1 would not involve any form of construction nor create any long-term operational land uses. Therefore, this alternative would not result in any direct, indirect, short-term or long-term construction or operations-related impacts on, nor be subject to any adverse conditions related to Geology and Soils. Consequently, the No Project/No Action Alternative would eliminate all impacts that would otherwise occur with the proposed project with regard to Geology and Soils.

Greenhouse Gas Emissions

Alternative 1 would not involve any form of construction nor create any long-term operational land uses. Therefore, this alternative would not result in any construction or operational emissions. Thus, the No Project Alternative would eliminate all greenhouse gas emissions that would otherwise occur with the proposed project. Given this, no impacts attributable to emissions of greenhouse gases would occur.

Hydrology and Water Quality

Alternative 1 would not involve any form of construction nor create any long-term operational land uses. Therefore, this alternative would not result in any direct, indirect, short-term or long-term construction or operations-related impacts on hydrology and water quality. Consequently, the No Project/No Action Alternative would eliminate all hydrology and water quality impacts that would otherwise occur with the proposed project.



Land Use and Planning

Since the No Project/No Action Alternative would not involve any development on the project site, it has no potential to physically divide an established community. The City's General Plan, Development Code and Design Guidelines govern all development within the City limits and are oriented toward avoiding or minimizing adverse environmental consequences due to development. Since no development would occur under Alternative 1, it has no potential to compromise or conflict with any land use plan, policy or regulation adopted by the City for the purpose of avoiding or mitigating an environmental impact.

Implementation of Alternative 1 would be consistent with the RTP/SCS, in contrast to the proposed project, which would be inconsistent. Alternative 1 would eliminate the significant and unavoidable impact of the proposed project regarding inconsistency of the proposed project with the RTP/SCS. Therefore, Alternative 1 would eliminate all Land Use and Planning impacts that proposed project development would cause.

Noise

The No Action/No Project Alternative would not involve any construction nor create any operational land uses on the project site. As a result, no Noise impacts of any kind would be expected under this alternative. Given this, the No Project Alternative would eliminate all impacts relative to Noise that would otherwise occur with the proposed project.

Public Services

The No Action/No Project Alternative would not involve any construction nor create any operational land uses on the project site. As a result, no demand for Public Services including police protection, schools, parks or other public facilities would be expected under this alternative. Given this, the No Project Alternative would eliminate all impacts relative to Public Services that would otherwise occur with the proposed project.

Transportation

Alternative 1 would not involve any construction nor create any operational land uses on the project site. As a result, Alternative 1 would not generate any construction or operations related vehicle trips nor alter existing site access or elements of the public circulation system. Therefore, no Transportation/ impacts would occur under Alternative 1. As a consequence, this Alternative would eliminate all impacts relative to Transportation that would otherwise occur with the proposed project, including VMT, intersection levels of service, bicycle, pedestrian and vehicular safety and neighborhood intrusion.

Utilities and Service Systems

The No Action/No Project Alternative would not involve any construction nor create any operational land uses on the project site. As a result, no demand for Utilities and Service Systems including facilities for wastewater treatment, water, storm drains, and solid waste disposal would be expected under this alternative. Given this, the No Action/No Project Alternative would eliminate all impacts relative to Utilities and Service Systems that would otherwise occur with the proposed project.



Fire Protection Services and Wildfire Hazards

Under the No Project Alternative, no demolition or construction activities would occur at the site. Therefore, Alternative 1 would have no potential to create fire hazards due to the use or release of potentially flammable materials, or generate flammable waste, or the use and storage of hazardous and flammable materials during construction. There would be no construction equipment or vehicles that could create flammable gas or heavy-duty equipment that could potentially ignite a fire. Given the foregoing, the No Project Alternative would yield no construction-related impacts on demand for fire protection services or the creation of wildfire hazards.

The site of the proposed project is in a natural state with dense vegetation and steep slopes. In combination with LACFCD flood control facilities to the immediate southwest, south, and southeast and the Duarte Wilderness Park to the east, this area serves as a buffer between wildfires which may originate in areas to the north and area residences southwest, south and southeast of the project site. However, the absence of roadways on the project site essentially means that the subject area residences would be subject to wildfires originating from areas to the north and in effect serve as the northernmost locations at which a defensive perimeter can be established by fire protection resources due to the availability of roadway access for emergency vehicles and reliable pressurized water supplies. Compared to existing conditions, the proposed project, by implementing fuel modification zones and building residences using ignition-resistant construction, would not substantially increase wildfire hazard onsite. Substantial wildfire hazards on the project site and affecting nearby existing residences would remain with implementation of the No Project Alternative; therefore, impacts of this alternative on wildfire hazards would be significant.

6.5.3 Description of Alternative 2 – Reduced Density Alternative - Nine (9) Residential Estate Lots

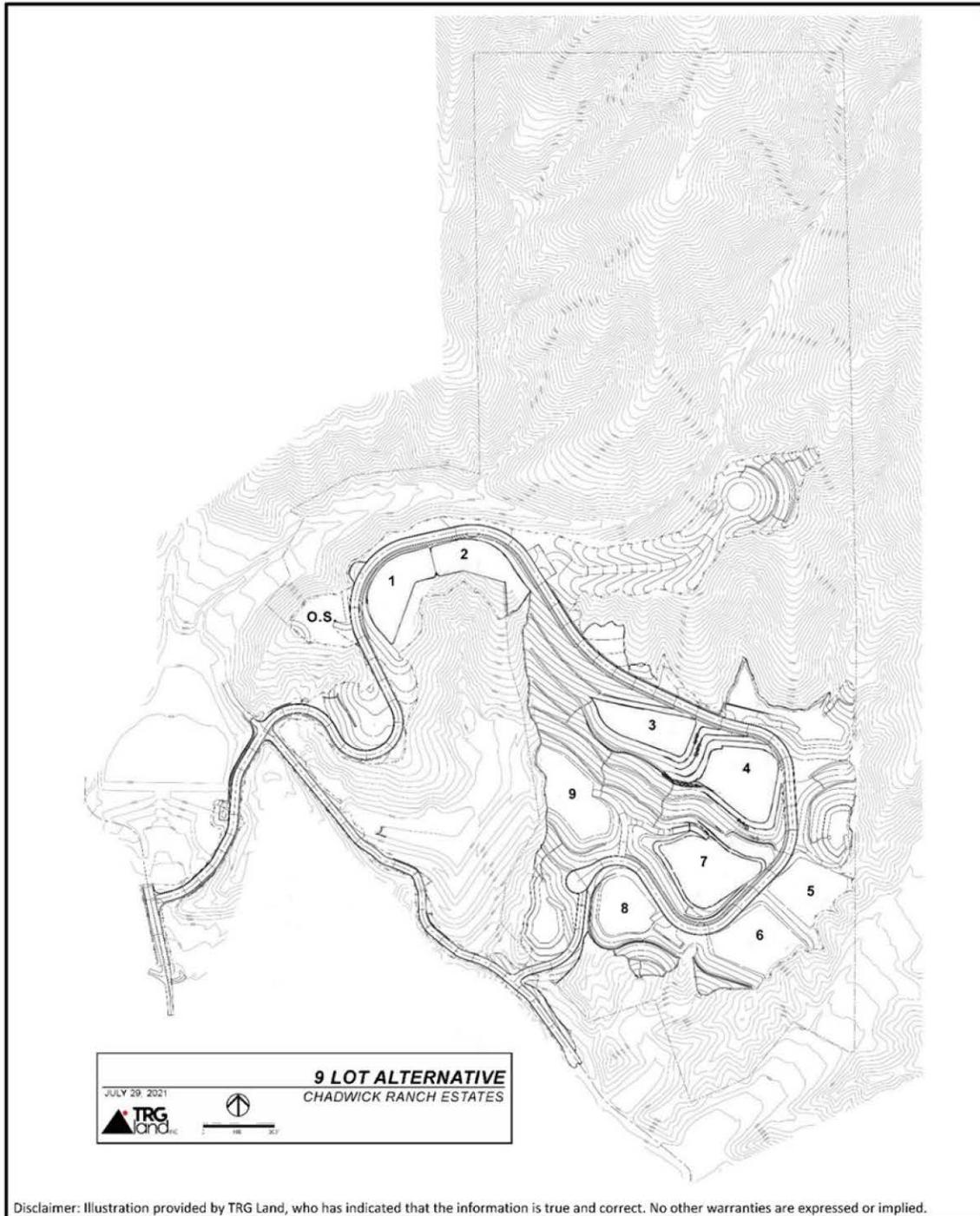
Alternative 2 is a reduced density project with nine (9) residential estate lots, five less than the proposed project. In most respects, Alternative 2 reflects both the type and spatial distribution of project features comprising the proposed project. **Figure 6.5-1, Site Plan – Alternative 2 – Nine (9) Residential Estate Lots**, illustrates primary development features of this Alternative. The proposed Chadwick Ranch Estates Alternative 2 would comprise nine (9) parcels developed with residential estates and thirteen (13) parcels committed to non-residential uses including a backbone circulation system, requisite infrastructure, as well as a water tank, a booster station, debris and water quality basins, and open space. Like with the proposed project, this Alternative would be accessed via a roadway originating at the intersection of Long Canyon Road and Bliss Canyon Road to the project site of the proposed project. It is noted that the density reduction associated with this alternative was achieved by merging lots and certain flat pad areas and creating larger pads. The estimated graded area site-wide under Alternative 2 would be the same as for the proposed project approximately 48 acres.

6.5.4 Environmental Analysis - Alternative 2 – Reduced Density Alternative - Nine (9) Residential Estate Lots

Aesthetics

Under Alternative 2, the construction scenario would be comparable to that of the proposed project with regard to surface area disturbance due to grading and the installation of infrastructure improvements. As a result, the short-term impacts of this Alternative on aesthetics during construction is expected to be comparable to the proposed project, that is, significant and

Figure 6.5-1
SITE PLAN – ALTERNATIVE 2 – NINE (9) RESIDENTIAL ESTATE LOTS





unavoidable. However, as with the proposed project, the significant impact on visual character would be reduced with the growth of vegetation and trees to full maturity. The primary difference between Alternative 2 and the proposed project with regard to their impacts on Aesthetics is that Alternative 2 has the opportunity to get to full build out more quickly due to its reduced number of residential estates. Once fully built out, all impacts on Aesthetics would be less than significant.

Air Quality

Under Alternative 2, the construction scenario would be comparable to that of the proposed project with regard to surface area disturbance due to grading and the installation of infrastructure improvements. Therefore, this alternative would result in construction emissions comparable to those associated with the proposed project. Alternative 2 will include approximately 35 percent fewer residential estates at full build out than would the proposed project. Correspondingly, this Alternative would be expected to yield proportionally fewer operations-related emissions than would the proposed project. Construction and operational air quality impacts of the proposed project and this alternative would both be less than significant. This Alternative would not: conflict with or obstruct implementation of SCAQMD's Air Quality Management Plan; violate any air quality standard; contribute to a projected air quality violation; significantly contribute to cumulative emissions of any criteria pollutants; or, create any objectionable odors.

Biological Resources

Under Alternative 2, the construction scenario would be comparable to that of the proposed project with regard to surface area disturbance due to grading and the installation of infrastructure improvements. Therefore, this alternative would result in potential effects on Biological Resources comparable to those associated with the proposed project, particularly with regard to the loss of sensitive habitats, habitats for special-status species, and oak trees, all of which are mitigatable to less than significant. The number of oak trees that would be removed by development of this alternative would be slightly reduced compared to development of the proposed project.

Cultural and Tribal Cultural Resources

Alternative 2 will ultimately result in a ground disturbance footprint less than that of the proposed project, approximately 23-acres compared to 44 acres for the proposed project. Background research and field surveys were conducted which covered both the entire approximately 112-acre project site and an area of potential effects just beyond. Background research identified no recorded on-site cultural or tribal cultural resources and field surveys found no cultural or tribal cultural resources. Therefore, this alternative would not result in any known direct, indirect, short-term or long-term construction or operations-related impacts on either Cultural or Tribal Cultural Resources. However, as with the proposed project, potential subsurface artifacts may be uncovered during earth movement activities associated with Alternative 2. The potential impacts and mitigation measure requirements for Cultural and Tribal Cultural Resources of this alternative would be comparable to those of the proposed project.

Energy

Under Alternative 2, the construction scenario would be comparable to that of the proposed project with regard to surface area disturbance due to grading and the installation of infrastructure improvements. Therefore, this alternative would result in energy usage comparable to that associated with the proposed project. Alternative 2 will include approximately 35 percent fewer



residential estates at full build out than would the proposed project. Correspondingly, this alternative would be expected to have operations-related energy demands proportionally less than the proposed project. Energy impacts of the proposed project would be less than significant.

Geology and Soils

Under Alternative 2, the construction scenario would be comparable to that of the proposed project with regard to surface area disturbance due to grading and the installation of infrastructure improvements. Therefore, this alternative would be subject to geotechnical constraints and remedial actions pertaining to geology and soils similar to those of the proposed project.

Greenhouse Gas Emissions

Under Alternative 2, the amounts of grading and trenching would be comparable to those of the proposed project. Therefore, this alternative would result in greenhouse gas emissions comparable to those associated with the proposed project. Alternative 2 will include approximately 35percent fewer residential estates at full build out than would the proposed project. Correspondingly, this Alternative would be expected to yield proportionally fewer operations-related greenhouse gas emissions than would the proposed project. GHG emissions impacts would be less than significant without mitigation in each of the two scenarios.

Hydrology and Water Quality

Alternative 2, would involve generally similar amounts of grading and trenching compared to the proposed project. This means that run-off volumes would be comparable to those of the proposed project as would the drainage infrastructure to be constructed. In this regard, Alternative 2 would perform all construction in accord with the same provisions of the General Construction Permit and required Storm Water Pollution Prevention Plan (SWPPP) as would the proposed project. For project operations, this Alternative, like the proposed project, would address storm water runoff and pollutant loading pursuant to an NPDES MS4 permit held by the City, a Co-Permittee and as implemented by Best Management Practices (BMPs) set forth in a Low Impact Development Plan (LID).

Land Use and Planning

The site of the proposed project and Alternative 2 is located along the northern urban fringe of the City of Bradbury. Thus, project site development has no potential to physically divide an established community. The proposed project and Alternative 2 would be developed pursuant to a Specific Plan which will either be consistent with or enhance criteria for development set forth in the City's General Plan and Development Code. The City's General Plan, Development Code and Design Guidelines govern all development within the City limits and are oriented toward avoiding or minimizing adverse environmental consequences due to development. Since development of the project site under Alternative 2 would occur pursuant to a Specific Plan, Alternative 2 would not compromise or conflict with any land use plan, policy or regulation adopted by the City for the purpose of avoiding or mitigating environmental impacts.

Alternative 2 would be inconsistent with the RTP/SCS, as the proposed project would. The RTP/SCS strategies that the proposed project would be inconsistent with are qualitative, not quantitative. Thus, while Alternative 2 would be inconsistent with those strategies to a somewhat lesser degree, it



would remain inconsistent with them. Land use and planning impacts of Alternative 2 would be significant and unavoidable.

Noise

Under Alternative 2, the construction scenario would be comparable to that of the proposed project with regard to surface area disturbance due to grading and the installation of infrastructure improvements. Therefore, this Alternative would result in construction noise levels comparable to those associated with the proposed project. Alternative 2 will include approximately 35 percent fewer residential estates at full build out than would the proposed project. Correspondingly, this Alternative would be expected to yield less operations-related noise than would the proposed project. However, since the greatest source of operational noise would be attributable to mobile sources (traffic) the difference between traffic noise impacts attributable to the proposed project and Alternative 2 would be imperceptible. Noise impacts of the proposed project would be significant and unavoidable during the construction phase. Noise impacts would be similar in each of these two scenarios. Overall, noise impacts of this alternative would be similar to those of the proposed project.

Transportation

Transportation impacts of the proposed project would be significant and unavoidable as the project would generate more than 110 trips per day, that is, the threshold below which projects are considered to have less than significant transportation impacts; and no mitigation measures are available that would reduce such impact to less than significant. Alternative 2 would generate 108 daily trips based on a daily trip generation rate of 12 trips/residential estate. As a consequence, this Alternative would reduce VMT-related impacts on Transportation to a less than significant level and no mitigation measures are required. Transportation impacts of this Alternative would be less than those of the proposed project.

Utilities and Service Systems

The extent of consumptive demand and generation volumes by residential uses is predominantly a function of their number. The proposed project would have 14 residential estates, while Alternative 2 would have 9. Given this, Alternative 2 would have a lower demand for water, electric power, natural gas, telecommunications facilities, and generate less solid waste and wastewater than would the proposed project. However, it is noted that Alternative 2 and the proposed project will meet their wastewater collection and disposal needs on a lot-by-lot basis employing enhanced septic system technology. Therefore, per lot the demand for wastewater treatment would be no different for Alternative 2 than for the proposed project. It is further noted that development of the project site with the proposed project or Alternative 2, a dry sewer would be constructed in the loop collector road with stub going to each property line. The purpose in doing so is while a community sewer system isn't available at the present time, it may be so in the future. If or when a community sewer becomes available, both the proposed project and Alternative 2 would tie into that system and forego the current enhanced septic systems they will have been using. In such an event, Alternative 2 would place less demand on the community sewer system due to the fewer number of residential estates.

The project site is vacant. Under Alternative 2, the construction scenario would be comparable to that of the proposed project with regard to surface area disturbance due to grading and the installation of infrastructure improvements. All utilities will be underground in the project's road with stubs to each individual estate. Given this, Alternative 2 will require a nominally smaller amount of infrastructure construction and facilities due to the smaller number of residential estates. Overall,



utilities and service systems impacts would be slightly reduced under Alternative 2 compared to the proposed project, and would be less than significant in both scenarios.

Fire Protection Services and Wildfire Hazards

Fire protection services in and near the project site are provided by the Los Angeles County Fire Department supported when necessary by the Monrovia Fire Department and US Forest Service. The project site and the rest of the City of Bradbury has been identified by CAL FIRE as being located in a Very High Fire Hazard Severity Zone. Under Alternative 2, the amount of ground disturbance would be comparable to that of the proposed project. Therefore, this Alternative would have a potential to create a fire hazard during construction due to the use or release of potentially flammable materials, or generate flammable waste, or the use and storage of hazardous and flammable materials. Given the foregoing, Alternative 2 would yield construction-related impacts on demand for fire protection services or the creation of wildfire hazards at a level comparable to the proposed project.

The site of the proposed project is in a natural state with dense vegetation and steep slopes. In combination with LACFCD flood control facilities to the immediate southwest, south, and southeast and the Duarte Wilderness Park to the east, this area serves as a buffer from wildfires which may originate in areas to the north. Compared to existing conditions, the proposed project and this Alternative would both reduce wildfire hazard onsite by implementing fuel modification zones and building residences using ignition-resistant construction. Impacts of this alternative on wildfire hazards and fire protection service would be similar to those of the proposed project.

6.6 Environmentally Superior Alternative

Table 6.6-1, *Comparison of Impacts - Alternatives to the Proposed Project*, provides a summary of the significance of the impacts of each alternative in comparison to those associated with the proposed project. Based on the information contained thereon, Alternative 1, the No Project/No Action Alternative would be the environmentally superior alternative overall. This is due primarily to the fact that none of the impacts associated with the construction and operations of proposed project would occur under Alternative 1. However, this Alternative would leave the surrounding residential areas in both Bradbury and Duarte with the same level of wildfire risk as currently exists. The proposed project would reduce wildfire hazard onsite by implementing fuel modification zones and building residences using ignition-resistant construction. Thus, the proposed project is environmentally superior to Alternative 1 in that single regard. Alternative 1 would not achieve any of the project objectives.

As mentioned previously, § 15626.6(e)(2) of the State CEQA Guidelines indicates that when the No Project Alternative is the environmentally superior alternative, the EIR shall also identify another environmentally superior alternative. Based on the information contained in **Table 6.6-1** it is evident that Alternative 2 would be environmentally superior to the proposed project. It meets the objectives of the proposed project and precludes or reduces to less than significant levels the transportation impacts of the proposed project.



**Table 6.6-1
COMPARISON OF IMPACTS - ALTERNATIVES TO THE PROPOSED PROJECT**

Environmental Topic	Impact Significance of the Proposed Project¹	Alternative 1 No Project/No Action Alternative	Alternative 2 - Reduced Density Alternative - Nine Residential Estates²
Aesthetics (Short-Term)	Significant	No Impact	Same as the Proposed Project
Aesthetics (Long-Term)	Less Than Significant	No Impact	Same as the Proposed Project
Air Quality	Less Than Significant	No Impact	Same as the Proposed Project
Biological Resources	Less Than Significant	No Impact	Similar to the Proposed Project
Cultural and Tribal Cultural Resources	Less Than Significant	No Impact	Same as the proposed project
Energy	Less Than Significant	No Impact	Less Than the Proposed Project
Geology and Soils	Less Than Significant	No Impact	Similar to the Proposed Project
Greenhouse Gas Emissions	Less Than Significant	No Impact	Same as the Proposed Project
Hazards and Hazardous Materials	Less Than Significant	No Impact	Same as the Proposed Project
Land Use and Planning	Significant	No Impact	Similar to the Proposed Project
Noise (Construction)	Significant	No Impact	Similar to the Proposed Project
Noise (Operational)	Less Than Significant	No Impact	Similar to the Proposed Project
Public Services	Less Than Significant	No Impact	Similar to the Proposed Project
Transportation	Significant	No Impact	Less Than the Proposed Project
Fire Protection Services and Wildfire Hazards	Less Than Significant	Significant	Similar to the Proposed Project
Cumulative Impacts	Less Than Significant	No Impact	Similar to the Proposed Project

Source: UltraSystems, 2020.

- 1 For the Proposed Project Less Than Significant could mean with or without mitigation.
- 2 Same means identical or nearly identical. Similar means approximately the same, or not significantly different.

SECTION 7.0 – REFERENCES



7.0 REFERENCES

- ARB, Undated. GHG Global Warming Potentials. URL: <https://ww2.arb.ca.gov/ghg-gwps>. Accessed March 11, 2020.
- ARB, 2008. Climate Change Scoping Plan: A Framework for Change. California Air Resources Board. December 2008.
- ARB, 2014. First Update to the Climate Change Scoping Plan, Building on the Framework. California Air Resources Board. May 2014.
- ARB, 2017a. Letter from ARB (Richard Corey) to USEPA (Alexis Strauss) regarding submittal of South Coast 2016 Air Quality Management Plan. California Air Resources Board. March 10, 2017.
- ARB, 2017b. California's 2017 Climate Change Scoping Plan. California Air Resources Board. November 2017. URL: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf
- ARB, 2018b. 2018. Updates to the California State Implementation Plan: California Air Resources Board, Sacramento, CA. Adopted October 25. Accessed online at www.arb.ca.gov/planning/sip/2018sipupdate/2018update.pdf on March 6, 2020.
- ARB, 2020b. Advanced Clean Cars Program. Accessed online at: <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/about>, on June 7, 2021.
- ARB, 2021. California's Greenhouse Gas Vehicle Emission Standards under Assembly Bill 1493 of 2002 (Pavley). Accessed online at: <https://ww2.arb.ca.gov/californias-greenhouse-gas-vehicle-emission-standards-under-assembly-bill-1493-2002-pavley>, on August 20, 2021.
- ArcGIS.com. 2021. Census Designated Places (CDPs) 2010 – California. Accessed online at: <https://www.arcgis.com/home/webmap/viewer.html?useExisting=1&layers=205860482daa46ebb906cac1e1fe53c6>, on September 30, 2021.
- Bean, Lowell John, and Charles R. Smith, 1978. Gabrielino. In Handbook of North American Indians, William C. Sturtevant, general editor, vol. 8, *California*, edited by Robert F. Heizer, pp. 538-549. Smithsonian Institution, Washington, DC.
- BREEZE Software. 2017. California Emissions Estimator Model. User's Guide, Version 2016.3.2. Prepared for the California Air Pollution Control Officers Association, in collaboration with South Coast Air Quality Management District. Available at <http://www.aqmd.gov/caleemod/user's-guide>.
- Brown, Alan K. (editor), 2001. *A Description of Distant Roads: Original Journals of the First Expedition into California 1769-1770, by Juan Crespí*. San Diego State University Press, San Diego, California.
- Buonicore, A.J. and Davis, W.T., 1992. Air Pollution Engineering Manual. Air & Waste Management Association, Pittsburgh, PA. Cited in Eyestone Environmental, 2019,



- CAL FIRE (California Department of Forestry and Fire Prevention). 2018. Strategic Fire Plan for California. Accessed online at: https://osfm.fire.ca.gov/media/5590/2018-strategic-fire-plan-approved-08_22_18.pdf, on February 10, 2021.
- CAL FIRE (California Department of Forestry and Fire Prevention). 2011. Very High Fire Hazard Severity Zones in LRA: Bradbury. Accessed online at: <https://osfm.fire.ca.gov/media/5806/bradbury.pdf>, on February 10, 2021.
- California Building Standards Commission (CBSC). 2019. 2019 California Building Code. Chapter 16: Structural Design. Accessed online at: <https://codes.iccsafe.org/content/CABCV22019/chapter-16-structural-design>, on February 19, 2021.
- CCAA (California Clean Air Act), 1988.
- California Department of Conservation, 1982. Special Report 143, Part IV. Accessed online at ftp://ftp.consrv.ca.gov/pub/dmg/pubs/sr/SR_143/PartIV/SR_143_partIV_Text.pdf. Accessed on September 4, 2019.
- California Department of Conservation, 2017. GIS Data PDF Map, 2016: Los Angeles County Important Farmland 2016. Approved July, 2017. Accessed online at on <https://www.conservation.ca.gov/dlrp/fmmp/Pages/LosAngeles.aspx>. Accessed on September 4, 2019.
- California Department of Conservation, 2019a. Mines Online. Accessed online at ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/OFR_94-14/. on September 4, 2019.
- California Department of Conservation, 2019b. DOGGR Well Finder. Accessed online at <https://maps.conservation.ca.gov/doggr/wellfinder/#/-117.96564/34.14886/14> on September 4, 2019.
- California Department of Fish and Wildlife (CDFW). 2020. California Natural Diversity Database. Accessed online at <https://apps.wildlife.ca.gov/myaccount/login?ReturnUrl=%2frarefind%2fview%2fRareFind.aspx> on June 5, 2020.
- California Department of Resources Recycling and Recovery (CalRecycle). 2020a. Jurisdiction Disposal and Alternative Daily Cover (ADC) Tons by Facility. Accessed online at: <https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility>, on August 24, 2020.
- California Department of Resources Recycling and Recovery (CalRecycle). 2020b. SWIS Facility/Site Activity Details: Azusa Land Reclamation Co. Landfill. Accessed online at: <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/3532?siteID=1001>, on August 24, 2020.
- CalRecycle (California Department of Resources Recycling and Recovery). 2020c. Landfill Tonnage Reports. Accessed online at: at: <https://www2.calrecycle.ca.gov/LandfillTipFees/>, on August 24, 2020.



- California Department of Resources Recycling and Recovery (CalRecycle). 2020. Estimated Solid Waste Generation Rates. Accessed online at: <https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates>, on August 24, 2020.
- California Energy Commission, 2018a. Building Energy Efficiency Standards for Residential and Nonresidential Buildings for the 2019 Building Energy Efficiency Standards. Title 24, Part 6, and Associated Administrative Regulations in Part 1. CEC-400-2018-020-CMF. December. URL: <https://ww2.energy.ca.gov/2018publications/CEC-400-2018-020/CEC-400-2018-020-CMF.pdf>. Accessed March 12, 2020.
- California Energy Commission, 2018b. 2019 Building Energy Efficiency Standards. Frequently Asked Questions. March. URL: https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf. Accessed March 12, 2020.
- California Energy Commission, 2020a. Available online at: <https://www.energy.ca.gov/rules-and-regulations/energy-suppliers-reporting/clean-energy-and-pollution-reduction-act-sb-350>. Accessed March 19, 2020.
- California Energy Commission (CEC). 2019 Building Energy Efficiency Standards: Frequently Asked Questions. Accessed online at: https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf, on May 18, 2021.
- California Legislative Information, 2020a. Available online at: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB100. Accessed March 19, 2020.
- California Legislative Information, 2020b. Available online at: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200120020AB1493. Accessed March 19, 2020.
- California Legislative Information, 2020c. Available online at: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200920100AB758. Accessed March 19, 2020.
- California Legislative Information, 2020d. Available online at: http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200120020SB1389. Accessed 3/19/2020
- California Legislative Information, 2021. California Government Code Sections 51175 et seq.
- California Native Plant Society. 2020. CNPS Inventory of Rare Plants. Accessed online at: <https://www.cnps.org/rare-plants/cnps-inventory-of-rare-plants>, on June 8, 2020.
- California Public Resources Code, 2020. California Health and Safety Code S7050.5. Accessed online at https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC§ionNum=7050.5 on March 3, 2020.



- California State Scenic Highway System Map, 2018. Available online at: <https://www.arcgis.com/apps/webappviewer/index.html?id=2e921695c43643b1aaf7000dfcc19983> accessed 8/20/2020.
- Caltrans. 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol. California Department of Transportation. Accessed online at <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf> on April 22, 2021.
- CAPCOA, 2017. California Air Pollution Control Officers Association. California Emissions Estimator Model® Users Guide, Version 2016.3.2, Appendix D. Default Data Tables. November 2017.
- CASQA, 2003. Stormwater Best Management Practice Handbook: New Development and Redevelopment Errata Pages. Available online at <https://www.casqa.org/resources/bmp-handbooks/new-development-redevelopment-bmp-handbook>. Downloaded on January 3, 2020.
- CBSC, 2019. Guide to the 2016 California Green Building Standards Code, January 1, 2017. Accessed online at <http://www.bsc.ca.gov/Home/CALGreen.aspx> in March 2020.
- CEMA (California Emergency Management Agency), CGS (California Geological Society), and USC (University of Southern California), 2009. Tsunami Inundation Map for Emergency Planning: Los Alamitos Quadrangle/Seal Beach Quadrangle, County of Los Angeles, State of California [map]. Scale 1:24,000. Available at <https://www.conservation.ca.gov/cgs/tsunami/maps/los-angeles>. Downloaded on January 3, 2020.
- CGS (California Geological Survey), 1999. Earthquake Zones of Required Investigation, Azusa Quadrangle [map]. Updated 2014. Scale 1:24,000. Available at <https://maps.conservation.ca.gov/cgs/informationwarehouse/regulatorymaps/>. Downloaded on January 2, 2020.
- Chartkoff, Joseph L., and Kerry Kona Chartkoff, 1984. *The Archaeology of California*. Stanford University Press, Stanford, California.
- Chasteen, Carrie, 2015. Archaeological Site Record, Primary Record, for 19-192-459, Bradbury Debris Basin and Flood Control Channel. On file, South Central Coastal Information Center, California State University, Fullerton.
- Chico, T. and Koizumi, J., 2008. Final Localized Significance Threshold Methodology. South Coast Air Quality Management District, Diamond Bar, California. June 2003. Revised June 2008.
- City Data, 2017. Bradbury, California. <http://www.city-data.com/city/Bradbury-California.html>. Accessed on September 6, 2019.
- Bradbury, City of. Emergency Operations Plan, 2010. Available online at: <https://www.cityofbradbury.org/public-safety/emergency-preparedness>. Accessed 8/20/2020.



City of Bradbury, 2012. City of Bradbury Energy Action Plan. City of Bradbury and San Gabriel Valley Council of Governments. December 2012.

City of Bradbury, 2014a. City of Bradbury General Plan 2012-2030 Update Climate Action Plan Element. City of Bradbury Planning Department. Available at https://www.cityofbradbury.org/images/ClimateActionPlan-DRAFT-02-05-2014_2.pdf. Last accessed December 31, 2019.

City of Bradbury, 2014b. General Plan 2012-2030 Health and Safety Element. City of Bradbury Planning Department. Available at https://www.cityofbradbury.org/images/HealthandSafety-DRAFT-02-05-2014_2.pdf. Last accessed December 31, 2019.

City of Bradbury, 2014c. General Plan 2012-2030 Update. City of Bradbury. Revised February 5, 2014.

City of Bradbury, 2014d. General Plan – 2012-2013 Update; Community Resources Element; Revised-020514. Accessed January 31, 2020, at <https://www.cityofbradbury.org/images/CommunityResourcesElement.pdf>.

City of Bradbury, 2019. *About Bradbury – City History*. Accessed October 29, 2019, at <https://cityofbradbury.org/about-bradbury/city-history>.

City of Bradbury, 2020a. Municipal Code – Small Residential Rooftop Solar Systems. Available online at: https://library.municode.com/ca/bradbury/codes/code_of_ordinances?nodeId=COOR_TI_TXVIIIBURE_CH11SMREROSOSY. Accessed 3/19/2020.

City of Bradbury, 2020b. Municipal Code - Electric Vehicle Charging Stations. Available online at: https://library.municode.com/ca/bradbury/codes/code_of_ordinances?nodeId=COOR_TI_TXVIIIBURE_CH14ELVECHST. Accessed 3/19/2020

City of Duarte, 2007. City of Duarte Comprehensive General Plan 2005 – 2020, Chapter 4, Noise. Adopted August 14, 2007. Available at <https://www.accessduarte.com/civicax/filebank/blobdload.aspx?BlobID=22817> and <https://www.accessduarte.com/civicax/filebank/blobdload.aspx?BlobID=22818>. Accessed December 31, 2019.

City of Los Angeles, 2000. (Stormwater Management Division, Bureau of Sanitation, Department of Public Works). Reference Guide for Stormwater Best Management Practices. Available at [https://www.waterboards.ca.gov/rwqcb2/water_issues/programs/stormwater/muni/nrdc/16bmp_refguide\[1\].pdf](https://www.waterboards.ca.gov/rwqcb2/water_issues/programs/stormwater/muni/nrdc/16bmp_refguide[1].pdf). Downloaded on January 3, 2020.

CNRA (California Natural Resources Agency), 2007. The California Environmental Quality Act (CEQA). Guidelines for Implementation of the California Environmental Quality Act. Electronic document.

County of Los Angeles, 2020. Stormwater Best Management Practice Design and Maintenance Manual. Available online at: http://dpw.lacounty.gov/DES/design_manuals/StormwaterBMPDesignandMaintenance.pdf



- County of Los Angeles, 2018. <https://www.calrecycle.ca.gov/lgcentral/library/policy/CIWMPEnforce/part1/ciwmpadq> accessed 4/22/2020
- County of Los Angeles, 2020. Available online at: <https://lacounty.gov/government/geography-statistics/statistics/> Accessed 8/20/20.
- County of Ventura. 2010. Construction Noise Threshold Criteria and Control Plan. Accessed online at https://docs.vcrma.org/images/pdf/planning/ceqa/Construction_Noise_Thresholds.pdf on April 24, 2021.
- Dibblee, Thomas W., Jr., 1998. Geological Map of the Mnt Wilson & Azusa Quadrangles, Los Angeles County, California. *Dibblee Foundation Map DF-67*. Dibblee Geologic Foundation.
- Dietrich, C. 2020. Chadwick Ranch Estates Specific Plan VMT Assessment. Technical memorandum from Michael Baker International to Kevin Kearney, City of Bradbury. September 1.
- DOC (California Department of Conservation, Division of Mines and Geology), 2004. Recommended Criteria for Delineating Seismic Hazard Zones in California (Special Publication 118). Pp. 3 -8. Accessed online at https://www.conservation.ca.gov/cgs/Documents/Publications/SP_118.pdf. Downloaded on March 6, 2020.
- Dumke, Glenn S., 1944. *The Boom of the Eighties in Southern California*. Huntington Library, San Marino, California.
- Dudek. 2020. *Conceptual Fire Protection Plan for Chadwick Ranch Estates*.
- Eilperin, J. and Dennis, B., 2017. EPA yanks scientists' conference presentations, including on climate change. Washington Post, Washington, DC. Accessed online at https://www.washingtonpost.com/national/health-science/epa-yanks-scientists-presentations-at-conference-on-narragansett-bay/2017/10/22/7429e65c-b76a-11e7-a908-a3470754bbb9_story.html?utm_term=.b862a98fdc2f on March 6, 2020.
- Engelhardt, Zephryn, O.F.M., 1931. *San Gabriel Mission and the Beginnings of Los Angeles*. Franciscan Herald Press, Chicago.
- Eyestone Environmental, 2019. Paseo Marina Project Draft Environmental Impact Report. SCH No. 2017061017. March. Accessed online at <https://planning.lacity.org/eir/PaseoMarina/Deir/index.html> on August 21, 2021.
- Dillon, Brian D., 1994. Alameda District Plan, Los Angeles, California: Prehistoric and Early Historic Archaeological Research. California: Consulting Archaeologist.
- Dudek, 2020. Conceptual Fire Protection Plan for Chadwick Ranch Estates. February 2020
- Federal Bureau of Investigation, 2019. <https://ucr.fbi.gov/crime-in-the-u.s/2018/crime-in-the-u.s.-2018/tables/table-8/table-8-state-cuts/california.xls> accessed 5/20/2020.



- FEMA, 2012. Available online at [https://www.ready.gov/sites/default/files/Flood After Fire Fact Sheet.pdf](https://www.ready.gov/sites/default/files/Flood%20After%20Fire%20Fact%20Sheet.pdf). Accessed 4/1/2020
- Garcia, Kyle, 2016. Archaeological Site Record, Primary Record, for 19-004717, Spanish Canyon Motorway. On file, South Central Coastal Information Center, California State University, Fullerton.
- FEMA (Federal Emergency Management Agency). 2020. Flood Risks Increase After Fires. Accessed online at: https://www.fema.gov/sites/default/files/documents/fema_flood-after-fire_factsheet_nov20.pdf, on February 10, 2021.
- GMI (GHG Management Institute), 2018. What is a Global Warming Potential? And Which One Do I Use? GHG Management Institute. Available online at <https://ghginstitute.org/2010/06/28/what-is-a-global-warming-potential/>. Last accessed January 2, 2020.
- Golla, Victor, 2011. California Indian Languages. University of California Press: Los Angeles
- Google Earth Pro, 2020. Available online at <https://earth.google.com>. Accessed August 20, 2020.
- Grayson, Donald K., 2011. *The Great Basin: A Natural Prehistory*. University of California Press, Berkeley.
- Gudde, Erwin G., 2004. *California Place Names: The Origin and Etymology of Current Geographical Names*. Fourth Edition, Revised and Enlarge by William Bright. University of California Press: Los Angeles.
- Harrington, John P., 1986. *Native American History, Language, and Culture of Southern California/Great Basin*. Edited by Elaine L. Mills and Ann J. Brickfield. The Papers of John Peabody Harrington in the Smithsonian Institution, 1907 – 1957, Volume 3. Microfilm edition. National Anthropological Archives, Smithsonian Institution: Washington, D/C. Kraus International Publications: Millwood, New York.
- Howard, W. J., and L. M. Raab, 1993. Olivella Grooved Rectangle Beads as Evidence of an Early Period Southern California Channel Island Interaction Sphere. *Pacific Coast Archaeological Society Quarterly* 29(3):1-11.
- ICF Jones and Stokes. 2009. Final Technical Noise Supplement. Accessed online at https://www.gsweventcenter.com/Draft_SEIR_References/2013_0709_DOT_Technical_Noise_2009.pdf on April 22, 2021.
- Jones, Terry L., and Kathryn A. Klar (edited by), 2007. *California Prehistory: Colonization, Culture, and Complexity*. AltaMira Press, New York.
- Knauer, H. et al., 2006. FHWA Highway Construction Noise Handbook. U.S. Department of Transportation, Research and Innovative Technology, Administration, Cambridge, Massachusetts, FHWA-HEP-06-015. August.



- Kroeber, Alfred, 1925. Handbook of the Indians of California. *Bureau of American Ethnology Bulletin* No. 78, Washington, D.C.
- LACFD Statistical Summary, 2019. Accessed online at: <https://fire.lacounty.gov/wp-content/uploads/2020/06/2019-Statistical-Summary-May-2020.pdf>, on June 7, 2021.
- losangeles.cbslocal.com. 2021. Mudslide Shuts Down Azusa Highway During Storm, Monrovia Escapes Serious Damage. Accessed online at: <https://losangeles.cbslocal.com/2021/01/29/mudslide-shuts-down-azusa-highway/>, on August 27, 2021.
- Los Angeles County Fire Department (LACoFD). 2017. Los Angeles County Fire Department Strategic Plan 2017-2021. Accessed online at: <https://fire.lacounty.gov/wp-content/uploads/2019/09/LACoFD-Strategic-Plan-2017-2021.pdf>, on February 10, 2021.
- Los Angeles County Sheriff, 2018. Available online at: <http://shq.lasnews.net/CrimeStats/yir9600/yir2018/tem/40.htm>. Accessed on March 18, 2020.
- Los Angeles County Library System, 2020. Duarte Library. Available online at: <https://lacountylibrary.org/duarte-library/>. Accessed on March 18, 2020.
- Los Angeles County Chief Executive Office (LACOA). 2012. Los Angeles County Operational Area Emergency Response Plan. Accessed online at: <https://ceo.lacounty.gov/wp-content/uploads/2019/12/OAERP-Approved-Adopted-Version-6-19-2012.pdf>, on December 22, 2020.
- Los Angeles County Chief Executive Office (LACOA). 2019. Los Angeles County All-Hazard Mitigation Plan. Accessed online at: http://file.lacounty.gov/SDSInter/lac/1062614_AHMPPublicDraft_Oct1.pdf, on December 21, 2021.
- Los Angeles County Department of Regional Planning, 2020. Significant Ecological Areas and Coastal Resource Areas Policy Map. Accessed online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_2014-FIG_9-3_significant_ecological_areas.pdf, on June 22, 2020.
- McCawley, William, 1996. *The First Angelinos: The Gabrielino Indians of Los Angeles*. Malki Museum Press, Banning, California/Ballena Press, Novato, California.
- McLeod, Samuel A, Ph.D, 2019. Paleontological Records Search for the proposed Chadwick Ranch Estates Project, UltraSystems Environmental Project No. 7023, in the City of Bradbury, Los Angeles County, project area. Natural History Museum Los Angeles County.
- Meighan, C. W., 1954. A Late Complex in Southern California Prehistory. *Southwest Journal of Anthropology* 10(2):215-227.
- Metro, 2018. 2010 Congestion Management Plan. Accessed online at https://media.metro.net/projects_studies/cmp/images/CMP_Final_2010.pdf in February 2020.



- Metropolitan Transportation Authority of Los Angeles County (Metro). 2014. Metro Bike Map. Accessed online at: http://www.metro.net/riding_metro/bikes/images/bike_map_la.pdf, on March 22, 2021.
- Metropolitan Water Department, 2015. [http://mwdh2o.com/Reports/2.4.1 Integrated Resources Plan.pdf](http://mwdh2o.com/Reports/2.4.1_Integrated_Resources_Plan.pdf) accessed 4/22/2020
- Moratto, Michael J., 1984. *California Archaeology*. Academic Press, Orlando, Florida.
- Native American Heritage Commission, 2020. California Public Resources Code §5097.98. Accessed online at <http://nahc.ca.gov/codes/california-public-resources-code-5097-9/> on March 3, 2020.
- NWCG (National Wildfire Coordinating Group). 2021. Inciweb: Incident Information System. Bobcat. Accessed online at: <https://inciweb.nwcg.gov/incident/maps/7152/>, on January 28, 2021.
- NEHRP (National Earthquake Hazard Reduction Program), 2018. Accessed online at <https://www.nehrp.gov/about/history.htm> on March 2, 2020.
- Nelson, Trayci, 2020. Personal Communications regarding AB 52 status of consultation between the City of Bradbury and Native American tribes. Emails to Stephen O'Neil (UltraSystems Environmental) February 17, February 18 and March 31, 2020. Michael Baker International, representing the City of Bradbury Planning Department.
- Nevis Capital, LLC. 2019. City of Bradbury Evacuation Routes.
- Obama White House, 2019. *President Obama Designates San Gabriel Mountains National Monument*. Retrieved November 1, 2019, from <https://obamawhitehouse.archives.gov/the-press-office/2014/10/10/president-obama-designates-san-gabriel-mountains-national-monument>.
- OEHHA (California Office of Environmental Health Hazard Assessment), 1998. Executive Summary for the “Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant”. Office of Environmental Health Hazard Assessment. April 22, 1998.
- OEHHA, 2016. OEHHA Acute, 8-hour and Chronic Reference Exposure Level (REL) Summary. Office of Environmental Health Hazard Assessment. Accessed online at <https://oehha.ca.gov/air/general-info/oehha-acute-8-hour-and-chronic-reference-exposure-level-rel-summary-on-november-2018>.
- O'Neil, Stephen, and Megan Black Dukakis, 2019. Cultural Resources inventory of the Chadwick Ranch Estates Project, City of Bradbury, Los Angeles County, California. UltraSystems Environmental Inc., Irvine, California.
- OPR, 2017. General Plan Guidelines: State of California, Governor’s Office of Planning and Research, Sacramento, California. Available at http://opr.ca.gov/docs/OPR_COMPLETE_7.31.17.pdf. Accessed August 19, 2019.



- Palos Verdes Estates, City of, (PVE). 2018. Local Hazard Mitigation Plan. Accessed online at: <https://www.pvestates.org/home/showpublisheddocument/10877/6367605200456000>, on September 7, 2021.
- POLB (Port of Long Beach), 2009. Middle Harbor Redevelopment Project. Final Environmental Impact Statement (FEIS)/Final Environmental Impact Report (FEIR) and Application Summary Report. Appendix C – Noise. Prepared by SAIC for Port of Long Beach and U.S. Army Corps of Engineers. April. URL: https://polb.com/download/390/environmental-archive/7072/middle-harbor-redevelopment-project-eir_eis-appendices-a-e-040209.pdf.
- Porcasi, Judith F., 1998. Middle Holocene Ceramic Technology on the Southern California Coast: New Evidence from Little Harbor, Santa Catalina Island. *Journal of California and Great Basin Anthropology* 20:270-284.
- Pratt, Riley, 2011. Biological Assessment (BA) / Biological Evaluation (BE) of the proposed Glendora Mountain Road Culvert Repair Project; Los Angeles County, California, Angeles National Forest, San Gabriel River Ranger District. Prepared for: County of Los Angeles Department of Public Works. UltraSystems Environmental, Inc.: Irvine, California.
- Q3 Consulting and Proactive Engineering Consultants, Inc. 2019a. Chadwick Ranch Estates (TTM No. 82349) Preliminary Hydrology and Hydraulics Report (City of Bradbury, California). Prepared for Nevis Capital, LLC. September 26, 2019.
- Q3 Consulting and Proactive Engineering Consultants, Inc. 2019b. Chadwick Ranch Estates (TTM No. 82349) LID Plan, City of Bradbury, California. Prepared for Nevis Capital, LLC. September 27, 2019.
- Rancho Azusa de Duarte, 2019. Rancho Azusa de Duarte. Retrieved November 1, 2019, from https://en.wikipedia.org/wiki/Rancho_Azusa_de_Duarte#:~:text=In%201841%2C%20on%20retirement%20from,the%20Rancho%20Azusa%20de%20Dalton.
- RWQCB (Los Angeles Regional Water Quality Control Board), 1994 (as amended). Water Quality Control Plan, Los Angeles Region. Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties. Available at https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.html. Downloaded on January 2, 2020.
- Sahagun, Louis, 2014. *Obama to publicly name San Gabriel Mountains a national monument today*. Retrieved November 1, 2019, from <https://www.latimes.com/local/la-me-lnh-obama-san-gabriel-mountains-national-monument-20141010-story.html>.
- Robinson, John, 1991. *The San Gabriels: The mountain country from Soledad Canyon to Lytle Creek*. Arcadia, CA: Big Santa Anita Historical Society.
- San Diego, 2003. San Diego Municipal Code, Land Development Code, Trip Generation Manual. City of San Diego. Revised May 2003.
- SCAG (Southern California Association of Governments), 2008. Final 2008 Regional Comprehensive Plan: Helping Communities Achieve a Sustainable Future. Los Angeles, CA.



- SCAG, 2016 (April). *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy*. Los Angeles: SCAG. <http://rtpscs.scag.ca.gov/Pages/2016-2040-RTP-SCS.aspx>
- SCAG, 2018. Available online at <https://www.scag.ca.gov/about/Pages/Home.aspx>. Accessed March 4, 2020
- SCAQMD (South Coast Air Quality Management District), 1993. *CEQA Air Quality Handbook*. South Coast Air Quality Management District. April 1993.
- SCAQMD, 2008. *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules, and Plans*. South Coast Air Quality Management Board. Adopted December 5, 2008.
- Silva, Michael A., Pamela J. Irvine, and Siang S. Tan, 1998. *Seismic Hazard Zone Report for the Los Angeles 7.5-minute Quadrangle, Los Angeles County, California: Earthquake-Induced Landslide Evaluation Report [Seismic Hazard Zone Report 029 (updated 2001)]*. California Department of Conservation, Division of Mines and Geology, p. 18.
- Smith, Geoffrey, M., and Pat Barker, 2017. *The Terminal Pleistocene/Early Holocene Record in the Northwestern Great Basin: What we Know, What We Don't Know, and How We May Be Wrong*. <http://dx.doi.org/10.1088/20555563.2016.1272395> (Paleoamerican, Center for the Study of the First Americans, Texas A&M University). Accessed online on February 10, 2017.
- Southern California Association of Governments, 2016. *Regional Transportation Plan/Sustainable Communities Strategy*. Available online at: <http://rtpscs.scag.ca.gov/Pages/2012-2035-RTP-SCS.aspx>. Accessed March 29, 2020.
- Southern California Association of Governments (SCAG). 2016 (April). *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy*. Los Angeles: SCAG. <http://rtpscs.scag.ca.gov/Pages/2016-2040-RTP-SCS.aspx>
- Southern California Association of Governments (SCAG). 2019. *Profile of the City of Bradbury*. Accessed online at: https://scag.ca.gov/sites/main/files/file-attachments/bradbury_localprofile.pdf?1605663978, on February 10, 2021.
- Southern California Edison, 2019. <https://www.sce.com/about-us/environment/power-generation> accessed 4/22/2020
- SCAG, 2016. *2012-2035 RTP/SCS*. Available online at: <http://rtpscs.scag.ca.gov/Pages/2012-2035-RTP-SCS.aspx>. Accessed 3/19/2020.
- SCAG, 2018. <https://www.scag.ca.gov/about/Pages/Home.aspx> SCAG website accessed March 4, 2020
- Southern California Association of Governments (SCAG), *Profile of the City of Bradbury*, May 2019, p. 19
- SCAQMD, 2018. *Final 2016 Air Quality Management Plan*. South Coast Air Quality Management District. March 2018.



- SCE (Southern California Edison), 2020. <https://www.edison.com/content/dam/eix/documents/investors/corporate-governance/eix-sce-2019-annual-report.pdf>. Accessed 3/19/2020.
- SoCalGas, 2019. Available online at: <https://investor.sempra.com/static-files/68af0350-d99c-412c-af4f-aa8e6c8e2606>. Accessed 3/19/2020.
- Sutton, Mark Q., 2008a. The Del Ray Tradition and Its Place in the Prehistory of Southern California. *Pacific Coast Archaeological Society Quarterly* 44(2):1-54.
- Sutton, Mark Q., 2008b. The Palomar Tradition and Its Place in the Prehistory of Southern California. *Pacific Coast Archaeological Society Quarterly* 44(4):1-74.
- Thomas Harder & Co. 2019. Technical Memorandum: Evaluation of Potential Well Sites for the Chadwick Ranch Estates. Sent to Mr. Mike Cho, TRG Land, Inc. August 26, 2019.
- True, Delbert L., 1958. An Early Complex in San Diego County, California. *American Antiquity* 23(3):255-263.
- True, Delbert L., 1970. Investigations of a Late Prehistoric Complex in Cuyamaca Rancho State Park, San Diego County, California. *Archaeological Survey Monographs* 1. University of California, Los Angeles.
- U.S. Census, 2010. Available online at: <https://data.census.gov> accessed Feb. 4, 2020
- U.S. Census, 2018. Accessed online at <https://data.census.gov> on February 4, 2020.
- US Department of Agriculture (USDA) and US Department of the Interior (USDOI). 2014. The National Strategy: The Final Phase in the Development of the National Cohesive Wildland Fire Management Strategy. Accessed online at: <https://www.forestsandrangelands.gov/documents/strategy/strategy/CSPPhaseIIINationalStrategyApr2014.pdf>, on February 10, 2021.
- U.S. Department of the Interior, 1997. How to Apply the National Register Criteria for Evaluation, *National Register Bulletin* #15.
- US Department of Transportation, 2020. CAFE Standards. Available online at: <https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy>. Accessed March 19, 2020.
- USEPA, 1974. "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety," EPA Report No. 550/9-74-004, March 1974. Available online at: <https://www.rosemonteis.us/sites/default/files/references/usepa-1974.pdf>. Accessed November 4, 2021,
- USEPA, 2020. Available online at: <https://www.epa.gov/laws-regulations/summary-energy-independence-and-security-act> accessed 3/19/2020.
- USFWS. 2020a. Information for Planning and Consultation (IPaC) system. Accessed online at: <https://ecos.fws.gov/ipac/location/index>, on June 11, 2020.



- US Fish and Wildlife Service (USFWS). 2020b. National Wetlands Mapper. Accessed online at: <https://www.fws.gov/wetlands/data/mapper.HTML>, on August 20, 2020.
- Vance, D. W., 2001. Archaeological Site Record, Primary Record, for 19-186917, Rincon-Red Box-Sawpit Roads Complex, USDA-Forest Service, Angeles National Forest. On file, South Central Coastal Information Center, California State University, Fullerton.
- Vance, D. W., 2005. Archaeological Site Record, Site Record Update, for 19-186917, Van Tassel Road, USDA-Forest Service, Angeles National Forest. On file, South Central Coastal Information Center, California State University, Fullerton.
- Vardhan, H., Karmakar, N.C. and Rao, Y.V. 2015. Experimental Study of Sources of Noise from Heavy Earth-Moving Machinery. *Noise Control Engineering Journal* 53(2). Available at https://www.researchgate.net/publication/243585125_Experimental_study_of_sources_of_noise_from_heavy_earth-moving_machinery. Accessed August 5, 2020.
- Wald, David J., et al. 1999, August. Relationships Between Peak Ground Acceleration, Peak Ground Velocity, and Modified Mercalli Intensity in California. *Earthquake Spectra* 15 No. 3.
- Wallace, William J., 1978. Post-Pleistocene Archeology, 9,000 to 2,000 BC. In Robert F. Heizer (ed.), *Handbook of North American Indians*, Vol. 8: California; pp. 25-36. Smithsonian Institution, Washington, D.C.
- Warren, Claude N., 1968. Cultural Traditions and Ecological Adaptations on the Southern California Coast. In Cynthia Irwin-Williams (ed.), *Archaic Prehistory in Western United State*, pp. 1-14. *Eastern New Mexico University Contributions in Anthropology* 1(3). Portales, New Mexico.
- Warren, Claude N., 1984. The Desert Region. In Michael J. Moratto (ed.), *California Archaeology*, pp. 339-430. Academic Press, Orlando, Florida.
- Warren, Claude N., and Robert H. Crabtree, 1986. Prehistory of the Southwestern Area. In *Handbook of North American Indians*, William C. Sturtevant, general editor, Vol. 11, Great Basin, edited by Warren L. D’Azevedo, pp. 183-193. Smithsonian Institution, Washington, DC.
- Water Systems Consulting, Inc. (WSC). Final 2015 Urban Water Management Plan for the Southern Division- Los Angeles County District. Accessed online at: https://wuedata.water.ca.gov/public/uwmp_attachments/6452893912/Final%20Los%20Angeles%20County%20District%202015%20Urban%20Water%20Management%20Plan%2Epdf, on May 18, 2021.
- WRCC, 2020. Western U.S. Climate Historical Summaries, Western Regional Climate Center. <http://www.wrcc.dri.edu/Climsum.html>. Accessed February 2020.

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8.0 LIST OF PREPARERS

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Joe O’Bannon, President/CEO

Petra Geosciences, Inc. - Geotechnical Review Report
Theodore M. Wolfe, Senior Associate Geologist
Ronald A. Reed, Senior Associate Engineer

Proactive | Q₃ Consulting/Proactive Engineering Consultants - Preliminary Hydrology & Hydraulics Report and LID Plan
Mark Anderson, PE, Principal/CFO, Proactive Engineering Consultants
John McCarthy, PE, Principal, Q3 Consulting

8.1.4 Persons and Organizations Contacted

South Central Coastal Information Center; California Historic Resource Information System; California State University, Fullerton
Stacy St. James

Native American Heritage Commission (NAHC)
Steven Quinn, Associate Governmental Program Analyst

Native American Tribes:

Gabrielino/Tongva Nation
Sandonne Goad, Chairperson

Gabrielino-Tongva Tribe
Charles Alvarez



Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson

Gabrieleno Band of Mission Indians – Kizh Nation
Andrew Salas, Chairperson

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson

San Fernando Band of Mission Indians
Donna Yocum, Chairperson