ADMINISTRATIVE DRAFT

VILLAGE OF MARBLE VALLEY SPECIFIC PLAN
DRAFT ENVIRONMENTAL IMPACT REPORT

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Appendices are found on the attached CD

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Figures follow the chapter or section in which they are referenced.

Acronyms and Abbreviations

2017 Ozone Plan	*Sacramento Regional 2008 8-Hour Ozone Attainment and Reasonable Further Progress Plan*
AB	Assembly Bill
af	acre-feet
af/ac	acre-feet of water use annually per acre of land
af/du	acre-feet per dwelling unit
AFY	acre-feet per year
Alquist-Priolo Act	Alquist-Priolo Earthquake Fault Zoning Act
AP	Adopted Plan
APN	Assessor's Parcel Number
AP-VMVSP	Adopted Plan-Village of Marble Valley Specific Plan
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
AT	Agriculture Tourism
BAAQMD	Bay Area Air Quality Management District
BAU	business-as-usual
BGEPA	Bald and Golden Eagle Protection Act
BMP	best management practice
BTU	British thermal units
C	Celsius
CAA	Clean Air Act
CAAQS	California ambient air quality standards
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
Cal-EPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	climate action plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
Carl Moyer Program	Carl Moyer Memorial Air Quality Standards Attainment Program
CBSC	California Building Standards Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDPH	California Department of Public Health

CEC	California Energy Commission
CEDHSP	Central El Dorado Hills Specific Plan
Central Valley Water Board	Central Valley Regional Water Quality Control Board
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CESA	California Endangered Species Act
CFD	Community Facilities District
CFR	Code of Federal Regulations
CH_4	methane
CIP	capital improvement plan
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPPA	California Native Plant Protection Act
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COG	council of governments
COP21	Conference of Parties
County	El Dorado County
County General Plan	El Dorado County General Plan
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CSD	community services district
CTC	California Transportation Commission
CUWCC	California Urban Water Conservation Council
CVP	Central Valley Project
CWA	Clean Water Act
CWD	County Water District
dB	decibels
dBA	A-weighted decibel
DFM	distribution feeder main
DOF	California Department of Finance
DOSD	State Division of Safety of Dams
DPM	diesel particulate matter
Drainage Manual	*County of El Dorado Drainage Manual*
DTSC	California Department of Toxic Substances Control
du	dwelling unit
du/ac	dwelling unit per acre

DWR	California Department of Water Resources
EDCAQMD	El Dorado County Air Quality Management District
EDCAQMD CEQA Guidelines	EDCAQMD's *Guide to Air Quality Assessment, Determining Significance of Air Quality Impacts Under the California Environmental Quality Act*
EDCTA	El Dorado County Transit Authority
EDCTC	El Dorado County Transportation Commission
EDCTDM	El Dorado County Travel Demand Forecasting Model
EDCWA	El Dorado County Water Agency
EDHFD	El Dorado Hills Fire Department
EDHSP	El Dorado Hills Specific Plan
EID	El Dorado Irrigation District
EIR	environmental impact report
EMD	Environmental Management Department
EO	Executive Order
ESA	federal Endangered Species Act
ESL	Environmental Screening Level
F	Fahrenheit
Fed. Reg.	*Federal Register*
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FILs	facility improvement letters
FIRM	flood insurance rate map
FMMP	Farmland Mapping and Monitoring Program
FPR	facility plan report
General Construction Permit	General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order 2010-0014-DWQ)
GHG	greenhouse gas
GIS	geographic information system
GSA	groundwater sustainability agency
GSP	groundwater sustainability plan
GWP	global warming potential
HCD	California Department of Housing and Community Development
HFC	hydrofluorocarbon
HFHSZ	high fire hazard severity zone
HI	hazard index
HOA	homeowners' association
"Hot Spots" Act	Air Toxics "Hot Spots" Information and Assessment Act of 1987
HPTP	historic properties treatment plan

HSWA	Hazardous and Solid Waste Amendments of 1984
HVAC	heating, ventilation, and air conditioning
HWCA	Hazardous Waste Control Act
Hz	Hertz
I-	Interstate
IBC	International Building Code
IHMP	important habitat mitigation plan
IPCC	Intergovernmental Panel on Climate Change
IWMP	Integrated Waste Management Plan
IWRMP	Integrated Water Resources Master Plan
km	kilometer
kWh	kilowatt-hours
LCFS	low carbon fuel standard
L_{dn}	day-night sound level
LDR	Low-Density Residential
LED	light-emitting diode
LEED	Leadership in Energy and Environmental Design
LID	low-impact development
L_{max}	maximum sound level
L_{min}	minimum sound level
LOS	level of service
LRVHD	Lime Rock Valley Historic District
LRVSP	Lime Rock Valley Specific Plan
LUST	leaking underground storage tank
MBTA	Migratory Bird Treaty Act
MCAB	Mountain Counties Air Basin
MERV	minimum efficiency reporting value
mg/kg	milligrams per kilogram
mgd	million gallons per day
MLD	most likely descendant
MMRP	Mitigation Monitoring and Reporting Program
MOU	Memorandum of Understanding
MPO	metropolitan planning organization
MRF	Material Recovery Facility
MRZ	mineral resource zone
MS4	municipal separate storm sewer system
MTIP	*Metropolitan Transportation Improvement Program*
MTP	Metropolitan Transportation Plan
MVAD	Marble Valley Archaeological District
MVHLMD	Marble Valley Historic Limestone Mining District

MWELO	Model Water Efficient Landscape Ordinance
N_2O	nitrous oxide
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NDC	nationally determined contribution
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NO	nitric oxide
NO_2	nitrogen dioxide
NOA	naturally occurring asbestos
NO_X	nitrogen oxides
NP	Neighborhood Park
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRHP	National Register of Historic Places
NWP	nationwide permit
NWPR	Navigable Waters Protection Rule
O&M	operations and maintenance
OHWM	ordinary high water mark
OP	Office Park
OPR	Governor's Office of Planning and Research
ORMP	Oak Resources Management Plan
OS	Open Space
OSMP	Open Space Management Plan
Pb	lead
pCi	picocurie
pCi/L	picocurie per liter
PEV	plug-in electric vehicle
PG&E	Pacific Gas and Electric Company
PM	particulate matter
PM10	particulate matter 10 microns in diameter or less
PM2.5	particulate matter 2.5 microns in diameter or less
ppb	parts per billion
PPV	peak particle velocity
PRC	California Public Resources Code
proposed project	Village of Marble Valley Specific Plan

psi	pounds per square inch
PV	photovoltaic
RCEM	Roadway Construction Emissions Model
RCRA	Resource Conservation and Recovery Act of 1976
Reclamation	U.S. Bureau of Reclamation
Regional Water Board	Regional Water Quality Control Board
RHNA	Regional Housing Needs Allocation
RHNP	Regional Housing Needs Plan
ROG	reactive organic gas
RPS	Renewables Portfolio Standard
RTP	regional transportation plan
SACOG	Sacramento Area Council of Governments
SAFE	Safer Affordable Fuel-Efficient
SB	Senate Bill
SCS	sustainable communities strategy
SCWA	Sacramento County Water Agency
SEL	sound exposure level
SFNA	Sacramento Federal Nonattainment Area
SGMA	Sustainable Groundwater Management Act
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SLCP	short-lived climate pollutant
Small MS4 Permit	Stormwater Discharges from Small Municipal Separate Storm Sewer Systems General Permit No. CAS000004 (Order 2013-001-DWQ)
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMARA	Surface Mining and Reclamation Act of 1975
SMUD	Sacramento Municipal Utility District
SO_2	sulfur dioxide
SR	State Route
SRA	State Responsibility Area
State Water Board	State Water Resources Control Board
SVP	Society of Vertebrate Paleontology
SWANCC	*Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*
SWMP	stormwater management plan
SWPPP	stormwater pollution prevention plan
TAC	toxic air contaminant
Tanner Act	Toxic Air Contaminant Identification and Control Act
TGPA/ZOU	targeted general plan amendment/zoning ordinance update
TIM	Traffic Impact Mitigation

TMDL	total maximum daily load
TMP	transportation management plan
TNW	traditional navigable waters
TPH	total petroleum hydrocarbons
TR	Tourist Recreational
TRI	Toxic Release Inventory
UAIC	United Auburn Indian Community
UARP	Upper American River Project
Under2 MOU	Global Climate Leadership Memorandum of Understanding
US	U.S. Highway
USACE	U.S. Army Corps of Engineers
USBM	U.S. Bureau of Mines
USC	United States Code
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
UWMP	Urban Water Management Plan
VC	Village Commercial
VHFHSZ	very high fire hazard severity zone
VMT	vehicle miles traveled
VMVSP	Village of Marble Valley Specific Plan
VOC	volatile organic compounds
VP	Village Park
VRH	Village Residential – High
VRL	Village Residential – Low
VRM	Village Residential – Medium
WDR	waste discharge requirement
WSA	water supply assessment
WTP	water treatment plant
WWFMP	Wastewater Facilities Master Plan
WWTP	wastewater treatment plant
ZNE	zero net energy

Introduction

This executive summary identifies the purpose of the draft environmental impact report (EIR), provides an overview of the proposed Village of Marble Valley Specific Plan (VMVSP; proposed project), and identifies the impacts that would result from implementation of the proposed project and recommended mitigation measures. This summary also presents other conclusions required by the California Environmental Quality Act (CEQA) and the State CEQA Guidelines. These discussions provide an overview and are to be used in conjunction with the Draft EIR and technical appendices.

The proposed project site is in an unincorporated area of El Dorado County, California that is approximately 29 miles northeast of downtown Sacramento and 14 miles west of Placerville. The proposed project site covers approximately 2,341 acres south of U.S. Highway (US) 50 in El Dorado Hills and southwest of Cameron Park.

Purpose of the Draft EIR

This Draft EIR has been prepared by El Dorado County (County), as lead agency, pursuant to CEQA (Public Resources Code 21000 et seq.); the State CEQA Guidelines (California Code of Regulations 15000 et seq.), as amended; and the County's environmental thresholds of significance. CEQA requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority. Approval of the proposed project, which includes a general plan amendment and rezoning, constitutes a *project* under CEQA.

An EIR is an informational document used in the planning and decision-making process. It is not the purpose of an EIR to recommend either approval or denial of a project. An EIR is a public document that assesses the environmental effects related to the planning, construction, and operation of the proposed project and identifies ways to reduce or avoid possible environmental damage. The EIR discloses significant environmental impacts that cannot be avoided; growth-inducing impacts; effects found not to be significant; and significant cumulative impacts of all past, present, and reasonably anticipated future projects.

This EIR will be used by the El Dorado County Planning Commission and Board of Supervisors to determine whether implementation of the proposed project would result in significant environmental impacts. If environmental impacts are identified as significant and unavoidable, the County may still approve the project if it believes that social, economic, or other benefits outweigh the unavoidable impacts. When that is the case, the County must disclose the specific benefits in writing.

Level of Review in EIR

CEQA identifies various types of EIRs, the most common of which is the project EIR. A project EIR focuses primarily on the changes in the environment that would result from a development project. It examines all phases of the project, including planning, construction, and operation. For the proposed project, this Draft EIR covers environmental impacts at a project level for onsite

improvements consistent with the level of detail provided in the VMVSP, supported by site-specific studies.

Offsite improvements associated with the proposed project, improvements or connections to existing infrastructure such as water and wastewater are included in the project. Each of these offsite improvements is examined in this Draft EIR to determine potential impacts. Where feasible, mitigation measures are recommended. The offsite improvements are analyzed to the extent of detail available at the time that this Draft EIR was prepared and later environmental review based on review of this EIR may be required once infrastructure details are known.

Public Review Process

Notice of Preparation Review and Scoping

A Notice of Preparation (NOP) was prepared for the proposed project and published for a 30-day public review and comment period beginning February 20, 2013 (Appendix A). The County conducted a public scoping meeting on March 6, 2013, at the at Assembly Hall of the Cameron Park Community Services District in Cameron Park, from 6:30 to 8:30 p.m. Approximately 30 individuals provided written or oral comments on the NOP. A summary of these comments is also included in Appendix A.

EIR Public Review

The County encourages public review of this EIR. This Draft EIR is being circulated for a 60-day public review period. During this time, written comments may be submitted to the following staff person for consideration in the Final EIR.

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Following the close of the public comment period, the County will prepare a Final EIR that contains this Draft EIR plus any technical clarifications and responses to significant environmental points raised in the public review and resource agency consultations. The Final EIR will be considered by the El Dorado County Planning Commission and the Board of Supervisors and, subsequently, a decision will be made to approve or deny the proposed project.

Areas of Known Controversy/Issues to be Resolved

State CEQA Guidelines Section 15123(b) requires that the summary section of the EIR include a description of areas of controversy known to the lead agency, including issues raised by agencies and the public and issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects. The areas of community concern and known controversy primarily focus on the overall level of growth and resulting effects in the El Dorado Hills area.

Areas of community concern (based on comments on the Notice of Preparation [NOP]) include the following.

- Location of schools.
- Decrease in wildlife habitat.
- Increased density of project.
- Unauthorized use of private roads and emergency egress.

Areas of known controversy include the following.

- Increased traffic in the area.
- Increased traffic congestion on U.S. Highway 50.
- Water supply and availability.
- Wildfire hazard.
- Availability and the jurisdiction of recreational facilities.

Project Overview

The proposed project would be a mixed-use community consisting of residential, commercial, retail, agricultural, and open space uses (including 466 acres of natural open space land for passive day-use park or private natural open space). Specifically, approval of the proposed project would allow the development of up to 3,236 residential units, 475,000 square feet of nonresidential uses, 55 acres of agricultural use, 87 acres of public facilities/recreational use (including two public schools—K–5 or K–6 and K–8, plus 47 acres of public parkland), and 61 acres of road areas and future right-of-way. In addition, 1,284 acres would be designated as open space. The proposed project would be designed in a manner that would concentrate a majority of the density in a 1-mile core along the entry roadway and would be designed to preserve, enhance, and highlight the historical use of the property for limestone mining. In addition, the proposed project includes a special project theme focusing on vineyard landscapes.

Several infrastructure improvements outside the VMVSP area would be required to support the proposed project. These offsite improvements would include improvements to the US 50/Bass Lake and US 50/Cambridge Road interchanges, the extension of the new Marble Valley Parkway to the US 50/Cambridge Road interchange and between the east and west sides of the northern portion of the proposed project site; a new connection of Marble Valley Parkway to the US 50/Bass Lake Road interchange; the extension of the new Lime Rock Valley Road to Deer Creek Road; water, recycled water (potentially), and wastewater line extensions and improvements to connect to existing El Dorado Irrigation District infrastructure; electric and natural gas line extensions and connections to Pacific Gas and Electric Company facilities; and oak canopy offsite improvements. A number of traffic mitigation measures would be necessary to reduce project and cumulative impacts to a less-than-significant level.

To implement the proposed development, the applicant is requesting amendments to the *El Dorado County General Plan* (County General Plan), rescission of the previous Marble Valley Master Plan and its associated entitlements, and rezoning, in addition to adoption of the new VMVSP. The new VMVSP would replace the Marble Valley Master Plan. The proposed project would include the County actions described below.

General Plan Amendments

The proposed project would include the following County General Plan amendments.

- Expand the Community Region of El Dorado Hills to include the VMVSP area.
- Amend the County General Plan Land Use Map designation of subject lands from Low-Density Residential (LDR) (1 dwelling unit per 5 acres [1 du/5 ac]) to Adopted Plan-Village of Marble Valley Specific Plan (AP-VMVSP) and VMVSP land use designations Village Residential – Low (VRL) (0.9–5.0 du/ac, average 2.9 du/ac), Village Residential – Medium (VRM) (5.0–12.0 du/ac, average 8.3 du/ac), Village Residential – High (VRH) (12.0–24.0 du/ac, average 17.8 du/ac), Office Park (OP), Village Commercial (VC), Public Utilities (PU), Public School (PS), Village Park (VP), Agriculture Tourism (AT), and Open Space (OS).

Rezoning

The proposed project would include the following rezoning.

- Amend zone districts from Estate Residential 5-Acre-Planned Development (RE-5-PD) and Open Space-Planned Development (OS-PD) to VMVSP zone districts Single-Family 15,000 square feet (SF)-Planned Development (R15-PD), Single-Family 10,000 SF-Planned Development (R10-PD), Single-Family 6,000 SF-Planned Development (R6-PD), Single-Family 4,000 SF-Planned Development (R4-PD), Multifamily-Medium Density-Planned Development (RM1-PD), Multifamily-High Density-Planned Development (RM2-PD), Office Park-Planned Development (C1-PD), Entertainment-Planned Development (C2-PD), Mixed Use-Planned Development (C3-PD), Vineyards-Planned Development (AT1-PD), Community Open Space-Planned Development (OS1-PD), and Foundation/Private Open Space-Planned Development (OS2-PD).

Rescission of the 1998 Marble Valley Master Plan

The proposed project would be located at the site of the previously approved 398-lot Marble Valley Master Plan. The Development Agreement DA97-0001 for the Marble Valley Tentative Maps under TM95-1298 and TM95-1299 was previously approved by the El Dorado County Board of Supervisors in 1998 but has since expired. If the proposed project is approved, the previously approved Marble Valley Master Plan would be rescinded and replaced by the VMVSP.

Adoption of Village of Marble Valley Specific Plan

As part of the entitlement process, the County would adopt the VMVSP for the development of 3,236 dwelling units and 475,000 square feet of commercial use, and the designation of 1,284 acres of open space on a 2,341-acre project area. The proposed project would require the County's approval of a development agreement, financing plan, development plan, and tentative and final subdivision maps.

Project Impacts and Mitigation Measures

The potential environmental impacts that would result from implementation of the proposed project and the proposed mitigation measures are summarized in Table ES-1 (at end of this chapter). In many cases, impacts would be less than significant. To the extent feasible, the County

has incorporated mitigation measures into the proposed project to avoid or reduce impacts. Those impacts that cannot be mitigated to a less-than-significant level would remain significant and unavoidable, as shown in Table ES-1.

Other CEQA-Related Impact Conclusions

Cumulative Impacts

Section 15130 of the State CEQA Guidelines requires that an EIR consider a project's contribution to any significant cumulative impacts. Cumulative impacts are the incremental effects of a proposed project added to the impacts of other closely related past, present, and reasonably foreseeable future projects, which, together, are cumulatively considerable. The purpose of the cumulative impact analysis is to assess the project's contribution in the context of the larger, cumulative impact.

All resource areas evaluated in this EIR were analyzed for cumulative impacts. No cumulative impact related to hazards and hazardous materials, or water resources was identified. The proposed project would not result in a considerable contribution to the cumulative impacts regarding the following resource topics within the El Dorado Hills region (and, therefore, cumulative impacts would be less than significant).

- Geology and soils
- Hydrology and water quality
- Land use planning and agricultural resources
- Minerals
- Paleontological resources
- Public services and utilities
- Recreation
- Transportation and Circulation

The project is expected to result in considerable contributions that cannot be mitigated to a less-than-significant level to cumulative impacts regarding the following resource topics within the El Dorado Hills region.

- Aesthetics
- Air quality
- Biological resources
- Cultural resources
- Greenhouse gas emissions
- Noise and vibration
- Population and housing

A detailed assessment of the project's contribution to cumulative impacts is provided in Chapter 5, *Other CEQA Considerations*.

Growth Inducement and Growth-Related Impacts

Section 15126.2 of the State CEQA Guidelines provides guidance for analyzing the growth-inducing impacts of a project. The growth inducement analysis must discuss ways in which a proposed project could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. Projects that would remove obstacles to population growth could lead to increased demand for existing community services. Growth in an area is not necessarily considered beneficial, detrimental, or of little significance to the environment. However, the secondary impacts associated with growth (e.g., air quality impacts from new construction) can be significant.

This EIR concludes that the project would induce growth by amending the County General Plan, replacing the Marble Valley Master Plan with the VMVSP, and constructing roadways and infrastructure and therefore removing limitations on growth that may exist on the project site. The project site is surrounded by existing similar rural residential uses and is currently designated for low-density residential development.

Growth inducement and growth-related impacts are discussed in further detail in Chapter 5, *Other CEQA Considerations*.

Significant Irreversible Environmental Changes

State CEQA Guidelines Section 15126.2 requires irreversible changes be evaluated in EIRs prepared for projects that would involve the adoption, amendment, or enactment of a plan, policy, or ordinance of a public agency. Examples of such changes include commitment of future generations to similar uses, irreversible damage that may result from accidents associated with a project, or irretrievable commitments of resources. This EIR analyzes the extent to which the proposed project would commit nonrenewable resources to uses that future generations will likely be unable to reverse. Implementation of the proposed project would result in the short-term commitment of nonrenewable energy resources and natural resources, including sand and gravel, asphalt, and other resources to construct the project, along with permanent habitat conversion, as discussed in this Draft EIR. The project's significant impacts are discussed in detail in Chapter 3, *Impact Analysis*, and its significant irreversible environmental changes are discussed in Chapter 5, *Other CEQA Considerations.*

Project Alternatives

The Draft EIR must examine a reasonable range of alternatives to the project that could feasibly attain most of the project objectives and avoid or substantially lessen any of the project's significant environmental impacts (State CEQA Guidelines 15126.6). As required by Section 15126.6 of the State CEQA Guidelines, the range of alternatives must always include the No Project Alternative. The purpose of describing and analyzing a No Project Alternative is to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project.

The following alternatives are examined in this EIR.

- Alternative 1—No Project

- Alternative 2—Reduced Wetland Impact
- Alternative 3—Reduced Development Footprint
- Alternative 4—Minimal Oak Impact

The impacts of these alternatives are summarized in Table ES-2 (below) and discussed in more detail in Chapter 4, *Alternatives Analysis.*

Table ES-2. Comparison of Environmental Impacts of Alternatives to the Proposed Project

Resource Topic	Proposed Project	Alternative 1 – No Project		Alternative 2 – Reduced Wetland Impact		Alternative 3 – Reduced Development Footprint		Alternative 4 – Minimal Oak Impact	
Aesthetics									
Light/Glare	SU	SU	(<)	SU	(<)	SU	(<)	SU	(<)
Construction	SU	SU	(<)	SU	(<)	SU	(<)	SU	(<)
Operation	SU	SU	(>)	SU	(<)	SU	(<)	SU	(<)
Air Quality									
Conflict with Plan	SU	SU	(=)	SU	(=)	SU	(=)	SU	(=)
Construction Emissions	LTS w/mit	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(>)	LTS w/mit	(<)
Operation Emissions	SU	SU	(<)	SU	(<)	SU	(>)	SU	(<)
Combined Emissions	SU	SU	(<)	SU	(<)	SU	(>)	SU	(<)
Health Risks (TAC and criteria pollutants)	SU	SU	(<)	SU	(<)	SU	(>)	SU	(<)
NOA Risks	LTS w/mit	LTS w/mit	(=)	LTS w/mit	(=)	LTS w/mit	(=)	LTS w/mit	(=)
Biological Resources									
Oak Canopy/Woodland	LTS w/mit	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)
Sensitive Vegetation Communities	LTS w/mit	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)
Wetlands	LTS w/mit	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)
Special-Status Species	LTS w/mit	LTS w/mit	(>)	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)
Cultural Resources									
Known Archaeological Resources	LTS w/mit	LTS w/mit	(=)	LTS w/mit	(>)	LTS w/mit	(<)	LTS w/mit	(<)
Potential Disturbance of Unknown Archaeological Resources	LTS w/mit	LTS w/mit	(=)	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)
Geology, Soils, Minerals, and Paleontological Resources									
Geology	LTS w/mit	LTS w/mit	(=)	LTS w/mit	(<)	LTS w/mit	(=)	LTS w/mit	(<)
Mine Hazards	SU	SU	(=)	SU	(=)	SU	(=)	SU	(=)
Minerals	LTS	LTS	(=)	LTS	(<)	LTS	(=)	LTS	(=)
Paleontological Resources	LTS w/mit	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)
Greenhouse Gas Emissions									
Generate GHG Emissions	SU	SU	(<)	SU	(<)	SU	(>)	SU	(<)
Conflict with Plan	SU	SU	(=)	SU	(=)	SU	(=)	SU	(=)
Hazards and Hazardous Materials									
Construction	LTS w/mit	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(=)	LTS w/mit	(<)
Operation	LTS	LTS	(<)	LTS	(<)	LTS	(=)	LTS	(<)

Note: shading indicates change in significance level from proposed project.

NI = no impact.
LTS = less-than-significant impact.
LTS w/mit = less-than-significant impact with mitigation incorporated.
SU = significant and unavoidable impact.

(<) less than proposed project.
(=) equal to proposed project.
(>) greater than proposed project.

Resource Topic	Proposed Project	Alternative 1 – No Project		Alternative 2 – Reduced Wetland Impact		Alternative 3 – Reduced Development Footprint		Alternative 4 – Minimal Oak Impact	
Hydrology, Water Quality, and Water Resources									
Construction Site Stormwater Runoff	LTS	LTS	(<)	LTS	(<)	LTS	(<)	LTS	(<)
Urban Stormwater Runoff	LTS	LTS	(<)	LTS	(<)	LTS	(<)	LTS	(<)
Drainage and Flood Hazard	LTS w/mit	LTS w/mit	(=)	LTS w/mit	(=)	LTS w/mit	(=)	LTS w/mit	(<)
Water Quality (Wetlands and Other Waters)	LTS w/mit	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)
Land Use Planning and Agricultural Resources									
Divide Community	NI	NI	(=)	NI	(=)	NI	(=)	NI	(=)
Conflict with Land Use Plan	LTS	NI	(<)	LTS	(=)	LTS	(=)	LTS	(=)
Noise and Vibration									
Construction	SU	LTS w/mit	(<)	SU	(=)	SU	(=)	SU	(<)
Ground Vibration	LTS w/mit	LTS w/mit	(=)	LTS w/mit	(=)	LTS w/mit	(=)	LTS w/mit	(=)
Traffic	SU	SU	(=)	SU	(=)	SU	(<)	SU	(<)
Non-Transportation Operation	LTS w/mit	LTS w/mit	(=)	LTS w/mit	(=)	LTS w/mit	(=)	LTS w/mit	(=)
Population and Housing									
Growth	SU	LTS	(<)	SU	(<)	SU	(>)	SU	(<)
Displacement	NI	NI	(=)	NI	(=)	NI	(=)	NI	(=)
Public Services and Utilities									
Public Services Facilities	LTS	LTS	(<)	LTS	(<)	LTS	(>)	LTS	(<)
Wastewater Treatment	LTS	LTS	(<)	LTS	(<)	LTS	(>)	LTS	(<)
Water Supply	LTS	LTS	(<)	LTS	(<)	LTS	(>)	LTS	(<)
Other Utilities Demand	LTS	LTS	(<)	LTS	(<)	LTS	(>)	LTS	(<)
Offsite Infrastructure Construction	LTS w/mit	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)
Energy	LTS	LTS	(>)	LTS	(=)	LTS	(>)	LTS	(<)
Recreation									
Impacts on Existing Parks	LTS	LTS	(=)	LTS	(>)	LTS	(<)	LTS	(<)
Impacts from New Offsite Parks	NI	NI	(=)	NI	(=)	NI	(=)	NI	(=)
Transportation									
VMT Efficiency	LTS w/mit	LTS w/mit	(>)	LTS w/mit	(>)	LTS w/mit	(=)	LTS w/mit	(>)
Pedestrian/bicycle/public transit	LTS w/mit	LTS w/mit	(>)	LTS w/mit	(<)	LTS w/mit	(=)	LTS w/mit	(=)

Note: shading indicates change in significance level from proposed project.

NI = no impact.
LTS = less-than-significant impact.
LTS w/mit = less-than-significant impact with mitigation incorporated.
SU = significant and unavoidable impact.

(<) less than proposed project.
(=) equal to proposed project.
(>) greater than proposed project.

Environmentally Superior Alternative

State CEQA Guidelines Section 15126.6(e)(2) requires a draft EIR to identify an "environmentally superior alternative." For the proposed project, the environmentally superior alternative is the No Project Alternative, because under this alternative nearly all of the impacts associated with development would be reduced.

State CEQA Guidelines Section 15126.6(e)(2) requires that, if the No Project Alternative is identified as environmentally superior, the EIR must identify an environmentally superior alternative among the other alternatives. Based on the assessment in Chapter 4, *Alternatives Analysis*, Alternative 4, the Minimal-Oak-Impact Alternative, is the environmentally superior alternative, as it would reduce impacts for all resource areas to some extent. The Minimal-Oak-Impact Alternative would meet the main objective of creating development patterns that make the most efficient and feasible use of existing infrastructure and public services while promoting a sense of community as envisioned by the County General Plan. Other objectives that this alternative would attain include meeting future housing needs, broadening the El Dorado Hills and Cameron Park housing stock, improving connectivity, encouraging future transit opportunities, minimizing impacts on oak woodlands, preserving natural habitats and setting aside wildlife corridors, and protecting important cultural resources. The Minimal-Oak-Impact Alternative would result in the development of 541 fewer acres than the proposed project and the least development acreage of all the alternatives examined and therefore would result in reduced impacts on biological, paleontological, and, to some extent, cultural resources. Additionally, it would result in approximately one-third fewer dwelling units than the proposed project (though far more than the No Project Alternative) and therefore fewer residents, resulting in reduced demands on services and fewer vehicles and therefore reduced air quality, and noise impacts.

Required Permits and Approvals

This EIR will be used by the County to document the potential impacts of the proposed project and to determine whether the impacts could be avoided or mitigated to less-than-significant levels. The County is the lead agency under CEQA for the proposed project. As applicable, this EIR may also be used by regulatory and responsible agencies, such as state agencies. These agencies are responsible for issuing permits and approvals that may be needed to proceed with the proposed project. A list of potential permits and approvals required by the County are identified below.

- Approval by the El Dorado County Board of Supervisors of a general plan amendment.
- Approval by the El Dorado County Board of Supervisors of the VMVSP.
- Approval by the El Dorado County Board of Supervisors of rezoning.
- Approval by the El Dorado County Board of Supervisors of Planned Development.
- After the VMVSP is approved, approval by the El Dorado County Planning Commission and/or Board of Supervisors of large lot tentative subdivision map dividing the property into residential, commercial, open space (including an approximate 466-acre natural open space land for passive day-use park or private natural open space), recreational, and other large lots.

- Approval by the El Dorado County Board of Supervisors of a development agreement between the applicant, Marble Valley Company, LLC, and the County.
- Approval by the El Dorado County Board of Supervisors of a financing plan between the applicant, Marble Valley Company, LLC, and the County.
- Approval by the County of building and grading permits, General Permit for Municipal Separate Storm Sewer Systems (MS4) compliance, small lot tentative maps, and final maps.
- Rescission by the El Dorado County Board of Supervisors of the Marble Valley Master Plan.

Other state and local approvals for CEQA for the proposed project may be required as the project is implemented. This EIR may be used for other approvals that may be necessary or desirable for project implementation. State permits or project approvals that may be required are listed below.

- Approval by El Dorado Irrigation District of connection to water and wastewater facilities.
- Clean Water Act Section 401 certification from the Regional Water Quality Control Board.
- Submittal of a Notice of Intent for coverage under the Statewide General Permit (Water Quality Order No. 2022-0057-DWQ) for construction activities to the State Water Resources Control Board.
- Fish and Game Code Section 1602 streambed alteration agreement from the California Department of Fish and Wildlife.
- California Department of Education approval of site acquisition and construction plans for the two proposed elementary or middle school facilities.
- Buckeye Union School District approval of site acquisition and construction plans for the two proposed elementary or middle school facilities.
- Approval from the El Dorado County Local Agency Formation Commission for the potential boundary adjustment between the El Dorado County Fire Protection District and El Dorado Hills County Water District, depending upon the ultimate boundaries and the layout of the proposed new villages. Reorganization would also require sphere of influence updates and possible updates to the municipal service reviews for the affected districts.

Federal permits or project approvals that may be required are listed below.

- Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers for fill of waters of the United States.
- Biological opinion from the U.S. Fish and Wildlife Service for project impacts on special-status species.

Table ES-1. Summary of Impacts and Mitigation Measures

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Aesthetics			
Impact AES-1: Temporary visual impacts caused by construction activities	Significant	Mitigation Measure BIO-1d: Avoid and minimize potential disturbance of oak woodland habitat and compensate for loss of oak woodland and individual trees	Significant and unavoidable
Impact AES-2: Have a substantial adverse effect on a scenic vista	Significant	Mitigation Measure AES-2: Apply aesthetic design treatments to buildings within oak woodland and grassland areas Mitigation Measure BIO-1e: Maintain retained oaks in development areas	Significant and unavoidable
Impact AES-3: Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings along a scenic highway	Significant	Mitigation Measure AES-2: Apply aesthetic design treatments to buildings within oak woodland and grassland areas Mitigation Measure BIO-1e: Maintain retained oaks in development areas	Significant and unavoidable
Impact AES-4: 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, conflict with applicable zoning and other regulations governing scenic quality	Significant	Mitigation Measure AES-2: Apply aesthetic design treatments to buildings within oak woodland and grassland areas Mitigation Measure AES-4: Design proposed noise barriers with aesthetic design treatments Mitigation Measure BIO-1e: Maintain retained oaks in development areas	Significant and unavoidable
Impact AES-5: Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area	Significant	Mitigation Measure AES-2: Apply aesthetic design treatments to buildings within oak woodland and grassland areas	Significant and unavoidable
Impact AES-6: Adversely affect scenic highways and vistas, the existing visual character or quality of the site and its surroundings, or create a new source of substantial light or glare as a result of offsite improvements	Less than significant	–	–
Impact AES-7: Adversely affect scenic highways and vistas, the existing visual character or quality of the site and its surroundings, or create a new source of substantial light or glare as a result of implementing of General Plan Policy TC-Xf traffic improvements	Less than significant	–	–
Air Quality			
Impact AQ-1: Conflict with or obstruct implementation of the applicable air quality plan	Significant	–	Significant and unavoidable

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Impact AQ-2a: Result in a cumulatively considerable net increase of any criteria pollutant during construction for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard	Significant	Mitigation Measure AQ-2a: Use low-VOC coatings during construction Mitigation Measure AQ-2b: Implement best management practices to reduce construction-related exhaust emissions during early construction Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks Mitigation Measure AQ-2d: Implement an EDCAQMD-approved Fugitive Dust Control Plan during construction Mitigation Measure AQ-2e: Offset construction-generated ozone precursors Mitigation Measure GHG-1: Implement BMPs to reduce construction-generated GHG emissions	Less than significant
Impact AQ-2b: Result in a cumulatively considerable net increase of any criteria pollutant during operation for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard	Significant and unavoidable	Mitigation Measure AQ-2f: Promote green consumer products Mitigation Measure TRA-2: Shift 25,000 square feet of commercial office land use to commercial retail land use Mitigation Measure GHG-2: Develop and implement GHG reduction plan to reduce construction and operational area, mobile, and building natural-gas GHG emissions	Significant and unavoidable
Impact AQ-2c: Result in a cumulatively considerable net increase of any criteria pollutant during combined construction and operation for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard	Significant	Mitigation Measure AQ-2a: Use low-VOC coatings during construction Mitigation Measure AQ-2b: Implement best management practices to reduce construction-related exhaust emissions during early construction Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks Mitigation Measure AQ-2d: Implement an EDCAQMD-approved Fugitive Dust Control Plan during construction Mitigation Measure AQ-2e: Offset construction-generated ozone precursors Mitigation Measure AQ-2f: Promote green consumer products Mitigation Measure GHG-1: Implement BMPs to reduce construction-generated GHG emissions Mitigation Measure GHG-2: Develop and implement GHG reduction plan to reduce construction and operational area,	Significant and unavoidable

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
		mobile, and building natural-gas GHG emissions Mitigation Measure TRA-2: Shift 25,000 square feet of commercial office land use to commercial retail land use	
Impact AQ-3a: Expose sensitive receptors to substantial toxic air contaminant concentrations and health risks during construction	Significant	Mitigation Measure AQ-2b: Implement best management practices to reduce construction-related exhaust emissions during early construction Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks Mitigation Measure GHG-1: Implement BMPs to reduce construction-generated GHG emissions	Significant and unavoidable
Impact AQ-3b: Expose sensitive receptors to substantial toxic air contaminant concentrations and health risks during operation	Less than significant		–
Impact AQ-3c: Expose sensitive receptors to substantial criteria pollutant concentrations during construction and operation	Significant	Mitigation Measure AQ-2a: Use low-VOC coatings during construction Mitigation Measure AQ-2b: Implement best management practices to reduce construction-related exhaust emissions during early construction Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks Mitigation Measure AQ-2d: Implement an EDCAQMD-approved Fugitive Dust Control Plan during construction Mitigation Measures AQ-2e: Offset construction-generated ozone precursors Mitigation Measure AQ-2f: Promote green consumer products Mitigation Measure GHG-1: Implement BMPs to reduce construction-generated GHG emissions Mitigation Measure GHG-2: Develop and implement GHG reduction plan to reduce construction and operational area, mobile, and building natural-gas GHG emissions Mitigation Measure TRA-2: Shift 25,000 square feet of commercial office land use to commercial retail land use	Significant and unavoidable

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Impact AQ-3d: Expose sensitive receptors to naturally occurring asbestos and associated health risks during construction	Significant	Mitigation Measure AQ-3: Submit and implement an asbestos dust mitigation plan in accordance with EDCAQMD Rule 233-2	Less than significant
Impact AQ-4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people	Less than significant	–	-
Impact AQ-5: Result in a cumulatively considerable net increase of any criteria pollutant, expose sensitive receptors to substantial pollutant concentrations, or generate odors as a result of construction and operations of offsite improvements	Significant	Mitigation Measure AQ-2b: Implement best management practices to reduce construction-related exhaust emissions during early construction Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks Mitigation Measure AQ-2d: Implement an EDCAQMD-approved Fugitive Dust Control Plan during construction Mitigation Measure AQ-3: Submit and implement an asbestos dust mitigation plan in accordance with EDCAQMD Rule 233-2 Mitigation Measure GHG-1: Implement BMPs to reduce construction-generated GHG emissions	Less than significant
Impact AQ-6: Result in a cumulatively considerable net increase of any criteria pollutant, expose sensitive receptors to substantial pollutant concentrations, or generate odors as a result of implementation of General Plan Policy TC-Xf traffic improvements	Significant	Mitigation Measure AQ-2b: Implement best management practices to reduce construction-related exhaust emissions during early construction Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks Mitigation Measure AQ-2d: Implement an EDCAQMD-approved Fugitive Dust Control Plan during construction Mitigation Measure AQ-3: Submit and implement an Asbestos Dust Mitigation Plan in accordance with EDCAQMD Rule 223-2 Mitigation Measure GHG-1: Implement BMPs to reduce construction-generated GHG emissions	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Biological Resources			
Impact BIO-1: Loss of oak woodland	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-1d: Avoid and minimize potential disturbance of oak woodland habitat and compensate for loss of oak woodland and individual trees Mitigation Measure BIO-1e: Maintain retained oaks in development areas	Less than significant
Impact BIO-2: Loss of riparian woodland	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-2: Compensate for the permanent loss of riparian woodland	Less than significant
Impact BIO-3: Loss of jurisdictional wetlands, including seasonal wetlands, seasonal wetland swales, and seeps	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands Mitigation Measure BIO-3b: Compensate for loss of jurisdictional wetlands	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Impact BIO-4: Loss of other waters of the United States, including perennial creek, seasonal creek, intermittent drainage, ephemeral drainage, drainage ditch, quarry pond, and stock pond	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands Mitigation Measure BIO-4: Compensate for loss of other waters of the United States	Less than significant
Impact BIO-5: Potential loss of Brandegee's clarkia or other special- status plants	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-5a: Conduct floristic surveys in the project area for special-status plants during appropriate identification periods Mitigation Measure BIO-5b: Avoid or compensate for substantial effects on special- status plants in the project area	Less than significant
Impact BIO-6: Potential mortality or disturbance of California red-legged frog within the VMVSP project area	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands Mitigation Measure BIO-6: Conduct preconstruction survey and implement California red-legged frog avoidance and minimization measures	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Impact BIO-7: Potential mortality or disturbance of foothill yellow-legged frog within the VMVSP project area	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands Mitigation Measure BIO-7: Avoid and minimize construction-related impacts on foothill yellow-legged frog	Less than significant
Impact BIO-8: Potential mortality or disturbance of Pacific pond turtle within the VMVSP project area	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-8: Conduct preconstruction surveys for Pacific pond turtle and exclude turtles from the work area	Less than significant
Impact BIO-9: Potential mortality or disturbance of Blainville's horned lizard within the VMVSP project area	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-9a: Avoid and minimize impacts on Blainville's horned lizard Mitigation Measure BIO-9b: Include measures in the open space management plan identifying homeowner responsibilities to help reduce potential for domestic animal predation on wildlife	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Impact BIO-10: Potential mortality or disturbance of nesting special-status and non–special-status birds within the VMVSP project area	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-10a: Conduct vegetation removal activities outside the breeding season for birds and raptors Mitigation Measure BIO-10b: Conduct preconstruction nesting surveys for special-status and non–special-status birds and implement protective measures during construction	Less than significant
Impact BIO-11: Potential injury, mortality, or disturbance of tree-roosting bats and removal of roosting habitat within the VMVSP project area	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-11: Identify suitable roosting sites for bats and implement avoidance and minimization measures	Less than significant
Impact BIO-12: Potential mortality or disturbance of American badger within the VMVSP project area	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-12: Implement measures to avoid and minimize potential impacts on American badger	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Impact BIO-13: Potential mortality or disturbance of ringtail within the VMVSP project area	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-10a: Conduct vegetation removal activities outside the breeding season for birds and raptors Mitigation Measure BIO-13: Identify suitable shelter and denning habitat for ringtail and implement avoidance and protective measures	Less than significant
Impact BIO-14: Interfere with the movement of resident or migratory wildlife	Significant	Mitigation Measure BIO-1d: Avoid and minimize potential disturbance of oak woodland habitat and compensate for loss of oak woodland and individual trees Mitigation Measure BIO-9b: Include measures in the open space management plan identifying homeowner responsibilities to help reduce potential for domestic animal predation on wildlife	Less than significant
Impact BIO-15: Potential conflict with the County General Plan oak protection policies	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-1d: Avoid and minimize potential disturbance of oak woodland habitat and compensate for loss of oak woodland and individual trees Mitigation Measure BIO-1e: Maintain retained oaks in development areas	Less than significant
Impact BIO-16: Potential introduction and spread of invasive plant species	Significant	Mitigation Measure BIO-16: Minimize the introduction and spread of invasive plants	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Impact BIO-17: Potential loss of sensitive natural communities within the offsite infrastructure improvement areas	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-1d: Avoid and minimize potential disturbance of oak woodland habitat and compensate for loss of oak woodland and individual trees Mitigation Measure BIO-2: Compensate for permanent loss of riparian woodland Mitigation Measure BIO-17: Compensate for loss of oak woodland in offsite infrastructure improvement areas	Less than significant
Impact BIO-18: Potential loss of waters of the United States within the offsite infrastructure improvement areas	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-1d: Avoid and minimize potential disturbance of oak woodland habitat and compensate for loss of oak woodland and individual trees Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands Mitigation Measure BIO-3b: Compensate for loss of jurisdictional wetlands Mitigation Measure BIO-4: Compensate for loss of other waters of the United States	Less than significant
Impact BIO-19: Potential loss of waters of the United States within the within the extension of Saratoga Way improvement area	No Impact	–	–

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Impact BIO-20: Potential loss of waters of the United States within the Bass Lake Road/Hollow Oak Drive intersection improvement area	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands	Less than significant
Impact BIO-21: Potential impacts on special-status plant species within the offsite infrastructure improvement areas	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-21a: Conduct floristic surveys in the offsite infrastructure improvement areas for special-status plants during appropriate identification periods Mitigation Measure BIO-21b: Avoid or compensate for substantial effects on special- status plants in the offsite infrastructure improvement areas	Less than significant
Impact BIO-22: Potential mortality or disturbance of listed vernal pool branchiopods and their habitat within offsite infrastructure improvement areas	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands Mitigation Measure BIO-22a: Conduct a habitat assessment for federally listed branchiopods in the offsite infrastructure improvement areas Mitigation Measure BIO-22b: Avoid or compensate for effects on	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
		vernal pool fairy shrimp and vernal pool tadpole shrimp and their habitat	
Impact BIO-23: Potential mortality or disturbance of California red-legged frog within offsite infrastructure improvement areas	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands Mitigation Measure BIO-6: Conduct preconstruction surveys and implement California red-legged frog avoidance and minimization measures	Less than significant
Impact BIO-24: Potential mortality or disturbance of foothill yellow-legged frog within offsite infrastructure improvement areas	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands Mitigation Measure BIO-7: Avoid and minimize construction-related impacts on foothill yellow-legged frog	Less than significant
Impact BIO-25: Potential mortality or disturbance of Pacific pond turtle within offsite infrastructure improvement areas	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-8: Conduct preconstruction surveys for Pacific pond turtle and exclude turtles from the work area	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Impact BIO-26: Potential mortality or disturbance of Blainville's horned lizard within offsite infrastructure improvement areas	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-9a: Avoid and minimize impacts on Blainville's horned lizard	Less than significant
Impact BIO-27: Potential mortality or disturbance of nesting special-status and non–special-status birds within offsite infrastructure improvement areas	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-10a: Conduct vegetation removal activities outside the breeding season for birds and raptors Mitigation Measure BIO-10b: Conduct preconstruction nesting surveys for special-status and non–special-status birds and implement protective measures during construction	Less than significant
Impact BIO-28: Potential injury, mortality, or disturbance of tree-roosting bats and removal of roosting habitat within offsite infrastructure improvement areas	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-11: Identify suitable roosting sites for bats and implement avoidance and minimization measures	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Impact BIO-29: Potential mortality or disturbance of American badger within offsite infrastructure improvement areas	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-12: Implement measures to avoid and minimize potential impacts on American badger	Less than significant
Impact BIO-30: Potential mortality or disturbance of ringtail within offsite infrastructure improvement areas	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-10a: Conduct vegetation removal activities outside the breeding season for birds and raptors Mitigation Measure BIO-13: Identify suitable shelter and denning habitat for ringtail and implement avoidance and protective measures	Less than significant
Cultural Resources			
Impact CUL-1: Cause a substantial adverse change in the significance of an archaeological resource that is a historical resource as defined in Section 15064.5	Significant	Mitigation Measure CUL-1a: Avoid impacts on the Marble Valley Archaeological District where possible and implement appropriate treatment where avoidance is not possible Mitigation Measure CUL-1b: Avoid impacts on the Marble Valley Historic Limestone Mining District where possible and implement appropriate treatment where avoidance is not possible Mitigation Measure CUL-1c: Avoid impacts on archaeological resources P-09-788, P-09-796, and P-09-1682 where possible and implement appropriate measures where avoidance is not possible Mitigation Measure CUL-1d: Perform archaeological construction monitoring during ground-disturbing activities within 100 feet	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
		of known cultural resource sites Mitigation Measure CUL-1e: Stop work in the event of discovery of previously unknown cultural resources	
Impact CUL-2: Cause a substantial adverse change in the significance of a built environment resource that is a historical resource pursuant to Section 15064.5	No impact	–	–
Impact CUL-3: Disturb any human remains, including those interred outside of formal cemeteries	Significant	Mitigation Measure CUL-1a: Avoid impacts on the Marble Valley Archaeological District where possible and implement appropriate treatment where avoidance is not possible Mitigation Measure CUL-1c: Avoid impacts on archaeological resources P-09-788, P-09-796, and P-09-1682 where possible and implement appropriate measures where avoidance is not possible Mitigation Measure CUL-3: Perform construction monitoring during ground-disturbing activities and stop work if human remains are encountered	Less than significant
Impact CUL-4: Result in disturbance to or destruction of cultural resources as a result of offsite infrastructure and General Plan Policy TC-Xf traffic improvements	Significant	Mitigation Measure CUL-1d: Perform archaeological construction monitoring during ground-disturbing activities within 100 feet of known cultural resource sites Mitigation Measure CUL-1e: Stop work in the event of discovery of previously unknown cultural resources Mitigation Measure CUL-3: Perform construction monitoring during ground-disturbing activities and stop work if human remains are encountered Mitigation Measure CUL-4: Perform cultural resources surveys of the offsite infrastructure and traffic improvement areas and mitigate impacts on any eligible resources in accordance with State CEQA Guidelines Section 15126.4	Less than significant
Geology, Soils, Minerals, and Paleontological Resources			
Impact GEO-1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: (1) 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.	Significant	Mitigation Measure GEO-1: Incorporate mitigation measures identified in geotechnical reports and use standard engineering practices to mitigate for non-engineered fill slope instability around the North Quarry	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Refer to Division of Mines and Geology Special Publication 42; (2) Strong seismic ground shaking; (3) Seismic-related ground failure, including liquefaction; and (4) Landslides			
Impact GEO-2: Result in substantial soil erosion or the loss of topsoil	Less than significant	–	–
Impact GEO-3: 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 an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse	Significant	Mitigation Measure GEO-1: Incorporate mitigation measures identified in geotechnical reports and use standard engineering practices to mitigate for non-engineered fill slope instability around the North Quarry Mitigation Measure GEO-3a: Protect Marble Lake Boulevard from unstable geologic conditions Mitigation Measure GEO-3b: Implement development setbacks around Marble Valley Lake Mitigation Measure GEO-3c: Ensure stability of South Quarry pit (Monolith Event Center) Mitigation Measure GEO-3d: Evaluate and implement appropriate detention basin roadway embankment design to address geotechnical stability and flood protection	Less than significant
Impact GEO-4: Result in fracturing and/or erosion from construction methods that could result in unstable geologic or soil conditions	Significant	Mitigation Measure GEO-4: Implement recommendations developed by qualified geotechnical engineers for excavation in hard rock	Less than significant
Impact GEO-5: Be located on expansive soil, as defined in Section 1803.5.3 of the CBSC, creating substantial risks to life or property	Less than significant	–	–
Impact GEO-6: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater	No impact	–	–
Impact GEO-7: Be located on a subterranean mine that has a shaft, vent, or adit open to the surface	Significant	Mitigation Measure GEO-7a: Incorporate standard practice for abandoning small hard rock mining features Mitigation Measure GEO-7b: Develop and implement reporting process for mine features discovered by residents, visitors, and employees	Significant and unavoidable

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Impact GEO-8: 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	Less than significant	–	–
Impact GEO-9: 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	–	–
Impact GEO-10: Directly or indirectly destroy a unique paleontological resource or unique geologic feature	Significant	Mitigation Measure GEO-10a: Educate construction personnel in recognizing fossil material Mitigation Measure GEO-10b: Stop work if fossil remains are encountered during construction Mitigation Measure GEO-10c: Stop work if a cave or void is encountered during construction	Less than significant
Impact GEO-11: Impacts on geological, mineral and paleontological resources resulting from offsite improvements and General Plan Policy TC-Xf traffic improvements	Significant	Mitigation Measure GEO-4: Implement recommendations developed by qualified geotechnical engineers for excavation in hard rock Mitigation Measure GEO-10a: Educate construction personnel in recognizing fossil material Mitigation Measure GEO-10b: Stop work if substantial fossil remains are encountered during construction Mitigation Measure GEO-10c: Stop work if a cave or void is encountered during construction	Less than significant
Greenhouse Gas Emissions			
Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment	Significant	Mitigation Measure TRA-2: Shift 25,000 square feet of commercial office land use to commercial retail land use Mitigation Measure AQ-2b: Implement best management practices to reduce construction-related exhaust emissions during early construction Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks Mitigation Measure GHG-1: Implement BMPs to reduce construction-generated GHG emissions Mitigation Measure GHG-2: Develop and implement a GHG reduction plan to reduce construction and operational area, mobile, and building natural-gas GHG emissions	Significant and unavoidable

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases	Significant	Mitigation Measure TRA-2: Shift 25,000 square feet of commercial office land use to commercial retail land use Mitigation Measure AQ-2b: Implement best management practices to reduce construction-related exhaust emissions during early construction Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks Mitigation Measure GHG-1: Implement BMPs to reduce construction-generated GHG emissions Mitigation Measure GHG-2: Develop and implement a GHG reduction plan to reduce construction and operational area, mobile, and building natural-gas GHG emissions	Significant and unavoidable
Impact GHG-3: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment as a result of offsite improvements	Significant	Mitigation Measure AQ-2b: Implement best management practices to reduce construction-related exhaust emissions during early construction Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks Mitigation Measure GHG-1: Implement BMPs to reduce construction-generated GHG emissions	Less than significant
Impact GHG-4: Impacts on GHG resources resulting from implementation of General Plan Policy TC-Xf traffic improvements	Significant	Mitigation Measure AQ-2b: Implement best management practices to reduce construction-related exhaust emissions during early construction Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks Mitigation Measure GHG-1: Implement BMPs to reduce construction-generated GHG emissions	Less than significant
Hazards and Hazardous Materials			
Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	Less than significant		–

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	Significant	Mitigation Measure AQ-3: Submit and implement an Asbestos Dust Mitigation Plan in accordance with EDCAQMD Rule 223-2 Mitigation Measure HAZ-2a: Conduct a Phase I environmental site assessment and a Phase II environmental site assessment if recommended in the Phase I environmental site assessment Mitigation Measure HAZ-2b: Implement remediation as necessary Mitigation Measure HAZ-2c: Conduct additional sampling and analysis of soils containing TPH	Less than significant
Impact HAZ-3: Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school	Less than significant	–	–
Impact HAZ-4: Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment	No impact	–	–
Impact HAZ-5: Be located within an airport land use plan area or, where such a plan has not been adopted, be within 2 miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area	No impact	–	–
Impact HAZ-6: Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area	No impact	–	–
Impact HAZ-7: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	Less than significant	–	–

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Impact HAZ-8: Expose people or structures to a significant risk of loss, injury, or death involving wildland fires; due to slope, prevailing winds, and other factors, exacerbate wildfire risks; require the installation or maintenance of associated infrastructure that may exacerbate fire risk; or expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes	Significant	Mitigation Measure HAZ-8: Preparation of a wildfire safety plan	Less than significant
Impact HAZ-9: Create a significant hazard to the public or the environment as a result of offsite infrastructure and General Plan Policy TC-Xf traffic improvements	Significant	Mitigation Measure TRA-4: Implement site-specific transportation management plan during construction	Less than significant
Hydrology, Water Quality, and Water Resources			
Impact WQ-1: Violate any water quality standards or water discharge requirements or otherwise substantially degrade surface water or groundwater quality	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands	Less than significant
Impact WQ-2: 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 WQ-3i: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite	Significant	Mitigation Measure GEO-3d: Evaluate and implement appropriate detention basin roadway embankment design to address geotechnical stability and flood protection	Less than significant
Impact WQ-3ii: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite	Significant	Mitigation Measure GEO-3d: Evaluate and implement appropriate detention basin roadway embankment design to address geotechnical stability and flood protection	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Impact WQ-3iii: Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff	Less than significant	–	–
Impact WQ-3iv: Impede or redirect flood flows	Less than significant	–	–
Impact WQ-4: In a flood hazard, tsunami, seiche zone, risk release of pollutants due to project inundation	Less than significant	–	–
Impact WQ-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan	No impact	–	–
Impact WQ-6: Impacts on hydrology, water quality, and water resources resulting from offsite improvements, including General Plan Policy TC-Xf traffic improvements	Significant	Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands	Less than significant
Land Use Planning and Agricultural Resources			
Impact LU-1: Physically divide an established community	No impact	–	–
Impact LU-2: 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	Less than significant	–	–
Impact LU-3: 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 nonagricultural use	No impact	–	–
Impact LU-4: Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract	No impact	–	–

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Impact LU-5: Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code Section 12220[g]), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g])	No impact	–	–
Impact LU-6: Result in the loss of forest land or conversion of forest land to non-forest use	No impact	–	–
Impact LU-7: Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use	Less than significant	–	–
Impact LU-8: Result in impacts related to land use as a result of offsite improvements or General Plan Policy TC-Xf traffic improvements	Less than significant	–	–
Noise and Vibration			
Impact NOI-1a: 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 County General Plan or noise ordinance as a result of construction activities	Significant	Mitigation Measure NOI-1a: Employ noise-reducing construction practices	Significant and unavoidable
Impact NOI-1b: 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 County General Plan or noise ordinance from project-generated traffic within the VMVSP project area	Significant	Mitigation Measure NOI-1b: Prepare and implement a noise control plan Mitigation Measure NOI-1c: Prepare and implement a noise control plan for 2080 Marble Valley Road and 4091 Flying C Road	Significant and unavoidable
Impact NOI-1c: 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 County General Plan or noise ordinance for stationary or non-transportation noise sources during project operation	Significant	Mitigation Measure NOI-1b: Prepare and implement a noise control plan Mitigation Measure NOI-1d: Employ measures to limit sound from outdoor events	Less than significant
Impact NOI-2: Generation of excessive groundborne vibration or groundborne noise levels	Significant	Mitigation Measure NOI-2: Employ measures to reduce airblast and vibration from blasting	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Impact NOI-3: For a project located within the vicinity of a private airstrip or an airport land use plan area, or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels	Less than significant	–	–
Impact NOI-4: Result in noise impacts due to activities associated with project offsite improvements	Significant	Mitigation Measure NOI-2: Employ measures to reduce airblast and vibration from blasting	Significant and unavoidable
Impact NOI-5: Result in impacts related to noise as a result of General Plan Policy TC-Xf traffic improvements	Less than significant	–	–
Population and Housing			
Impact POP-1: Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)	Significant	–	Significant and unavoidable
Impact POP-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere	No impact	–	–
Public Services and Utilities			
Impact PSU-1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection; police protection; schools; or libraries	Less than significant	–	–

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Impact PSU-2: Require or result in the relocation or construction of new or expanded wastewater treatment or storm water drainage facilities, the construction or relocation of which could cause significant environmental effects	Significant	Mitigation Measure AQ-2b: Implement best management practices to reduce construction-related exhaust emissions during early construction Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks Mitigation Measure AQ-2d: Implement an EDCAQMD-approved Fugitive Dust Control Plan during construction Mitigation Measure AQ-2e Offset construction-generated ozone precursors Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-1d: Avoid and minimize potential disturbance of oak woodland habitat and compensate for loss of oak woodland and individual trees Mitigation Measure BIO-2: Compensate for the permanent loss of riparian woodland Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands Mitigation Measure BIO-3b: Compensate for loss of jurisdictional wetlands Mitigation Measure BIO-4: Compensate for loss of other waters of the United States Mitigation Measure BIO-5a: Conduct floristic surveys in the project area for special-status plants during appropriate identification periods Mitigation Measure BIO-5b: Avoid or compensate for substantial effects on special- status plants in the project area Mitigation Measure BIO-6: Conduct preconstruction survey and implement California red-legged frog avoidance and minimization measures Mitigation Measure BIO-7: Avoid and minimize construction-related impacts on foothill yellow-legged frog Mitigation Measure BIO-8: Conduct preconstruction surveys for Pacific pond turtle and exclude turtles from the work area	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Impact PSU-3: Require or result in the construction of new water treatment or conveyance facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects	Significant	Mitigation Measure AQ-2b: Implement best management practices to reduce construction-related exhaust emissions during early construction Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks Mitigation Measure AQ-2d: Implement an EDCAQMD-approved Fugitive Dust Control Plan during construction Mitigation Measure AQ-2e: Offset construction-generated ozone precursors Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees Mitigation Measure BIO-1c: Conduct periodic site visits during construction Mitigation Measure BIO-1d: Avoid and minimize potential disturbance of oak woodland habitat and compensate for loss of oak woodland and individual trees Mitigation Measure BIO-2: Compensate for the permanent loss of riparian woodland Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands Mitigation Measure BIO-3b: Compensate for loss of jurisdictional wetlands Mitigation Measure BIO-4: Compensate for loss of other waters of the United States Mitigation Measure BIO-5a: Conduct floristic surveys in the project area for special-status plants during appropriate identification periods Mitigation Measure BIO-5b: Avoid or compensate for substantial effects on special- status plants in the project area Mitigation Measure BIO-6: Conduct preconstruction survey and implement California red-legged frog avoidance and minimization measures Mitigation Measure BIO-7: Avoid and minimize construction-	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
		related impacts on foothill yellow-legged frog	
		Mitigation Measure BIO-8: Conduct preconstruction surveys for Pacific pond turtle and exclude turtles from the work area	
		Mitigation Measure BIO-9a: Avoid and minimize impacts on Blainville's horned lizard	
		Mitigation Measure BIO-10a: Conduct vegetation removal activities outside the breeding season for birds and raptors	
		Mitigation Measure BIO-10b: Conduct preconstruction nesting surveys for special-status and non–special-status birds and implement protective measures during construction	
		Mitigation Measure BIO-11: Identify suitable roosting sites for bats and implement avoidance and minimization measures	
		Mitigation Measure BIO-12: Implement measures to avoid and minimize potential impacts on American badger	
		Mitigation Measure BIO-13: Identify suitable shelter and denning habitat for ringtail and implement avoidance and protective measures	
		Mitigation Measure BIO-17: Compensate for loss of oak woodland in offsite infrastructure improvement areas	
		Mitigation Measure BIO-21a: Conduct floristic surveys in the offsite infrastructure improvement areas for special-status plants during appropriate identification periods	
		Mitigation Measure BIO-21b: Avoid or compensate for substantial effects on special- status plants in the offsite infrastructure improvement areas	
		Mitigation Measure BIO-22a: Conduct a habitat assessment for federally listed branchiopods in the offsite infrastructure improvement areas	
		Mitigation Measure BIO-22b: Avoid or compensate for effects on vernal pool fairy shrimp and vernal pool tadpole shrimp and their habitat	
		Mitigation Measure CUL-1d: Perform archaeological construction monitoring during ground-disturbing activities within 100 feet of known cultural resource sites	
		Mitigation Measure CUL-1e: Stop work in the event of discovery of previously unknown cultural resources	

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
		Mitigation Measure CUL-3: Perform construction monitoring during ground-disturbing activities and stop work if human remains are encountered Mitigation Measure CUL-4: Perform cultural resources surveys of the offsite infrastructure and traffic improvement areas and mitigate impacts on any eligible resources in accordance with State CEQA Guidelines Section 15126.4 Mitigation Measure GEO-4: Implement recommendations developed by qualified geotechnical engineers for excavation in hard rock Mitigation Measure GEO-10a: Educate construction personnel in recognizing fossil material Mitigation Measure GEO-10b: Stop work if fossil remains are encountered during construction Mitigation Measure GEO-10c: Stop work if a cave or void is encountered during construction Mitigation Measure NOI-1a: Employ noise-reducing construction practices Mitigation Measure TRA-4: Implement site-specific transportation management plan during construction	
Impact PSU-4: 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 PSU-5: 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 and anticipated commitments	Less than significant	–	–
Impact PSU-6: 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 PSU-7: Comply with federal, state, and local management and reduction statutes and regulations related to solid waste	Less than significant	–	–

Impact	Level of Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Impact PSU-8: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation or conflict with or obstruct a state or local plan for renewable energy or energy efficiency	Less than significant	–	–
Recreation			
Impact REC-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated	Less than significant	–	–
Impact REC-2: Require the construction or expansion of offsite recreational facilities that might have an adverse physical effect on the environment	No impact	–	–
Traffic and Circulation			
Impact TRA-1: Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities	Significant	Mitigation Measure TRA-1: Provide alternative park-and-ride facilities	Less than significant
Impact TRA-2: Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)	Significant	Mitigation Measure TRA-2: Shift 25,000 square feet of commercial office land use to commercial retail land use	Less than significant
Impact TRA-3: Substantially increase hazards because of a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)	Less than significant	–	–
Impact TRA-4: Result in inadequate emergency access	Significant	Mitigation Measure TRA-4: Implement site-specific transportation management plan during construction	Less than significant
Impact TRA-5: Impacts on transportation as a result of offsite improvements	Significant	Mitigation Measure TRA-4: Implement site-specific transportation management plan during construction	Less than significant

Cumulative Impacts	Contribution to Cumulative Effects	Additional Mitigation Measures	Contribution after Mitigation
Aesthetics	Considerable contribution	–	Considerable contribution
Air Quality	Considerable contribution	–	Considerable contribution
Biological Resources – Oak woodland, Blainville's horned lizard, wildlife movement corridor	Considerable contribution	–	Considerable contribution
Cultural Resources – Prehistoric Cultural Resources	Considerable contribution	–	Considerable contribution
Greenhouse Gas Emission	Considerable contribution	–	Considerable contribution
Noise and Vibration – Traffic Noise on existing residence	Considerable contribution	–	Considerable contribution
Population	Considerable contribution	–	Considerable contribution

Chapter 1
Introduction

1.1 Project Background and Overview

The proposed Village of Marble Valley Specific Plan (VMVSP; proposed project) is a mixed-use community consisting of residential, commercial, agricultural, and open space uses (including 466 acres of natural open space land for passive day-use park or private natural open space). The project would provide for the development of up to 3,236 residential units, 475,000 square feet of office park/village commercial uses, 55 acres of agricultural use, 1,284 acres of open space, 87 acres of public facilities/recreational use (including two public elementary or middle schools and 47 acres of public parkland), and 61 acres of road areas and future rights-of-way. The proposed project would be designed in a manner that concentrates a majority of the density in a 1-mile core along the entry roadway and would be designed to preserve, enhance, and highlight the historical use of the property for limestone mining.

1.2 Purpose of this Environmental Impact Report

This draft environmental impact report (EIR) (State Clearinghouse No. 2013022043) has been prepared according to the California Environmental Quality Act (CEQA) (California Public Resources Code 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3) to evaluate the potential environmental impacts associated with implementing the proposed project, including implementing the VMVSP, amending the County's General Plan and related specific plans, and making zoning changes (Chapter 2, *Project Description*).

CEQA requires public agencies to consider the potential adverse environmental impacts of projects under their consideration. This includes both direct impacts and reasonably foreseeable indirect impacts. A discretionary project that would have a significant adverse impact on the environment cannot be approved without the preparation of an EIR. This includes the proposed project.

According to Section 15002 of the State CEQA Guidelines, the basic purposes of CEQA include the following.

- Inform government decision makers and the public about the potential significant environmental effects of proposed activities.
- Identify 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 governing 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.

CEQA establishes a process for analyzing a project's potential environmental impacts. It is not a permit and does not regulate the project. CEQA also does not require that a proposed project be

approved or denied. CEQA's purposes are to ensure that public agencies make a good faith effort at disclosing the potential environmental impacts of projects to decision makers, the public, and other agencies, and implement actions that will reduce or avoid potential significant impacts (i.e., mitigation measures).

The El Dorado County Planning Commission and Board of Supervisors will review the Draft EIR to understand the project's impacts before taking action. They will also consider other information and testimony that will arise during deliberations on the project before making their decision.

1.2.1 Level of Detail and Scope of the Environmental Impact Report

CEQA identifies various types of EIRs, the most common of which is the project EIR. A project EIR focuses primarily on the changes in the environment that would result from a development project. It examines all phases of the project, including planning, construction, and operation. For the proposed project, this Draft EIR covers environmental impacts on a project level for onsite improvements consistent with the level of detail provided in the VMVSP, supported by site-specific studies.

Offsite improvements associated with the proposed project, including improvements or connections to existing infrastructure such as roadways, water, and wastewater are included in the project. Each of these offsite improvements is examined to determine potential impacts, and mitigation measures are recommended where necessary to reduce impacts. The offsite improvements are analyzed to the extent that details were available at the time that this Draft EIR was prepared, and later environmental review based on review of this EIR may be required once infrastructure details are known.

Senate Bill 375 and the Sustainable Communities Strategy

The proposed project would develop residential and commercial land uses within the "Developing Community" area in unincorporated El Dorado County and provides a mix of new housing. Therefore, it is consistent with the Sacramento Area Council of Government's 2020 Metropolitan Transportation Plan (MTP)/Sustainable Communities Strategy (SCS) and therefore could qualify for streamlined CEQA review and analysis. However, the County has elected not to tier from the MTP/SCS for CEQA streamlining. This document fully analyzes impacts related to air quality, greenhouse gases, traffic, and growth-inducing impacts.

1.3 Scoping and Public Involvement

1.3.1 Purpose of Scoping

CEQA outlines a scoping process as part of the environmental review of a proposed project. Section 15083 of the State CEQA Guidelines defines early consultation, also called *scoping*, as the opportunity for reviewing agencies and the public to identify the range of actions, alternatives, mitigation measures, and significant impacts to be analyzed in depth in an EIR. The opportunity to provide input on the issues and alternatives to be evaluated during the environmental process is provided to potentially affected federal, state, and local agencies; Native American tribes; and other

interested persons or organizations that may be concerned with the environmental effects of the project.

As described below, the scoping process for this EIR involved the distribution of an NOP of a draft EIR, holding a public scoping meeting, and requesting comments and input from agencies and individuals on the NOP. The County continued to accept comments and include individuals on distribution lists after the official end of the comment period.

1.3.2 Notice of Preparation Scoping Meetings

An NOP was prepared for the proposed project and published for a 30-day public review and comment period beginning February 20, 2013 (Appendix A, *Notice of Preparation and Comment Matrix*). The County held a public scoping meeting on March 6, 2013, at the Assembly Hall of the Cameron Park Community Services District in Cameron Park, from 6:30 to 8:30 p.m. The scoping meeting was an open-house-style event, with presentation boards and materials at stations operated by County staff and County consultants. The project applicants were also present. Thirty-four people attended the meeting.

Approximately 30 individuals provided written or verbal comments on the NOP. A summary table of these comments and where pertinent discussions can be found in this document is included in Appendix A. These comments were considered in preparing this Draft EIR. After review of all relevant comments received during the NOP comment period on environmental issues, the County determined that the following resource areas would be reviewed for potential environmental impacts.

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils, Minerals, and Paleontological Resources
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology, Water Quality, and Water Resources
- Land Use Planning and Agricultural Resources
- Noise and Vibration
- Population and Housing
- Public Services and Utilities
- Recreation
- Transportation and Circulation

In addition, in May 2011 (prior to the submitting a formal application for the proposed project), the applicants began hosting a number of informational meetings for specific groups as requested. These meetings have continued, with the most recent meeting in August 2015 . Since that time the project has been dormant and there have been no substantial changes to the proposed project.

The project applicants and the County have been in consultation with representatives from the Wilton Rancheria, the Shingle Springs Band of Miwok Indians, and the United Auburn Indian Community, in accordance with Senate Bill 18.

1.3.3 Future Opportunities for Public Input

The review period for this Draft EIR will be a minimum of 60 days, beginning on May 1, 2024 and ending on July 1, 2024. The Draft EIR and the Public Review Draft VMVSP are available on the County's website (https://www.edcgov.us/Planning/); at the El Dorado Hills Library, 7455 Silva Valley Parkway, El Dorado Hills; the Placerville Library, 345 Fair Lane, Placerville; and at the public counter at the Community Development Agency, 2850 Fairlane Court, Building C, Placerville. Technical studies prepared for the project, except where confidential (e.g., cultural resources), are also available on the County's website at the link above.

Written comments can be submitted by mail to:

Mr. Cameron Welch
El Dorado County, Planning and Building Department
2850 Fairlane Court, Building C
Placerville, CA 95667

Written comments can be submitted by email to: VMVSP@edcgov.us.

Comments may also be submitted after the end of the formal review period; however, it is possible that they may not be responded to in writing and included in the Final EIR. No comments on the Draft EIR will be responded to outside of the CEQA process, and commenters will not be sent individual responses to their comments. The responses will be contained in the Final EIR. Comments that are received too late for inclusion in the Final EIR will nonetheless be made available to the County Planning Commission and the Board of Supervisors during their deliberations on the project.

1.3.4 Final Environmental Impact Report

After the close of the public review period for the Draft EIR, the County will prepare the Final EIR. The Final EIR will consist of the Draft EIR and the Final EIR and will include: the comments received during the formal review period of the Draft EIR; responses to the comments received that relate to environmental issues; and any revisions made to the Draft EIR in response to the comments in errata format. The Final EIR will also contain copies of the comments received during the public review period.

The Final EIR and accompanying Draft EIR will be available to the County Planning Commission and Board of Supervisors for consideration during their decision-making process to approve or deny the project.

1.4 Intended Use of this Environmental Impact Report

This Draft EIR will examine the potential impacts of the project (the proposed VMVSP). The Final EIR will be considered by the County Planning Commission and the Board of Supervisors prior to

taking their final action on the project. The agencies expected to use the Final EIR in the future include those listed below.

- El Dorado County Planning Commission.
- El Dorado County Board of Supervisors.
- El Dorado County Planning and Building Department.
- El Dorado Irrigation District.
- El Dorado Hills Community Services District.
- Cameron Park Community Services District.
- Central Valley Regional Water Quality Control Board.
- State Water Resources Control Board.
- California Department of Fish and Wildlife.
- El Dorado Local Agency Formation Commission.

Section 2.4, *Required Approvals*, identifies the specific County and state approvals and permits that would be required.

Federal agencies may use this EIR as reference for permitting purposes. These agencies may include the U.S. Army Corps of Engineers and U.S. Fish and Wildlife Service, among others.

1.5 Document Format

The format of this Draft EIR is outlined below to assist the reader's review of the document.

- **Executive Summary** summarizes the contents and findings contained in this Draft EIR. It also contains a brief description of the project, alternatives, areas of known controversy, public review procedures, and a summary table listing project impacts, mitigation measures that have been recommended to reduce any significant impacts, and the level of significance of each impact following mitigation.
- **Chapter 1, *Introduction*,** is the introduction to the Draft EIR and describes the project background, purpose of the project, and the public review process.
- **Chapter 2, *Project Description*,** contains the project description. It summarizes the proposed VMVSP. Full copies of the VMVSP are available for public review at the County Community Development Agency and at public libraries as indicated in Section 1.3.3 above.
- **Chapter 3, *Impact Analysis*,** consists of sections containing the environmental analysis for each environmental topic (e.g., aesthetics, air quality, noise). Each section is organized according to the following framework.
    - Existing Conditions
        - Regulatory Setting
        - Environmental Setting

    - Environmental Impacts
        - Methods of Analysis
        - Thresholds of Significance
        - Impacts and Mitigation Measures

- **Chapter 4, *Alternatives Analysis*,** contains discussion of the project alternatives. As allowed by CEQA, most of the impacts of these alternatives are evaluated at a more general level than the analyses contained in Chapter 3.
- **Chapter 5, *Other CEQA Considerations*,** contains discussions of additional topics required by CEQA, including growth-inducing impacts, cumulative impacts, unavoidable impacts, significant irreversible environmental changes, and other environmental impact analyses.
- **Chapter 6, *List of Preparers*,** lists the organizations and persons consulted in preparation of the Draft EIR and the Draft EIR preparers.
- **Chapter 7, *References Cited*,** provides details about the references cited and personal communications related to preparation of the Draft EIR. All of the items listed in Chapter 7, excepting confidential documents, are available for review during normal business hours at the County Community Development Agency offices: 2850 Fair Lane, Building C, Placerville.
- **Appendices A through L** contain copies of the NOP and comment letters and supporting technical reports.
    - Appendix A, *Notice of Preparation and Comment Matrix*
    - Appendix B, *Consistency with El Dorado County General Plan Policies*
    - Appendix C, *Air Quality and Greenhouse Gas Studies and Calculations*
    - Appendix D, EDCAQMD Rule 223-1 Best Management Practices and Rule 223-2
    - Appendix E, *Plant Species*
    - Appendix F, *Oak Resources Technical Report*
    - Appendix G, *Native American Consultation Documentation*
    - Appendix H, *Water Supply Assessment*
    - Appendix I, *CEQA Guidelines Appendix F: Energy Conservation*
    - Appendix J, *Drainage Analysis*
    - Appendix K, *Transportation Impact Analysis*
    - Appendix L, *Deer Creek WWTP Mitigation Monitoring Program*
    - Appendix M, *Wildfire Risk Analysis*
    - Appendix N, *Fire Evacuation Assessment*

Chapter 2
Project Description

The proposed Village of Marble Valley Specific Plan (VMVSP) (proposed project) features a variety of residential land uses supported by commercial and recreational uses accessible to the public. The proposed project would be developed in multiple phases with full buildout anticipated in 2042 or later. This chapter describes the project setting and project objectives; provides an overview of the project entitlements, land use plan, and project features; and identifies the approvals required to implement the proposed project.

A specific plan is defined as a tool for the systematic implementation of the General Plan. It establishes a link between implementing policies of the General Plan and the individual development proposals in a defined area. The VMVSP includes goals, objectives, policies, development standards, and design guidelines that will help guide the development and buildout of the project area. The VMVSP provides the basis for El Dorado County's (County's) consideration of all subsequent discretionary and ministerial project approvals and entitlements in the proposed project area. The VMVSP, in conjunction with the applicable policies of the General Plan, elements of the County Code, and other relevant requirements, will govern the design of the VMVSP's subdivisions, including the size of lots and types of improvements that will be required as conditions of approval. To move forward with a particular VMVSP project, the County would require compliance with the VMVSP policies and development standards; the environmental impact report (EIR) mitigation measures; applicable chapters of the County Code; and other County standards, policies, and regulations. Processing of individual development applications would be subject to review and approval by the County.

2.1 Project Setting

The proposed project site is in unincorporated El Dorado County, California that is approximately 29 miles northeast of downtown Sacramento and 14 miles west of Placerville. The proposed project site is in the El Dorado Hills community and southwest of the Cameron Park community. VMVSP provides for a mix of low-density, large residential lots; high-density, multifamily residential housing; open space (including 466 acres of natural open space land for use as a passive, day-use park or private natural open space); commercial; agricultural; and retail uses. Figure 2-1 shows the regional location of the proposed project.

2.1.1 Location

The approximately 2,341-acre project site is immediately south of U.S. Highway (US) 50, approximately 1,000 feet southeast of the US 50/Bass Lake Road interchange, and southwest of the US 50/Cambridge Road interchange. Figure 2-2 shows the proposed project location.

2.1.2 Existing Conditions and Land Uses

The proposed project site consists primarily of hilly, oak savannah with lowland riparian oak woodland along Marble and Deer Creeks, and chaparral on several southern-aspect hill slopes. The

elevation of the site ranges from approximately 680 to 1,300 feet above mean sea level. Marble Creek flows south from the northern boundary of the property into Deer Creek, which flows from east to west through the southern portion of the site. The hilly terrain is drained by various intermittent drainages and seasonal wetland swales. There are two former limestone quarries in the northern portion of the project area. Portions of the site have been used for grazing. Figure 2-3 shows the project area and existing conditions.

The site consists of Assessor's Parcel Numbers (APN) 087-200-74; 119-020-56 and -57; 119-030-13 through -19; and 119-330-01. The proposed project site was previously approved for development with the Marble Valley Master Plan , a 398-lot residential development. The associated tentative maps and development agreement have expired. The Marble Valley Master Plan remains in effect. Table 2-1 summarizes the APNs, land uses, and zoning.

Table 2-1. Existing Land Use Designations and Zoning

Assessor's Parcel No.	Area (acres)	Land Use	Zoning	Max No. Units
087-200-74	160	LDR	OS & RE-5 (PD)	21
119-020-56 to -57	524	LDR	OS & RE-5 (PD)	95
119-030-13 to -19	1,636	LDR	OS & RE-5 (PD)	282
119-330-01	21	TR	RE-5	0
Total	+/- 2,341			398

Source: El Dorado County General Plan and Zoning Ordinance

General Plan Land Use

LDR = Low-Density Residential (1 dwelling unit per 5 acres).
TR = Tourist Recreational.

Zoning

OS = Open Space.
RE-5 = Residential Estate (1 dwelling unit per 5 acres).
PD = Planned Development Overlay Zone.

2.1.3 Surrounding Land Uses

The proposed project site is bounded by the Cambridge Oaks residential development and US 50 to the north; Marble Ridge residential development and Valley View Specific Plan area to the west; Ryan Ranch residential development to the southwest; Sun Ridge to the south; and Cameron Estates, proposed Lime Rock Valley Specific Plan (LRVSP) area, Deer Creek Wastewater Treatment Plant (WWTP), and Royal Equestrian Estates to the east (Figure 2-3).

2.2 Project Objectives

The County's primary objective for the proposed project is to create development patterns that make the most efficient and feasible use of existing infrastructure and public services while promoting a sense of community. There are an additional 15 objectives of the proposed project as follows.

- ***Fulfill regional land use objectives by achieving Metropolitan Transportation Plan (MTP)/ Sustainable Communities Strategy (SCS) Consistency***. Establish new development that fulfills

regional land use objectives by directing two-thirds of new growth in "…Centers and Corridors and Established Community (i.e., existing suburbs, downtowns, commercial corridors, and the buildout of today's existing suburbs). The remaining third of new housing and 15% of job growth is expected to be in more than two-dozen new Developing Communities (i.e., greenfield areas), mostly located at the edge of established communities and in scattered rural residential areas." (Sacramento Area Council of Governments 2019).

- ***Curtail suburban sprawl.*** Curtail suburban sprawl (*El Dorado County General Plan* [County General Plan] Goal 2.1 by promoting mixed-use development patterns to accommodate the County's future population growth and support economic expansion (El Dorado County 2004).
- ***Assist in meeting future Regional Housing Needs Allocations (RHNA) needs.*** Assist in meeting the County's RHNA for the *2021–2029 Housing Element* (and beyond) by introducing new lands zoned multifamily.
- ***Broaden the housing stock in El Dorado Hills and Cameron Park communities.*** Maximize opportunities for higher-density housing. Offer land uses to accommodate various lot sizes, densities, and product types to satisfy the market demands of existing and future household types, sizes, and income levels (County General Plan Goal HO-1), including the senior population (County General Plan Goal HO-4).
- ***Provide a strong community identity and quality built environment.*** Establish a community setting with an identifiable character and a visually attractive design theme that is compatible with the surrounding area and contributes to the quality of life and economic health (County General Plan Goal 2.4). Carefully plan and incorporate visual elements that enhance and promote a sense of community (County General Plan Goal 2.5) and provide quality residential environments for all income levels (County General Plan Goal HO-2).
- ***Utilize existing infrastructure and public services.*** Promote compact land use patterns in Community Regions to maximize existing public services, such as water, wastewater, parks, schools, solid waste, fire protection, law enforcement, and libraries, thus accommodating new growth in an efficient manner (County General Plan Goal 5.1).
- ***Improve connectivity of the regional roadway network.*** Expand the regional roadway network by connecting Marble Valley Parkway between Bass Lake Road and Cambridge Road interchanges, thus improving parallel capacity to US 50 and providing a coordinated roadway system (County General Plan Goal TC-1).
- ***Encourage future transit opportunities.*** Locate higher-density development in proximity to new public roadways to improve the feasibility of future transit services, thus reducing traffic congestion and offering alternative transportation choices to a range of users (County General Plan Goal TC-2).
- ***Create a new non-motorized transportation system.*** Create a new non-motorized transportation system (County General Plan Goal TC-4) linking residential development to retail services. Incorporate Class I bike paths, "complete streets" with Class II bike lanes, and sidewalks in new development to promote alternative transportation modes and reduce vehicle miles traveled.

- ***Create opportunities to expand the regional trail system.*** Design a trail network for pedestrian and cyclist enjoyment in a manner that coordinates trail connectivity with adjoining undeveloped properties, with a possible linkage to the El Dorado Trail (County General Plan Goal 9.1).
- ***Create new recreational opportunities.*** Provide recreational facilities for the health and welfare of residents and visitors (County General Plan Goal 9.1), including a passive regional park for public enjoyment, thus promoting opportunities to capitalize on recreational uses through tourism and recreation-based businesses and industries (County General Plan Goal 9.3).
- ***Minimize impacts on oak woodlands.*** Conserve vegetative resources (County General Plan Goal 7.4) and minimize impacts on oak woodlands by preserving the area around Deer Creek as open space and directing new development to areas with minimal or little oak canopy.
- ***Preserve natural habitats and set aside wildlife corridors.*** Enhance the natural environment by preserving and protecting habitat within open space areas, including corridors for wildlife movement (County General Plan Goal 7.4). Incorporate the project site's natural features as an amenity for the community to enjoy, and provide opportunities for recreational activities.
- ***Protect important cultural resources.*** Protect the County's important cultural resources (County General Plan Goal 7.5), including significant archaeological and Native American resources and unique historical features of the Cowell family's former quarry and kiln operations.
- ***Foster sustainable communities.*** Foster sustainable communities (County General Plan Goal 2.1) by utilizing sustainable design practices to reduce greenhouse gas emissions, and increase the efficiency of energy and water use in new development (County General Plan Goal HO-5).
- ***Promote the El Dorado County agri-tourism industry.*** Promote El Dorado County's wine industry by establishing a unique and special project theme focusing on public and private vineyard landscapes, including agricultural production (General Plan Goal 8.2) and creating an "agriburbia" destination.

2.3 Project Overview

The proposed project would be a mixed-use community consisting of residential, commercial, retail, agricultural, and open space uses (including 466 acres of natural open space land for passive day-use park or private natural open space). Specifically, it would allow the development of up to 3,236 residential units, 475,000 square feet of commercial uses, 55 acres of agricultural use, 87 acres of public facilities/ recreational use (including 47 acres of public parkland), and 61 acres of road impact areas and future rights-of-way. The proposed project also would designate 1,284 acres as open space. The proposed project would be designed in a manner that would concentrate a majority of the density and intensity in a 1-mile core along the entry roadway and would be designed to preserve, enhance, and highlight the historical use of the property for limestone quarrying. In addition, the proposed project includes a special project theme focusing on vineyard landscapes.

2.3.1 Project Entitlements

The proposed project is the adoption of a new VMVSP, which would include amendments to the County General Plan, approval of new tentative maps and development agreement, and rezoning. The County would also rescind the previous Marble Valley Master Plan and its associated entitlements. These entitlements are requested under application SP12-0003. A separate application for a development agreement for the proposed project is filed under application DA14-0002. If the proposed project is approved, the County's previously approved Marble Valley Master Plan would be superseded by the VMVSP and a new Planned Development consistent with the VMVSP would be established under Application PD14-0005.

Adoption of Village of Marble Valley Specific Plan

As part of the entitlement process, the County would adopt the VMVSP for the development of 3,236 dwelling units, 475,000 square feet of commercial use, and 1,284 acres of open space on a 2,341-acre project area. The proposed project would require the County's approval of a development agreement, financing plan, development plan, and tentative and final subdivision maps.

General Plan Amendments

Under Application A14-0004, the proposed project would include the following General Plan amendments.

- Amend the Community Region of El Dorado Hills to include the VMVSP area (Figure 2-4).
- Amend the County General Plan Land Use Map designation of subject lands from Low-Density Residential (1 dwelling unit per 5 acres [1 du/5 ac]) to Adopted Plan-Village of Marble Valley Specific Plan. The Adopted Plan (AP) land use category recognizes areas for which specific land use plans have been prepared and adopted. These plans (e.g., specific plan or community plan) are accepted and incorporated by reference, and the respective land use map associated with each such plan is adopted as the General Plan map for each such area. Land use designations under the VMVSP would include the following (see also Table 2-2 and Figure 2-5).
    - Village Residential, Low (VRL) (0.9–5.0 du/ac, average 2.9 du/ac)
    - Village Residential, Medium (VRM) (5.0–12.0 du/ac, average 8.3 du/ac)
    - Village Residential, High (VRH) (12.0–24.0 du/ac, average 17.8 du/ac)
    - Office Park (OP)
    - Village Commercial (VC)
    - Public Utilities (PU)
    - Public School (PS)
    - Village Park (VP)
    - Agriculture Tourism (AT)
    - Open Space (OS)

Table 2-2. Proposed Land Use Summary

Land Use Designation	Area (acres)	Percent of Total Area (%)	Residential Units	Commercial Area (square feet)
Residential				
VRL—Village Residential, Low (0.9–5.0 du/ac, average 2.9 du/ac)	685	29	1,963[a]	N/A
VRM—Village Residential, Medium (5.0–12.0 du/ac, average 8.3 du/ac)	84	4	708[a]	N/A
VRH—Village Residential, High (12.0–24.0 du/ac, average 17.8 du/ac)	28	1	501[a]	N/A
Subtotal	797	34	3,172[a]	N/A
Commercial				
OP—Office Park	41	2	N/A	375,000
VC—Village Commercial	16	1	50	100,000
Subtotal	57	3	50	475,000
Agriculture				
AT—Agriculture Tourism	55	2	14[e]	N/A
Subtotal	55	2	14	N/A
Public Facilities				
PS—Public School (K–5 or K–6 elementary school and one K–8 elementary school)	35	1	N/A	N/A
VP—Village Park[b]	47	2	N/A	N/A
NP—Neighborhood Park[c]	TBD	0.0	N/A	N/A
PU—Public Utilities	5	0	N/A	N/A
Subtotal	87	3	N/A	N/A
Open Space				
OS—Open Space	1,284	55	N/A	N/A
Subtotal	1,284	55	N/A	N/A
Road Impact Areas and Future Right-of-Way[d]	61	3	N/A	N/A
Subtotal	61	3	N/A	N/A
Total	2,341	100	3,236	475,000

Source: Marble Valley Company LLC 2023.

du/ac = dwelling unit per acre.
N/A = not applicable.
K–5 = kindergarten through 5th grade.
K–6 = kindergarten through 6th grade.
K–8 = kindergarten through 8th grade.
TBD = to be determined.

[a] Based on average dwelling units for each residential land use designation.

[b] Includes Marble Lake (10.5 acres).

[c] Anticipated 12 acres to be located in residential neighborhoods; acreage incorporated into residential development.

[d] As shown in Figure 2-5 (area includes actual right-of-way plus oak woodland/wetland impact area).

[e] 14 units within Agriculture Tourism (AT) are associated with a bed-and-breakfast-type accommodation and are not permanently occupied residential units.

Rezoning

The proposed project would amend zone districts from Estate Residential 5-Acre-Planned Development (RE-5-PD) and OS to VMVSP zone districts Single-Family 15,000 square feet (SF)-Planned Development (R15-PD), Single-Family 10,000 SF-Planned Development (R10-PD), Single-Family 6,000 SF-Planned Development (R6-PD), Single-Family 4,000 SF-Planned Development (R4-PD), Multifamily-Medium Density-Planned Development (RM1-PD), Multifamily-High Density-Planned Development (RM2-PD), Office Park-Planned Development (C1-PD), Entertainment-Planned Development (C2-PD), Mixed Use-Planned Development (C3-PD), Vineyards-Planned Development (AT1-PD), Community Open Space-Planned Development (OS1-PD), and Foundation/Private Open Space-Planned Development (OS2-PD).

Table 2-3 summarizes the definitions of densities per residential zoning.

Table 2-3. Proposed Zoning Summary

Land Use Designation[a]		Zoning	Area (acres)	Percent of Project Area (%)	Units	Commercial Area (square feet)
Residential						
Village Residential, Low (VRL)	Parcels 1A, 1B, 1C, 1D, 1F	R15-PD	197	8	193	N/A
	Parcel 1E	R10-PD	63	3	125	N/A
	Parcels 2A, 2B, 2C, 2D, 2E, 2F	R6-PD	305	13	1,085	N/A
	Parcel 2G	R4-PD	120	5	560	N/A
	Subtotal VRL		685	29	1,963	N/A
Village Residential, Medium (VRM)	Parcels 3A, 3B, 3C	RM1-PD	84	4	708	N/A
	Subtotal VRM		84	4	708	N/A
Village Residential, High (VRH)	Parcels 4A, 4B	RM2-PD	28	1	501	N/A
	Subtotal VRH		28	1	501	N/A
	Subtotal Residential		**797**	**34**	**3,172**	**N/A**
Commercial						
Office Park (OP)	Parcels 5A, 5B, 5C	C1-PD	41	2	N/A	375,000
	Subtotal OP		41	2	N/A	375,000
Village Commercial (VC)	Parcels 6B, 6C, 6D, 6E	C2-PD	7	0	N/A	25,000
	Parcel 6A	C3-PD	9	0	50	75,000
	Subtotal VC		16	0	50	100,000
	Subtotal Commercial		**57**	**2**	**50**	**475,000**
Agriculture						
Agriculture Tourism (AT)	Parcels 7A, 7B, 7C, 7D, 7E, 7F, 7G, 7H, 7I, 7J	AT1-PD	55	2	14[c]	N/A
	Subtotal Agriculture		**55**	**2**	**14**	**N/A**
Public Facilities						
Public School (PS)	PS1 (Parcel 8A)	RM2-PD	19	1	N/A	N/A
	PS2 (Parcel 8B)	R4-PD	16	1	N/A	N/A
	Subtotal PS		**35**	**2**	**N/A**	**N/A**

Land Use Designation[a]		Zoning	Area (acres)	Percent of Project Area (%)	Units	Commercial Area (square feet)
Village Park (VP)	VP1 (Parcel 9A)	OS1-PD	10	1	N/A	N/A
	VP2 (Parcel 9B)	OS1-PD	10	0	N/A	N/A
	VP3 (Parcel 9C)	RM2-PD	8	0	N/A	N/A
	VP4 (Parcel 9D)	R4-PD	6	0	N/A	N/A
	VP5 (Parcel 9E)	OS1-PD	6	0	N/A	N/A
	VP6 (Parcel 9F)	OS1-PD	2	0	N/A	N/A
	VP7 (Parcel 9G)	RM2-PD	5	0	N/A	N/A
	Subtotal VP		**47**	**1**	**N/A**	**N/A**
Public Utilities (PU)	PU1 (Parcel 10A)	R15-PD		0	N/A	N/A
	PU2 (Parcel 10B)	OS1-PD		0	N/A	N/A
	PU3 (Parcel 10C)	AT1-PD		0	N/A	N/A
	PU4 (Parcel 10D)	OS1-PD		0	N/A	N/A
	Subtotal PU		**5**	**0**	**N/A**	**N/A**
	Subtotal Public Facilities		**87**	**4**	**N/A**	**N/A**
Open Space						
Community Open Space (OS)	North of Deer Creek (Parcel 11A)	OS1-PD	743	32	N/A	N/A
	U.S. Highway 50 Scenic Corridor (Parcel 11B)	OS1-PD	75	3	N/A	N/A
	Subtotal Community OS		**818**	**35**	**N/A**	**N/A**
Foundation or Private Open Space (OS)	Parcel 11C	OS2-PD	466	20	N/A	N/A
	Subtotal OS		**1,284**	**55**	**N/A**	**N/A**
Road Impact Areas and Future Right-of-Way[c]			**61**	**3**	**N/A**	**N/A**
Total			2,341	100	3,236	475,000

Source: Marble Valley Company, LLC 2023.
N/A = not applicable.

Zoning
R15-PD = Single-Family 15,000 square feet (SF)-Planned Development.
R10-PD = Single-Family 10,000 SF-Planned Development.
R6-PD = Single-Family 6,000 SF-Planned Development.
R4-PD = Single-Family 4,000 SF-Planned Development.
RM1-PD = Multifamily-Medium Density-Planned Development.
RM2-PD = Multifamily-High Density-Planned Development.
C1-PD = Office Park-Planned Development.
C2-PD = Retail & Entertainment-Planned Development.
C3-PD = Mixed Use-Planned Development.
AT1-PD = Vineyards-Planned Development.
OS1-PD = Community Open Space-Planned Development.
OS2-PD = Foundation/Private Open Space-Planned Development.

[a] Land use designations and zoning are shown and defined in Figures 2-5 and 2-6, respectively.
[b] Includes actual right-of-way and oak woodland impact area.
[c] 14 units within Agriculture Tourism (AT) are associated with a bed-and-breakfast-type accommodation and are not permanently occupied residential units.

Rescission of the 1998 Marble Valley Master Plan

The proposed project is located at the site of the previously approved 398-lot Marble Valley Master Plan. The Development Agreement DA97-0001 for the Marble Valley Tentative Maps under TM951298 and TM95-1299 was previously approved by the County Board of Supervisors in 1998. In 2001, the S.H. Cowell Foundation sold the property to Marble Valley Company, LLC. In 2008, Marble Valley Company, LLC received a Finding of Consistency approval from the County for a minor modification of the originally approved tentative subdivision map and in 2018, the development agreement and associated tentative subdivision maps expired.

If the proposed project is approved, the County's previously approved master plan would be rescinded. A new Planned Development consistent with the VMVSP would be established under Application PD14-0005.

2.3.2 Proposed Land Use Plan

The proposed project would establish the VMVSP and would encompass 3,236 dwelling units, 475,000 square feet of commercial use, 55 acres of agricultural use, 1,284 acres of open space (including 466 acres of open space for a passive, day-use park or private open space), and 87 acres of public facilities/ recreational use (including 47 acres of public parkland), and 61 acres of new road impact areas and future rights-of-way (see Table 2-1). Planned improvements would take place on approximately 1,875 acres located mostly north of Deer Creek. Table 2-2 summarizes the proposed land uses for the VMVSP, and Figure 2-5 shows the proposed land use designations.

Table 2-3 summarizes the proposed zoning of the VMVSP, and Figure 2-6 shows the proposed zoning for the VMVSP.

Transfer of Residential Units within the VMVSP

The VMVSP would permit development of a diverse range of housing, such as conventional small and large single-family production lots, custom and semi-custom lots, and higher-density attached and detached residential products. All housing within the community would be designed to avoid as many natural resources as possible and integrate with the site's native features. The VMVSP would allow transfer of residential units between residential parcels, provided the maximum dwelling count does not exceed 3,236 units.

2.3.3 Project Features

The proposed project would include a wide variety of amenities for residents and visitors, including the following.

- Vineyards—vineyard blocks and public roadway landscaping are planned throughout the project.
- Marble Lake at Marble Valley Park—a 21-acre public lake park that was a former limestone quarry with a 10.5-acre water surface for non-motorized boating and surrounding park spaces for an amphitheater, gazebo, and lighted sports fields.
- S.H. Cowell Historic Park—a 6-acre park providing interpretive exhibits and the potential restoration of historic features related to limestone quarrying and production in the area.

- Neighborhood Parks (approximately 12 acres, dependent upon population).
- Village Parks—seven village parks, two of which are joint-use with elementary or middle schools.
- Village Center—16 acres to accommodate 100,000 square feet of neighborhood retail/residential mixed-use site.
- Monolith Event Center—the 25-foot tall, limestone monolith in the middle of a former 2-acre quarry and the surrounding quarry floor would be preserved and may serve as a private event and activity complex.
- Wine Center—the project site may accommodate a wine country gateway and Agritourism information center due to its strategic location within the county on US 50.
- Information and Sales Center—a sales and information center would provide public information about the community and sales and marketing brochures to interested guests and may also become home to The Village of Marble Valley Owners' Association.
- Office Park—41 acres to accommodate 375,000 square feet of office space.
- Bikeway and Trail Network—a circulation system that includes provisions for bicycle and pedestrian use, including pedestrian network links to retail services, employment, and recreational amenities, a network of Class I bike paths, and connection to the El Dorado Trail (if the County approves the LRVSP).
- Open Space—1,284 acres (55% of the project area), of which 466 acres south of Deer Creek may accommodate passive day use or private open space. The 466 acres may be dedicated to a foundation of interested stakeholders to own and manage at a later date. This amount of open space would exceed the minimum amount of 30% required for Planned Development projects.

The public service infrastructure for the proposed project would include the following.

- Schools—two elementary or middle school sites (approximately 16 and 19 acres) are proposed in the northern portion of the community, with direct access to future Marble Valley Parkway. The schools have been strategically sited to allow for joint-use between the school and community services districts (CSD).

Vehicle Circulation Plan

As shown in the preliminary vehicle circulation plan for the proposed project (Figure 2-7), the proposed project is immediately south of US 50 with access from two existing interchanges at Bass Lake Road and Cambridge Road. The proposed project does not propose, and would not need, access through the circulation systems that serve adjacent residential neighborhoods. The traffic circulation system for the proposed project would also provide El Dorado Irrigation District (EID) public road access to the Deer Creek WWTP (Figure 2-7), and provide landowners to the east of the proposed project (the proposed LRVSP area) more direct access to US 50. In addition, the proposed project includes roundabout control at major public intersections.

Trail Circulation Plan

The proposed project includes a comprehensive system of on- and off-street bicycle and pedestrian facilities to allow for non-vehicular connectivity between the various land uses. Class I trails will

connect to the El Dorado Trail via Lime Rock Valley Road (if the County approves the LRVSP). Figure 2-8 shows the preliminary trail circulation plan for the proposed project.

Utility Plan

EID would provide potable water and wastewater treatment to the proposed project.

The proposed project would require construction of a new potable water transmission and distribution system and a wastewater collection system within the project area. The preliminary utility plan for the proposed project is shown in Figure 2-9 (potable water), Figure 2-10 (recycled water), and Figure 2-11 (wastewater). EID has determined that a new 44 million-gallon-per-day water treatment plant to be located off Missouri Flat Road will be necessary to support development addressed in the County General Plan. The timing of this construction would be based on needed capacity. A transmission main would be constructed to bring water to the Bass Lake tanks, north of the plan area. EID has determined that up to 1,544 residential units in the VMVSP could be served prior to the construction of the proposed plant with construction of new water transmission mains between Cameron Park and the project site ("Interim Phase 1 improvements"). The locations of the water transmission system improvements are shown in Figure 2-12 and are discussed below under *Related Offsite Improvements*. The improvements listed below provide the anticipated necessary improvements as they are currently envisioned at the time of publication of this Draft EIR. Such improvements are subject to review and revision through the standard EID development process which includes a facility improvement letter, facility plan report, and plan submittal. That process would consider and respond to the water supply conditions existing at the time the improvements would be implemented.

Stormwater runoff from the proposed project area would be directed to a stormwater collection system that will comply with the requirements of the County's National Pollutant Discharge Elimination System (NPDES) and Municipal Separate Storm Sewer System (MS4) permit in place at the time of subsequent development approvals. The Storm Drain Master Plan (Appendix J, *Drainage Analysis*) includes a detention basin along Marble Valley Creek at a downstream road crossing within the project area.

Related Offsite Improvements

There are several offsite infrastructure improvements that would be required to support the proposed project (Figure 2-13), including the following.

- Extension of the new Marble Valley Parkway to the US 50/Cambridge Road interchange.
- Upgraded connection of Marble Valley Parkway to the US 50/Bass Lake Road interchange.
- Interim improvements to the US 50/Cambridge Road interchange.
- Interim improvements to the US 50/Bass Lake Road interchange.
- A new section of Marble Valley Parkway between the east and west sides of the northern portion of the proposed project site (the same alignment as that approved with the 398-lot Master Plan).
- Potential extension of the proposed Lime Rock Valley Road to Deer Creek Road.
- Water, recycled water (potentially), and wastewater line extensions and improvements to connect to existing EID infrastructure and potential upsizing to accommodate demand.

- Portions of the potable water transmission main improvements shown as Interim Phase I Potable Water Improvements on Figure 2-13.
    - Construction of a new 18-inch line from the existing 16-inch line in Ponte Morino Drive to the existing 18-inch stub on the north side of US 50, near the US 50/Cameron Park Drive off-ramp.
    - Construction of a new 12-inch line within Durock Road from the existing 12-inch line near the driveway to Syar Concrete to the intersection of Business Drive.
    - Construction of a new 24-inch transmission main from the intersection of Cameron Park Drive and Coach Lane to the Village of Marble Valley boundary and Deer Creek Road.
    - Construction of approximately three new pressure-reducing stations with locations to be determined with EID input at a later date.
    - Connect the existing 10-inch line in Cambridge Road to the new 24-inch transmission main.
- New water transmission lines along Bass Lake Road and Cambridge Road.

The potential environmental impacts of implementing these offsite infrastructure improvements have been evaluated in this EIR as part of the proposed project. In addition, the project applicant has identified potential locations for offsite oak tree mitigation. Those areas, which are shown in Figure 2-14, are in the El Dorado Hills Specific Plan area in El Dorado Hills.

General Plan Policy TC-Xf Improvements

Measure E, Initiative to Reinstate Measure Y's Original Intent—No More Paper Roads, which became effective on July 29, 2016, modified General Plan policies TC-Xa, TC-Xf, and TC-Xg related to maintaining level of service (LOS) standards for County roads and highways. Specifically, Measure E required that roadway improvements be constructed by development projects when LOS is expected to be below LOS standards of the Circulation Element of the General Plan. On July 29, 2016, the Alliance for Responsible Planning initiated an action in the El Dorado County Superior Court challenging the constitutionality and validity of Measure E. On July 20, 2017, the trial in *Alliance for Responsible Planning v. El Dorado County Board of Supervisors, et al.* came before the court, and on July 31, 2017, the trial court issued a Writ of Mandate and Declaratory Relief that upheld certain provisions of Measure E while also finding that others were unconstitutional. The trial court found that amendments to policies TC-Xa 3, TC-Xa 4, TC-Xa 6, and TC-Xf of the General Plan and Implementation Statement No. 8 of Measure E were unconstitutional or invalid and that the Measure E amendments to policies TC-Xa 1, TC-Xa 2, TC-Xa 5, TC-Xa 7, and TC-Xg of the General Plan and Implementation Statements Nos. 1, 2, 3, 4, 5, 6, 7, and 9 were constitutional and valid. Per the Writ of Mandate the County has removed the text of Measure E amendments from Policies TC-Xa 3, TC-Xa 4, TC-Xa 6, and TC-Xf from the General Plan and restored those policies to the language in effect immediately prior to the July 29, 2016 effective date of Measure E. Per the Writ of Mandate the County added the text of Implementation Statements Nos. 1, 3, 4, 5, 6, and 7 to the Transportation and Circulation Element of the General Plan. Proponents of Measure E appealed the trial court's decision and the petitioner cross-appealed. The Third District Court of Appeal upheld the lower court's decision in May 2021.

This Draft EIR analyzes the physical environmental impacts of all traffic improvements that are triggered by the VMVSP and are not included in the County's current Capital Improvement Program

(CIP). Improvements that could be required by General Plan Policy TC-Xf are listed below and are referred to throughout this EIR as TC-Xf projects (Figure 2-15).

- Improve US 50/Bass Lake Road interchange – construct a Type L-9 configuration, consisting of a westbound loop on-ramp and slip on- and off-ramps in the eastbound direction and improve eastbound ramp intersection
- Improve the Marble Valley Parkway/Marble Mountain Road intersection—add stop sign on Marble Mountain Road and designated left turn lanes from Marble Valley Parkway to Marble Mountain Road
- Improve the Marble Valley Parkway/Marble Ridge Road intersection—add stop sign on Marble Ridge Road and designated left turn lane from Marble Valley Parkway to Marble Ridge Road
- Improve the Cambridge Road/Country Club Drive intersection—install traffic-signal control; reconfigure lanes to provide left turn lanes
- Improve the Cambridge Road/Knollwood Drive intersection—install traffic-signal control; reconfigure lanes to provide left turn lanes
- Improve the Cambridge Road/Flying C Road/Crazy Horse Road intersection—install traffic-signal control; reconfigure to provide left and right turn lanes
- Improve the Latrobe Road/Town Center Boulevard Intersection —reconfigure lanes
- Improve the Bass Lake Road/Hollow Oak Road intersection—install traffic-signal control
- Improve the Cambridge Road/Merrychase Drive/US 50 westbound ramps intersection
- Improve Bass Lake Road between Hollow Oak Drive and Country Club Drive

Public Services

The proposed project is within the service areas of two fire protection districts—El Dorado County Fire Protection District and El Dorado Hills County Water District (CWD) (which includes El Dorado Hills Fire District) (El Dorado County Fire Protection District 2024). Depending on the ultimate layout of the proposed new villages, a reorganization of both fire districts may be required to align service boundaries with the proposed internal layout of the VMVSP, specifically future lines of assessment and ownership, village clusters, and internal circulation. Reorganization is subject to discretionary approval by LAFCO and would require sphere of influence updates and possible updates to the municipal service reviews for the affected districts. The proposed project also falls within a State Responsibility Area, where the State of California (i.e., California Department of Forestry and Fire Protection) has financial responsibility for wildland fire protection. The proposed project would be served by the El Dorado County Sheriff's Office. It is proposed that the residential neighborhoods would be gated and they may also have their own security in addition to the public protection offered by the sheriff. The proposed project is also within the El Dorado Hills CSD, which provides public services such as public parks and recreation services and facilities (El Dorado Hills Community Services District 2024). The proposed project includes seven village parks totaling 47 acres, and 12 acres of neighborhood parks. The El Dorado Hills CSD would be responsible for any amenities in the proposed public parks and would be required to submit an application for a planned development permit to construct and operate such parks.

The proposed project site is in the Buckeye Union Elementary School District and the El Dorado Union High School District. The County General Plan states that the minimum levels of service for

school districts within El Dorado Hills are determined by the school district. Two elementary or middle schools are proposed as part of the proposed project to accommodate the expected number of new students in the project area. Currently, the project area is within the attendance boundary of Union Mine High School, but students may attend a new high school the district plans to construct on Latrobe Road.

The proposed project is within the El Dorado Hills CSD, which coordinates with various public service providers to determine the terms of service, such as cable television providers and waste/recycling collection services (El Dorado Hills Community Services District 2024).

Dry Utility Connections

Extensions to connect electricity and natural gas services to existing facilities would be necessary to serve the project (Figure 2-13). These extensions would be constructed by Pacific Gas and Electric Company (PG&E).

PG&E electricity service would be extended from a 21-kilovolt single-phase overhead line connecting to two existing substations, Clarksville to the west and Shingle Springs to the east (Marble Valley Company, LLC 2023).

PG&E may extend service to the project area to provide natural gas service in one of the following ways.

1. Adding an extension (transmission pressure) from its distribution feeder mains (DFM) on Green Valley Road and El Dorado Hills Boulevard east to Bass Lake Road or Cambridge Road, then south to a new offsite regulator station.
2. Converting the existing steel main in Serrano Parkway to transmission pressures, continuing with steel southeast to Bass Lake Road, then south on Bass Lake Road, where a new regulator station would be located.
3. Extending a 6-inch or 8-inch steel main (rather than plastic) from the existing plastic main on Bass Lake Road and Hollow Oaks Drive to a future regulator station on Bass Lake Road. Initially the main would operate at distribution pressures but could later convert to transmission pressures and run as a DFM. Steel would extend from the regulator station site on Serrano Parkway to a new steel main at the intersection of Bass Lake Road and Hollow Oaks Drive (Marble Valley Company, LLC 2023).

AT&T and Verizon are the local exchange carriers and primary providers for telecommunication services. A backbone network of conduits and manholes in easements adjacent to roads that would be capable of supporting both copper and fiber-optic systems would be necessary within the plan area. Telecommunications for office, commercial, and retail users will be either copper or fiber-optic services. One remote terminal site, consisting of controlled environment vaults or cabinets, is anticipated to provide telecommunications service to the plan area, and it would likely be located in the Village Center. Residential customers will receive telecommunications service via fiber-optic cable capable of providing internet access, dial tone, and video services. Mobile communication service providers will provide residents with wireless communications service from various existing or future wireless communications towers in El Dorado Hills and within the plan area.

Comcast Communications is the cable television and broadband service provider for the plan area. Comcast Communications has potential facilities north of US 50 that may be extended into the plan area to provide service. Comcast Communications will install a fiber-optic/coaxial hybrid system

and offer internet access, dial tone, and video services. The El Dorado CSD will manage the cable television franchise.

2.3.4 Project Phasing and Construction

Buildout of the project would likely occur over 19 years or more and would ultimately be dictated by housing market conditions and available infrastructure. It is anticipated construction would be phased within the project site. Construction could begin in 2025.

Construction hours of all phases would conform to County noise ordinances, which apply to construction activities between 7 a.m. and 7 p.m., Monday through Friday, and 8 a.m. and 5 p.m. on weekends and federally recognized holidays. Provided construction equipment is fitted with factory installed muffling devices and is maintained in good working order, construction noise during daylight hours is exempt under Section 130.37.020 of the County ordinance. The amended Health and Safety element of the County General Plan exempts construction noise from standards outlined in the tables within that element (Policy 6.5.1.11) (El Dorado County 2019).

In addition to the VMVSP development standards, the project applicant would be required to comply with El Dorado County's Storm Water Management Plan; Grading, Erosion, and Sediment Control Ordinance; the Design and Improvement Standards Manual; and the Drainage Manual, all of which require construction site runoff control. The State Water Resources Control Board's (State Water Board) NPDES General Permit for Storm Water Discharges from MS4 Order No. 2013-0001-DWQ (Order) would apply to the project. The proposed project qualifies as a "Regulated Project" as defined in Section E.12 of the Order and therefore will be required to comply with the standards provided in the Order. The project applicant would be required to follow the County's development standards and implement postconstruction runoff control.

The project would use onsite materials for fill and other purposes. Approximately 530,000 to 600,000 cubic yards of fill (spoils) materials from previous quarry operations are currently located on the east and south sides of the quarry. The applicant proposes to relocate this material for use onsite, and if economically feasible, screen and process this material as engineered fill or be used for other purposes. Materials may be used for building pads and road bases, or if suitable further processed for topsoil or other uses. The screening, processing and reuse or re-compaction of these materials would be complete prior to any occupancy on the project site. Offsite roadway improvements would be implemented as dwelling unit limits are reached. At 860 dwelling units, additional improvements to US 50 ramps at Bass Lake Road and to Marble Ridge Road and Marble Mountain Road would be implemented. At Cambridge Road, improvements would be implemented at the US 50 ramps, Flying C Road, and Crazy Horse Road in order to accommodate 750 dwelling units. At 880 dwelling units, additional improvements to US 50 westbound ramps at Cambridge Road would be implemented.

2.4 Required Approvals

This EIR will be used by the County to document the potential environmental impacts of the proposed project and to determine whether the impacts could be avoided or mitigated to less-than-significant levels. The County is the lead agency for the proposed project. As applicable, this EIR may also be used by regulatory and responsible agencies, such as state agencies. These agencies are

responsible for issuing permits and approvals that may be needed to proceed with the proposed project. A list of potential permits and approvals required by the County are identified below.

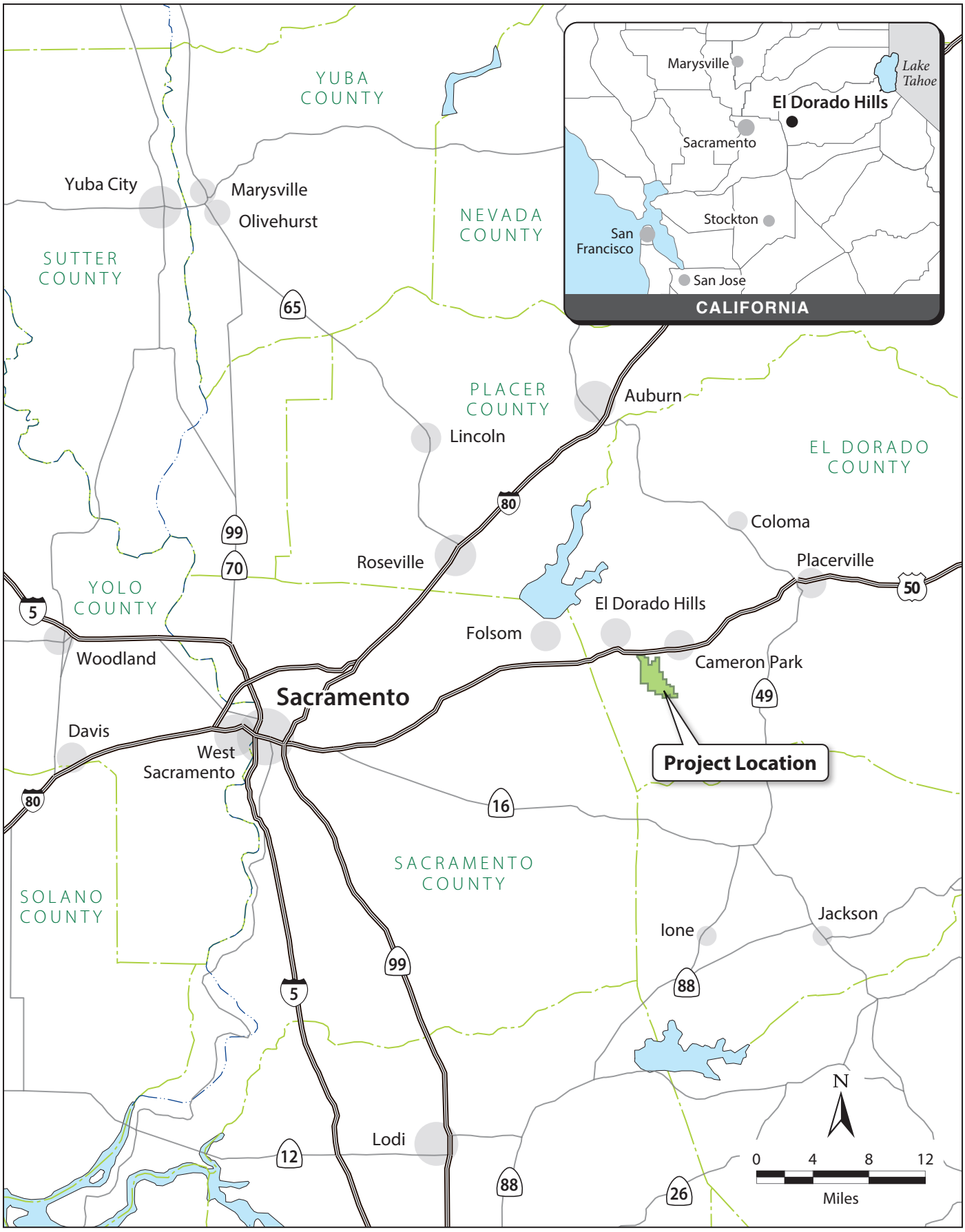
- Approval by the El Dorado County Board of Supervisors of General Plan amendments.
- Approval by the El Dorado County Board of Supervisors of the VMVSP.
- Approval by the El Dorado County Board of Supervisors of rezoning.
- Approval by the El Dorado County Board of Supervisors of Planned Development.
- After the VMVSP is approved, approval by the El Dorado County Planning Commission and/or Board of Supervisors of large lot tentative subdivision map dividing the property into residential, commercial, open space (including an approximate 466-acre Foundation Park or private open space), recreational, and other large lots.
- Approval by the El Dorado County Board of Supervisors of a development agreement between the applicant, Marble Valley Company, LLC, and the County.
- Approval by the El Dorado County Board of Supervisors of a financing plan between the applicant, Marble Valley Company, LLC, and the County.
- Approval by the County of building and grading permits, General Permit for MS4 compliance, small lot tentative maps and final maps.
- Rescission by the El Dorado County Board of Supervisors of the Marble Valley Master Plan.

Other state and local approvals for the California Environmental Quality Act for the proposed project may be required as the project is implemented. This EIR may be used for other approvals that may be necessary or desirable for project implementation. State permits or project approvals that may be required are listed below.

- Approval by EID of connection to water and wastewater facilities.
- Clean Water Act Section 401 certification from the Regional Water Quality Control Board.
- Submittal of a Notice of Intent for coverage under the Statewide General Permit (Water Quality Order No. 2022-0057-DWQ) for construction activities to the State Water Board.
- Fish and Game Code Section 1602 streambed alteration agreement from the California Department of Fish and Wildlife.
- California Department of Education approval of site acquisition and construction plans for the two proposed elementary or middle school facilities.
- Buckeye Union School District approval of site acquisition and construction plans for the two proposed elementary or middle school facilities.
- Approval from the El Dorado County Local Agency Formation Commission for the potential boundary adjustment between the El Dorado County Fire Protection District and El Dorado Hills County Water District, depending on the ultimate boundaries and the layout of the proposed new villages. Reorganization is subject to discretionary approval by LAFCO and would require sphere of influence updates and possible updates to the municipal service reviews for the affected districts.

Federal permits or project approvals that may be required are listed below.

- Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers for fill of waters of the United States.
- Biological opinion from the U.S. Fish and Wildlife Service for project impacts on special-status species.



ICF Graphics... 00667.12 (7-5-2018)

Figure 2-1
Regional Location

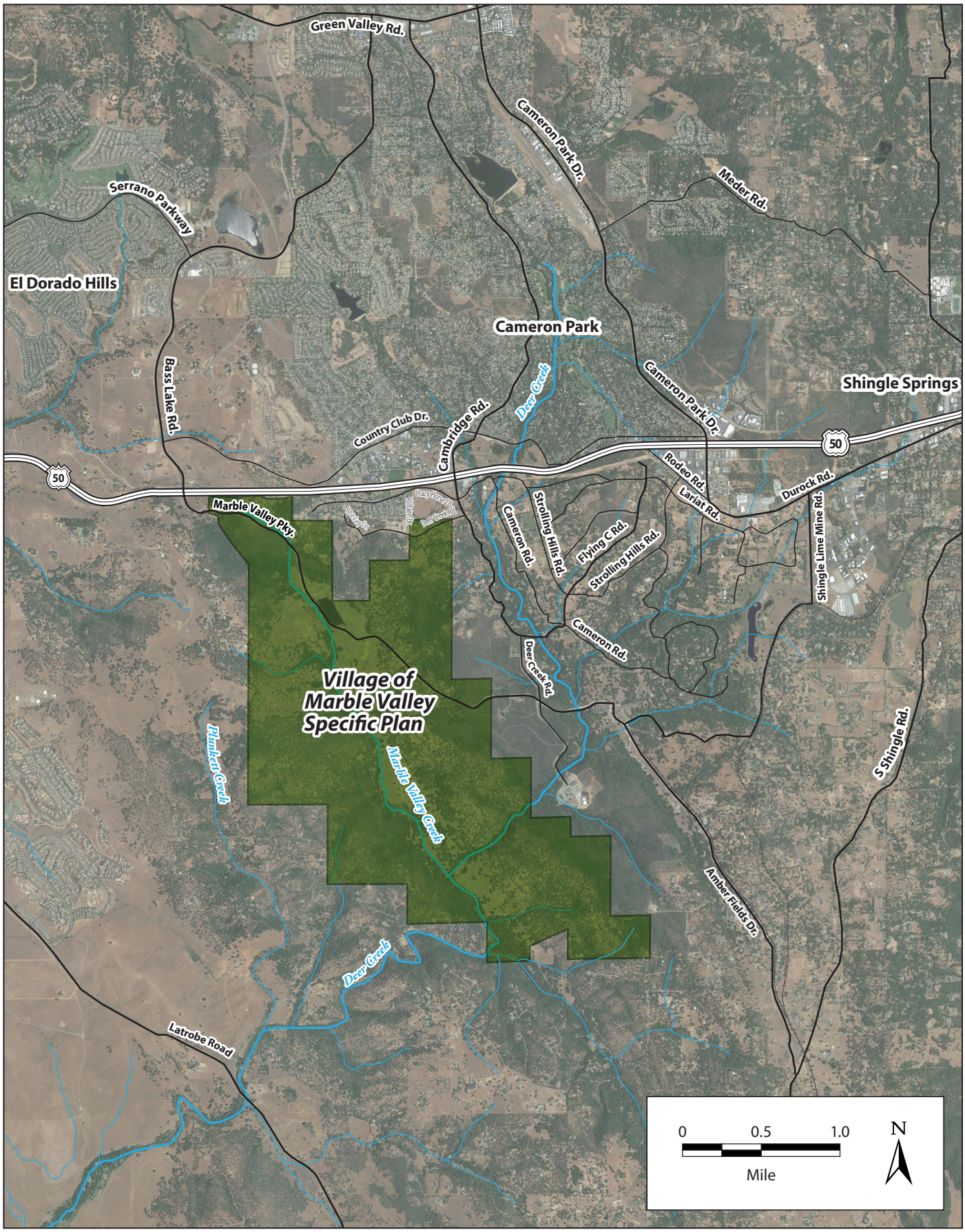


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Figure 2-2
Project Location

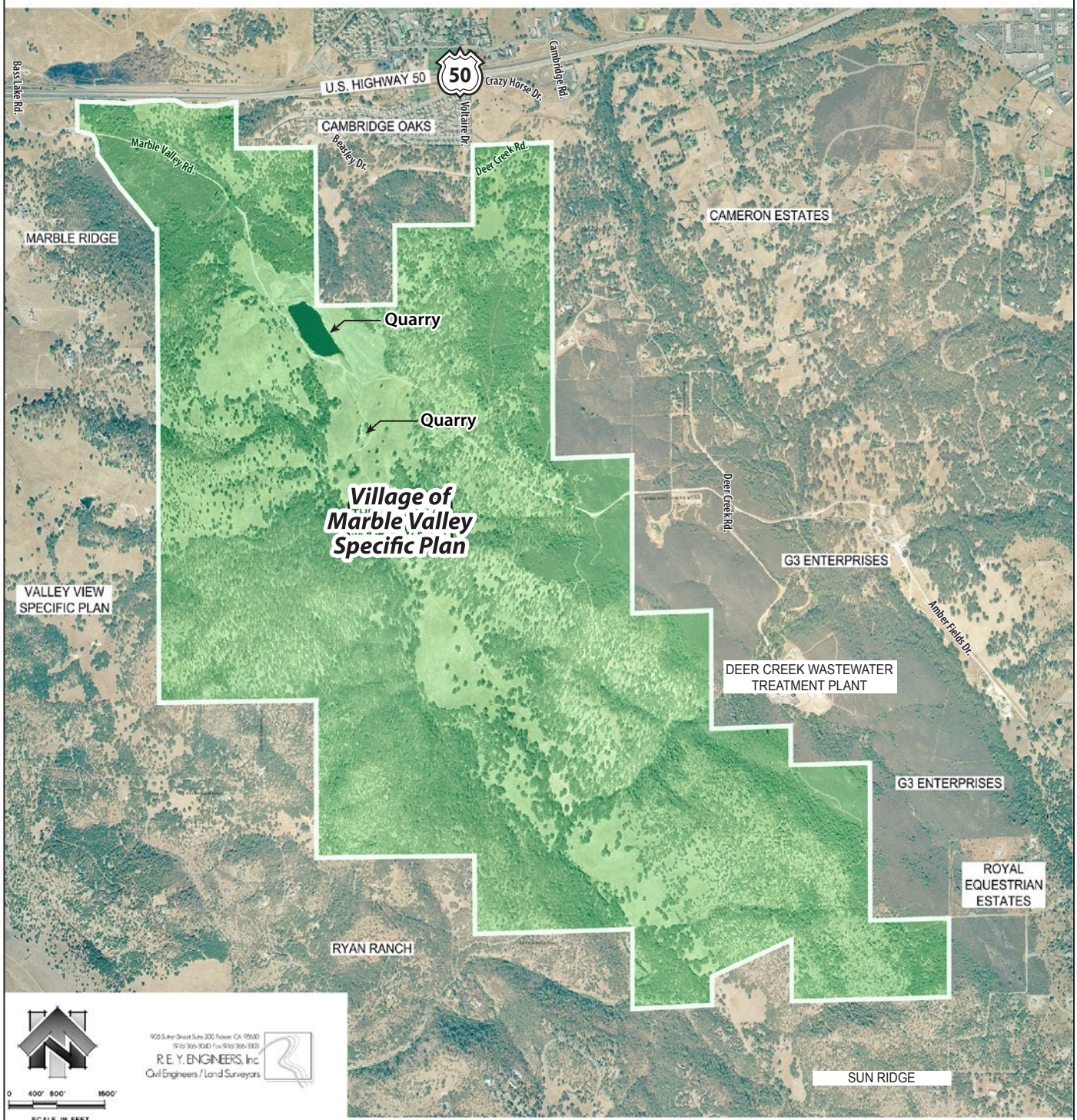

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Figure 2-3
Existing Conditions

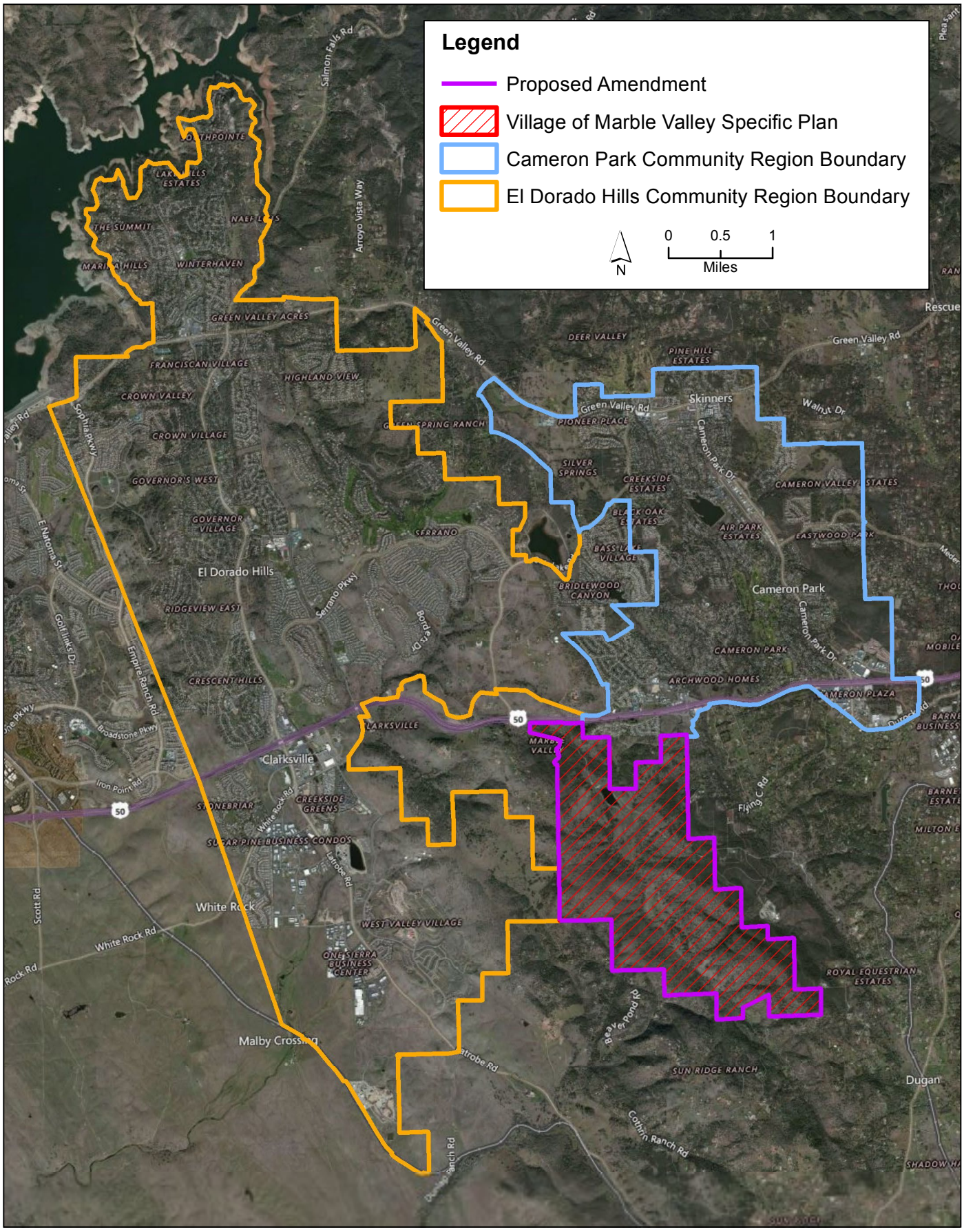

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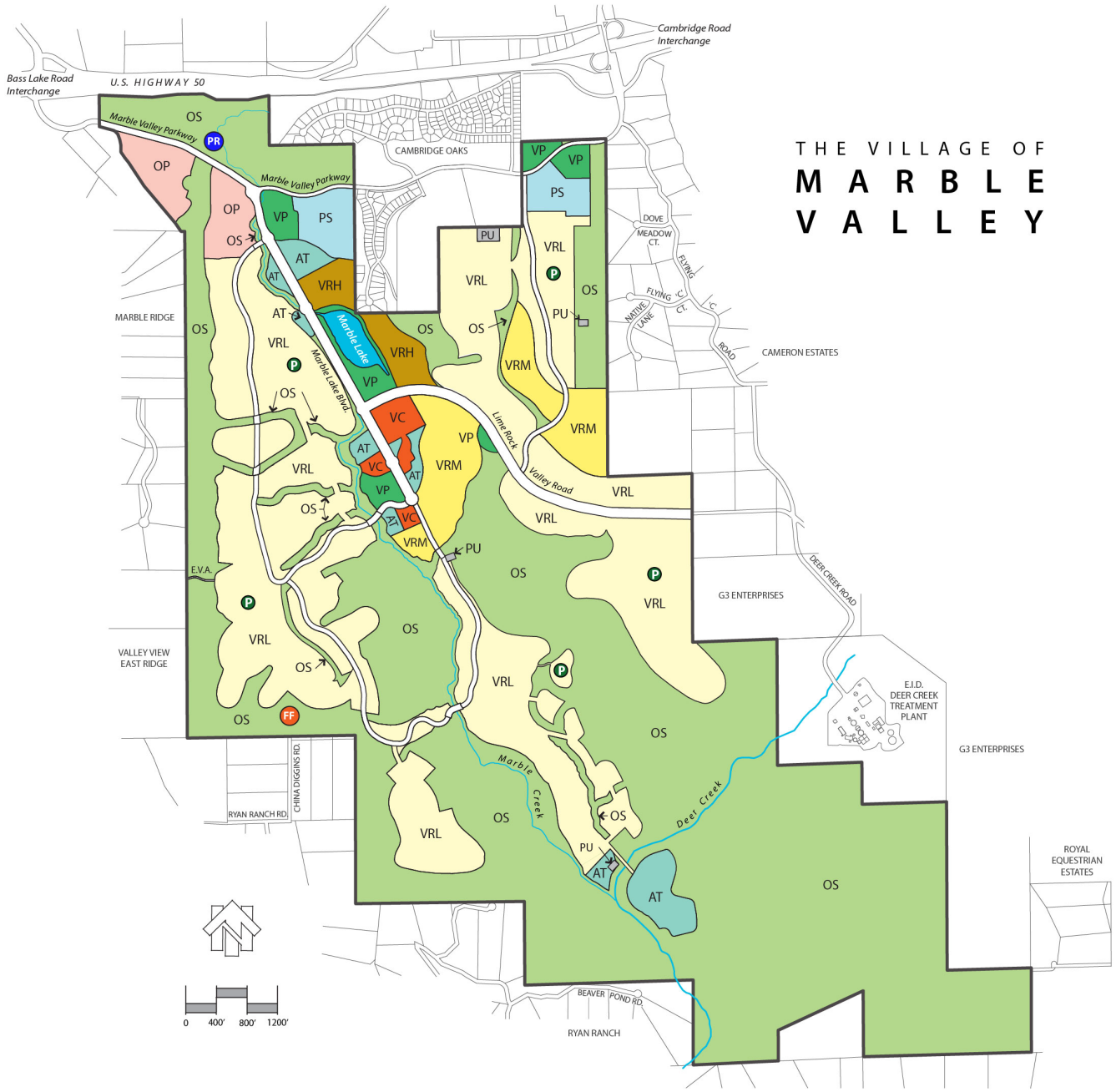
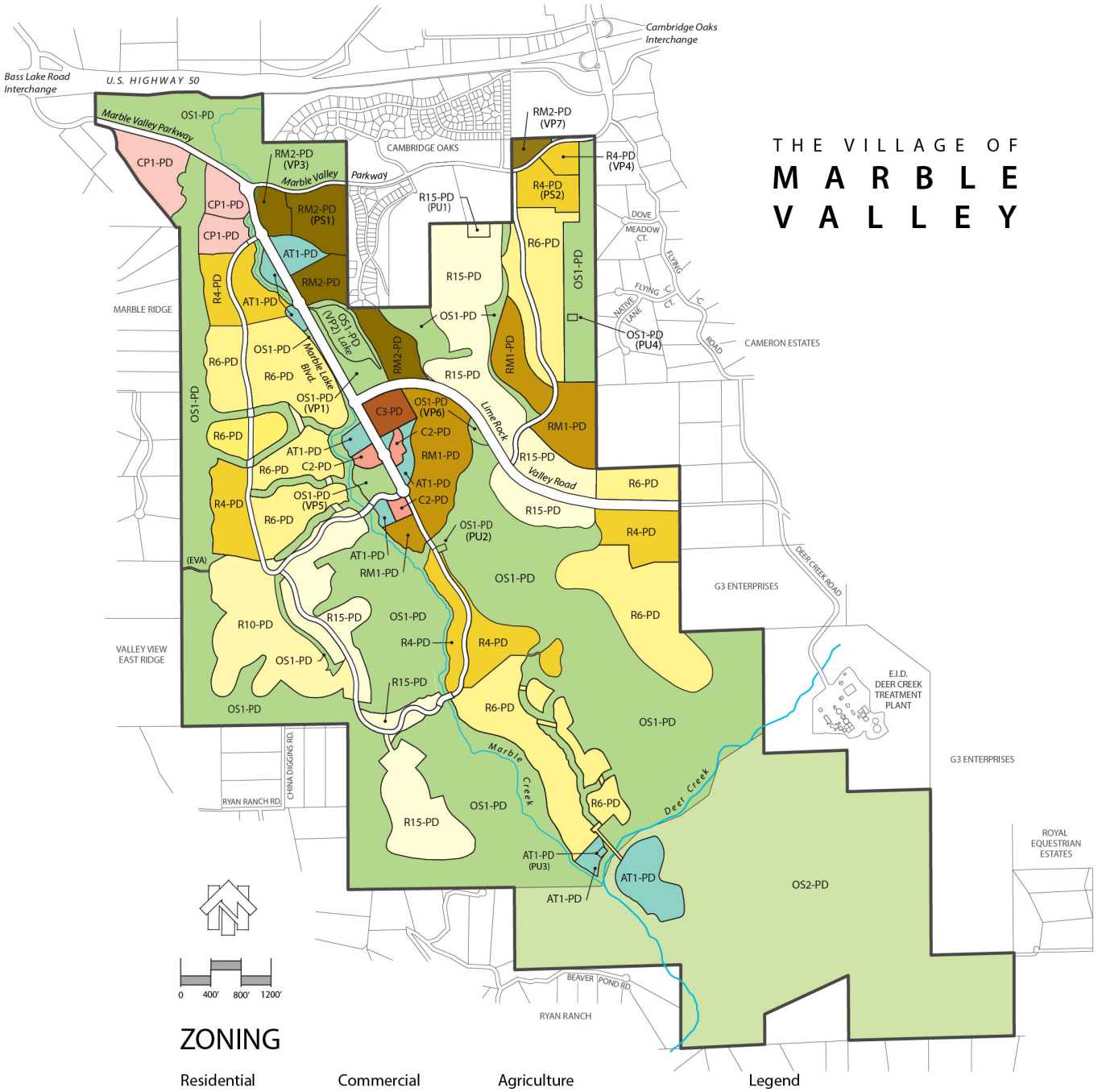
Figure 2-4
Proposed Amendment to Community Region



Source: Torrence Planning, 2016.

ICF Graphics... 00667.12 (7-5-2018)

Figure 2-5
Proposed Land Use Designations



ZONING

Residential

R15-PD	Single Family	15,000 SF Min. Lot
R10-PD	Single Family	10,000 SF Min. Lot
R6-PD	Single Family	6,000 SF Min. Lot
R4-PD	Single Family	4,000 SF Min. Lot
RM1-PD	Multi-Family	Medium Density
RM2-PD	Multi-Family	High Density

Commercial

C1-PD	Office Park
C2-PD	Retail & Entertainment
C3-PD	Mixed Use

Agriculture

AT1-PD	Vineyards [1]

Open Space

OS1-PD	Community Open Space
OS2-PD	Foundation or Private Open Space

[1] Marble Lake Boulevard and Lime Rock Road Medians are zoned AT1-PD

Legend

VP1 = Village Park 1
VP2 = Village Park 2 (Marble Lake)
VP3 = Village Park 3
VP4 = Village Park 4
VP5 = Village Park 5
VP6 = Village Park 6
VP7 = Village Park 7

PS1 = Elementary School 1
PS2 = Elementary School 2

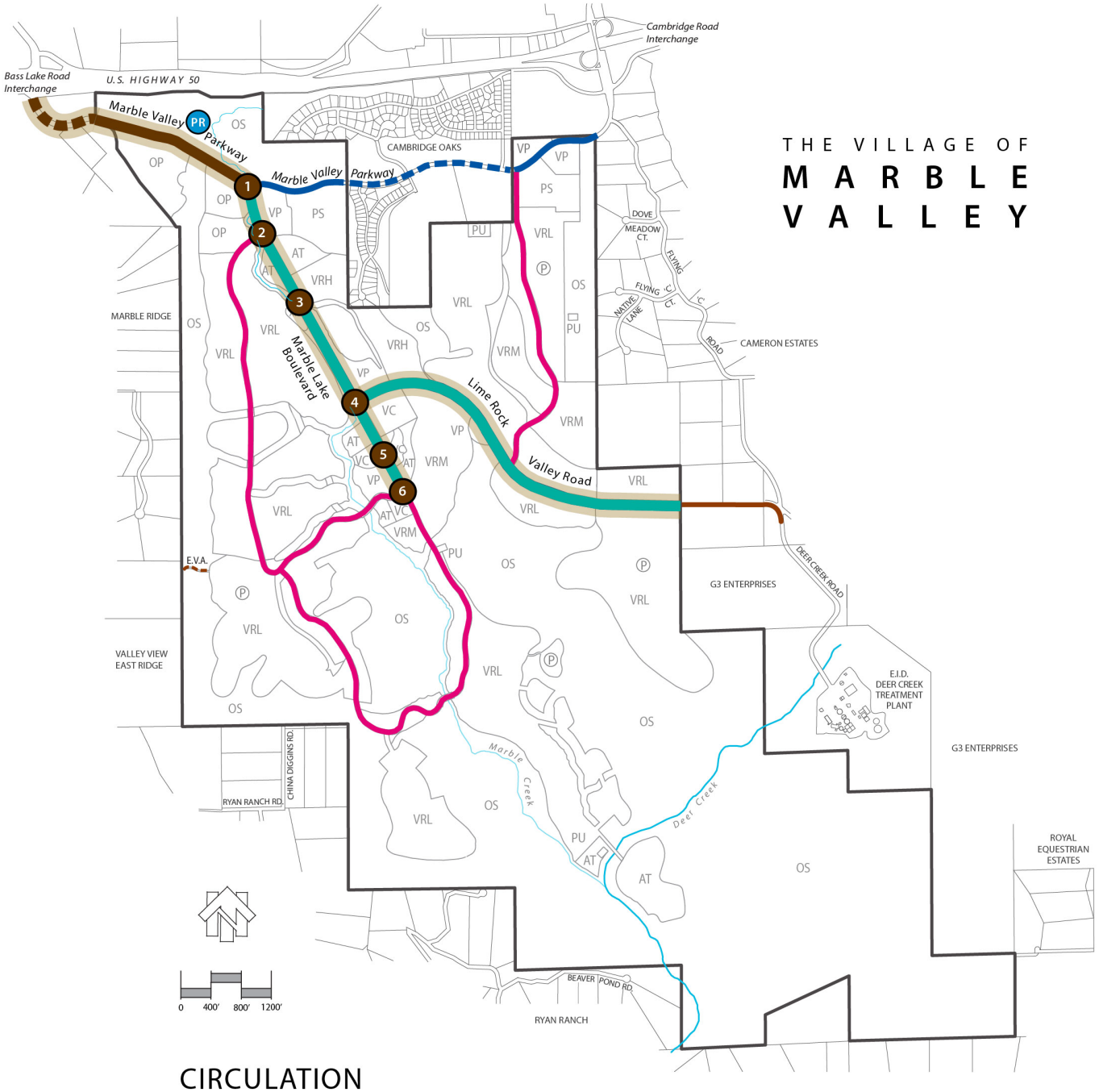
PU1 = Water Storage Tanks
PU2 = Lift Station 1
PU3 = Lift Station 2
PU4 = Lift Station 3

EVA = Emergency Vehicle Access

Source: Torrence Planning, 2016.

ICF Graphics... 00667.12 (7-5-2018)

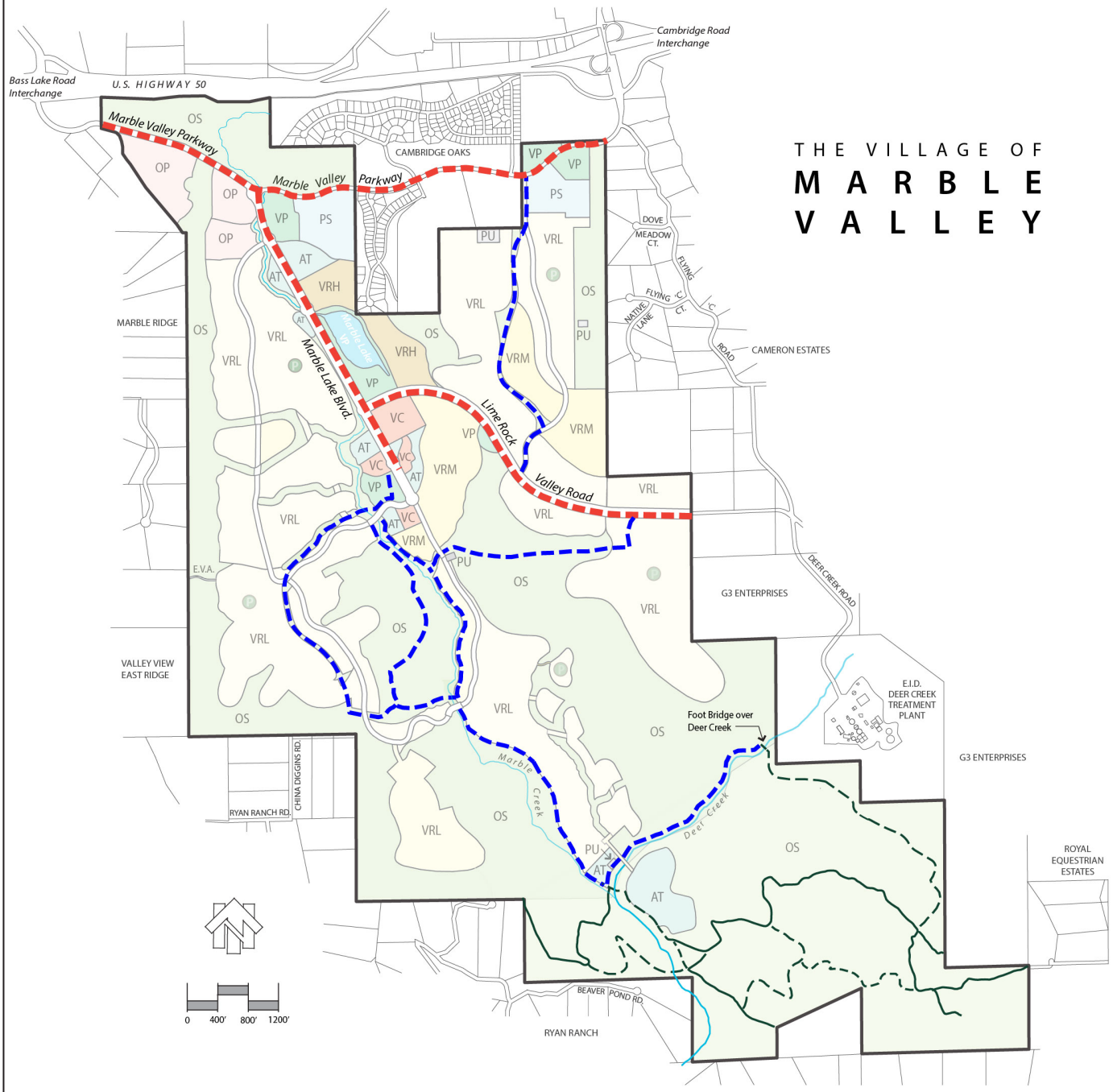
Figure 2-6
Proposed Zoning



Source: Torrence Planning, 2016.

ICF Graphics... 00667.12 (7-5-2018)

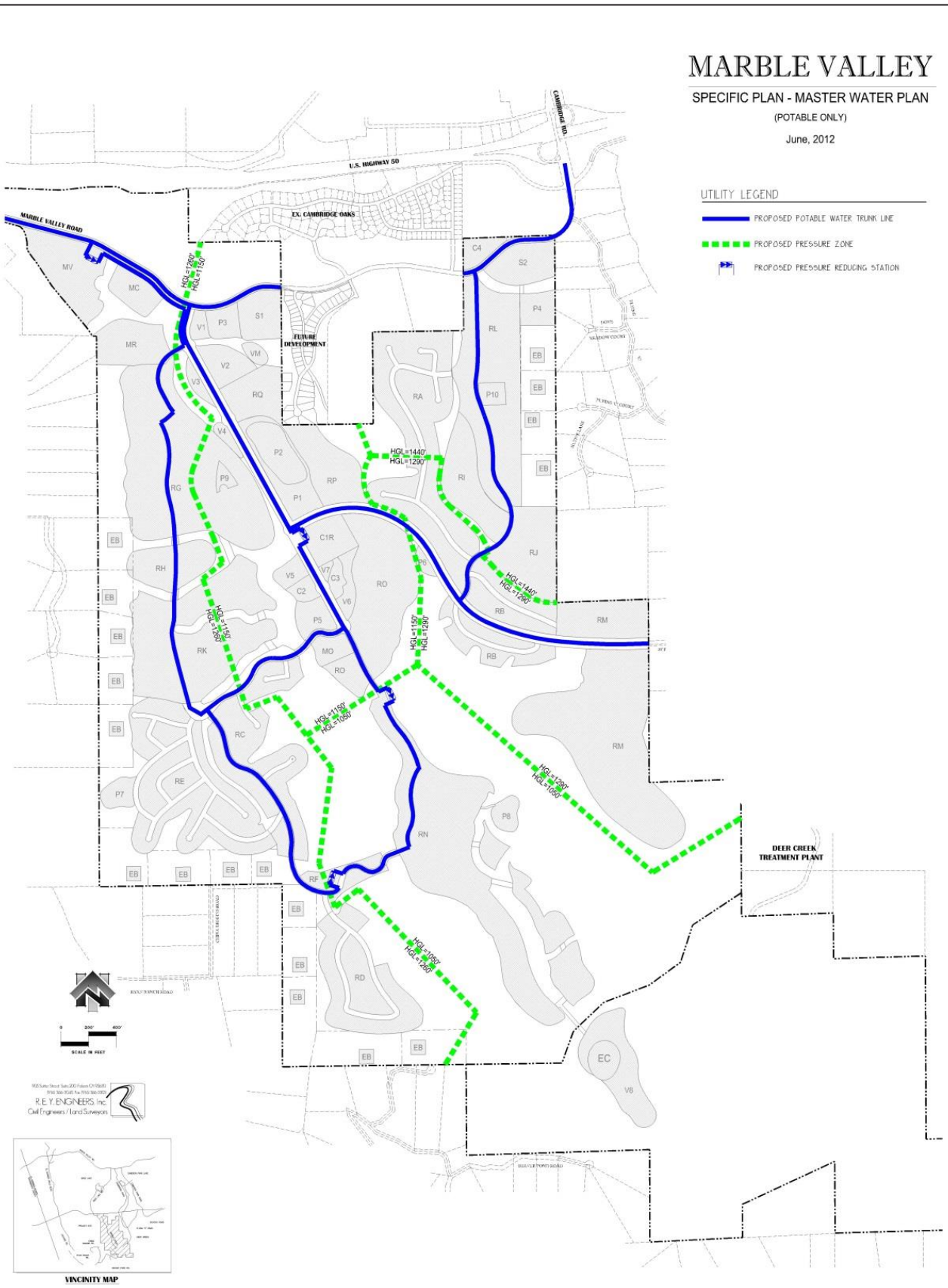
Figure 2-7
Preliminary Roadway Circulation Plan



Source: Torrence Planning, 2016.

ICF Graphics... 00667.12 (7-5-2018)

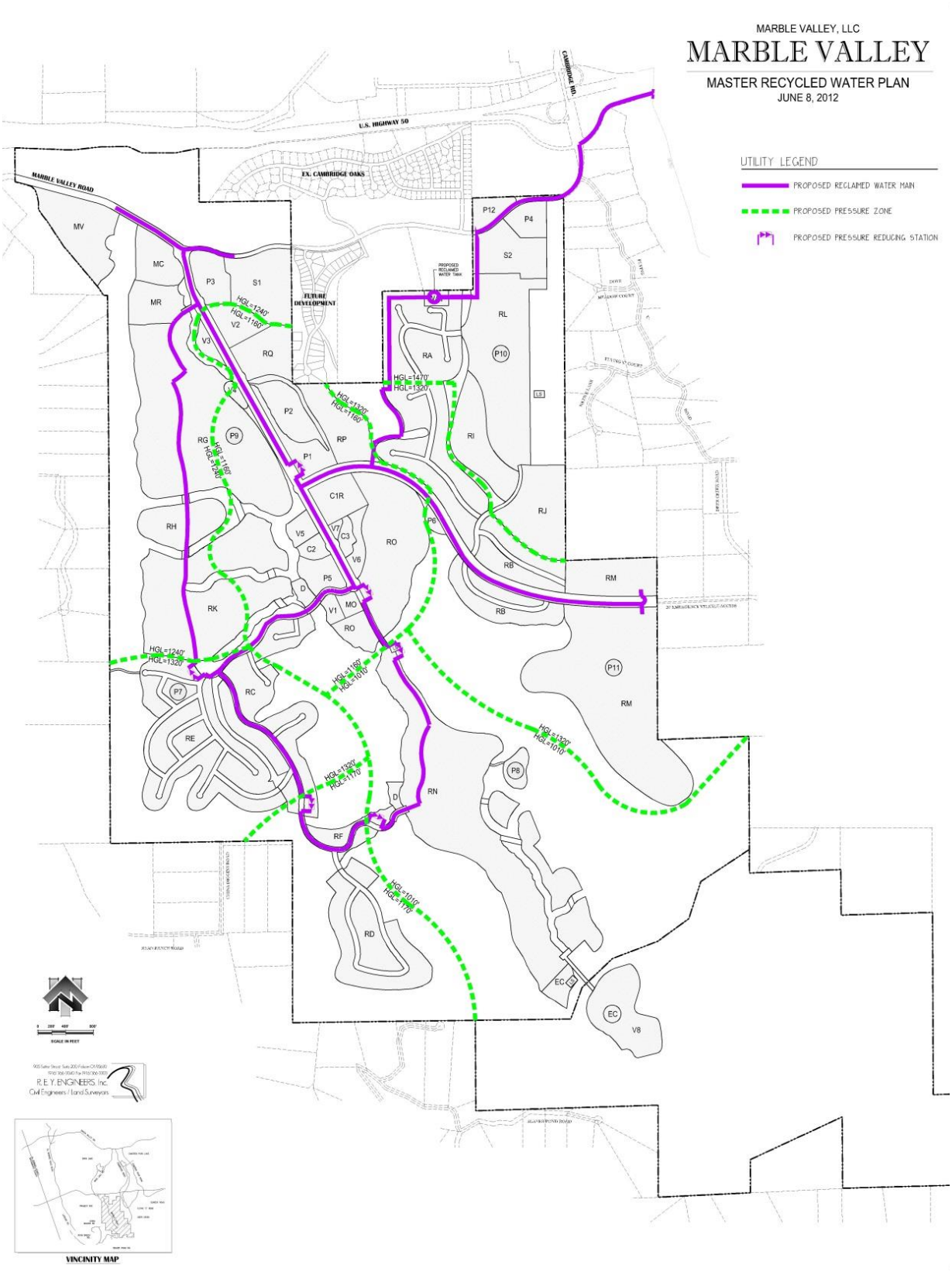
Figure 2-8
Preliminary Trail Circulation Plan



Source: R.E.Y. Engineers, 2012.

ICF Graphics... 00667.12 (7-5-2018)

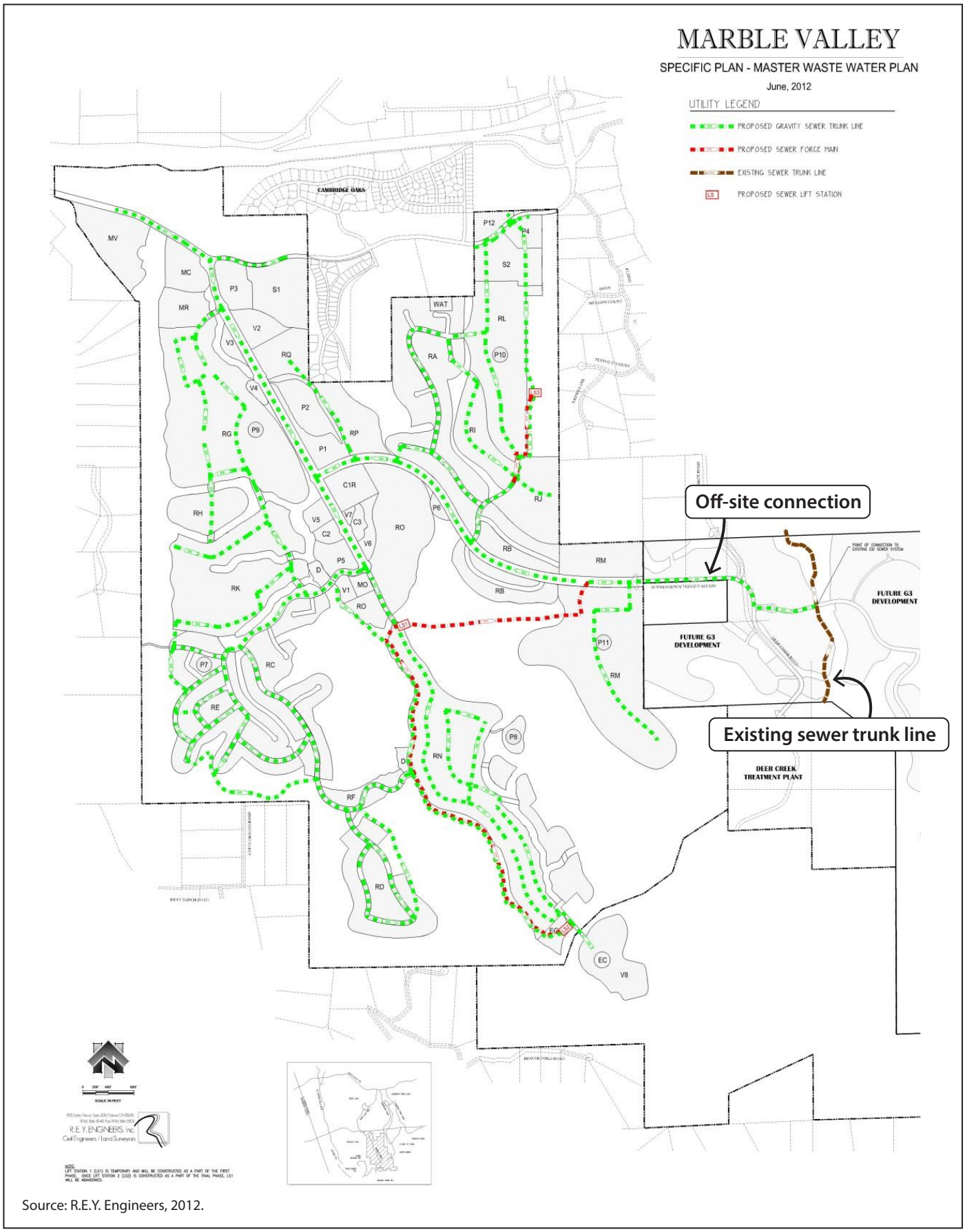
Figure 2-9
Conceptual Potable Water Plan



Source: R.E.Y. Engineers, 2012.

ICF Graphics... 00667.12 (7-5-2018)

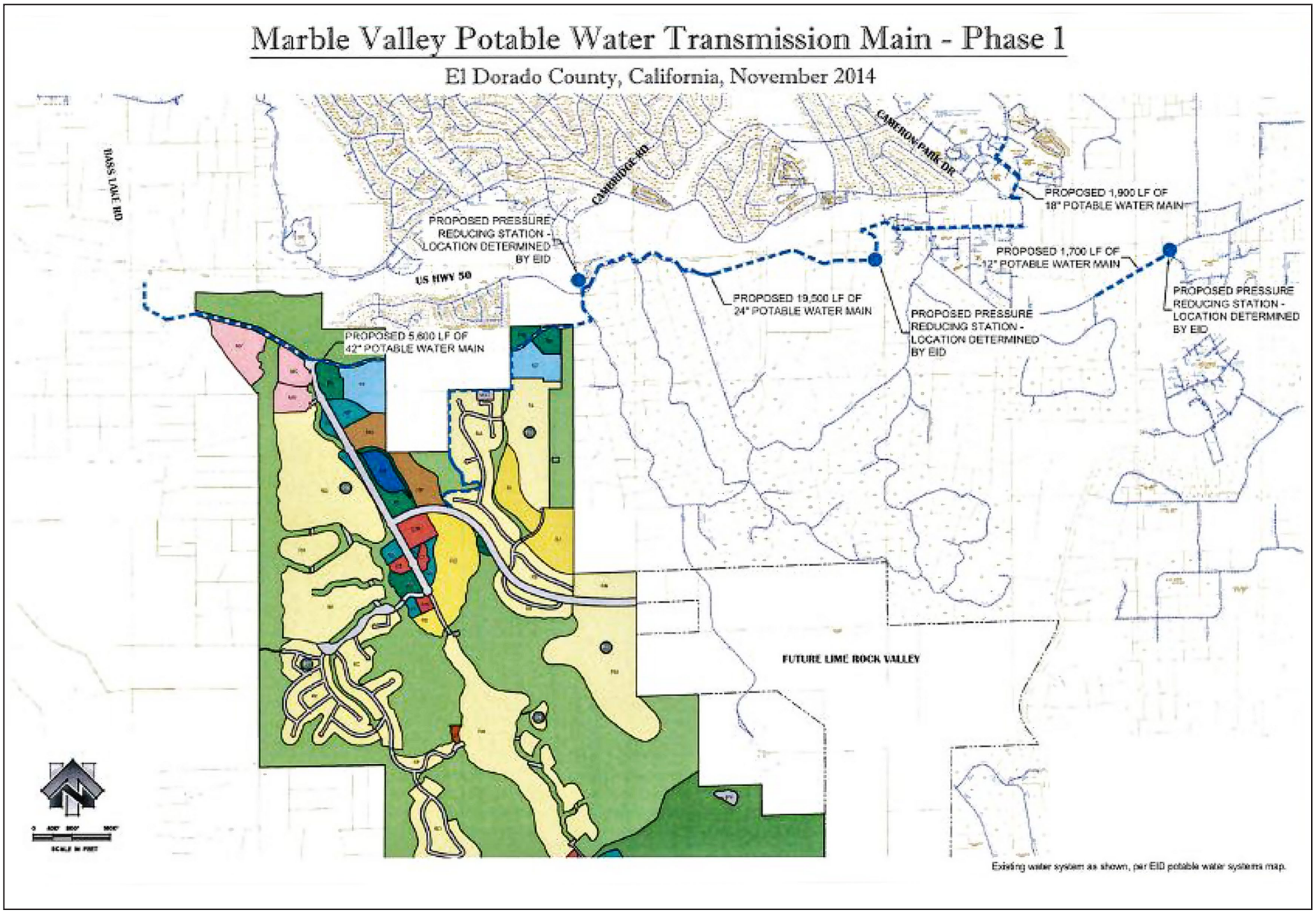
Figure 2-10
Conceptual Recycled Water Plan



Source: R.E.Y. Engineers, 2012.

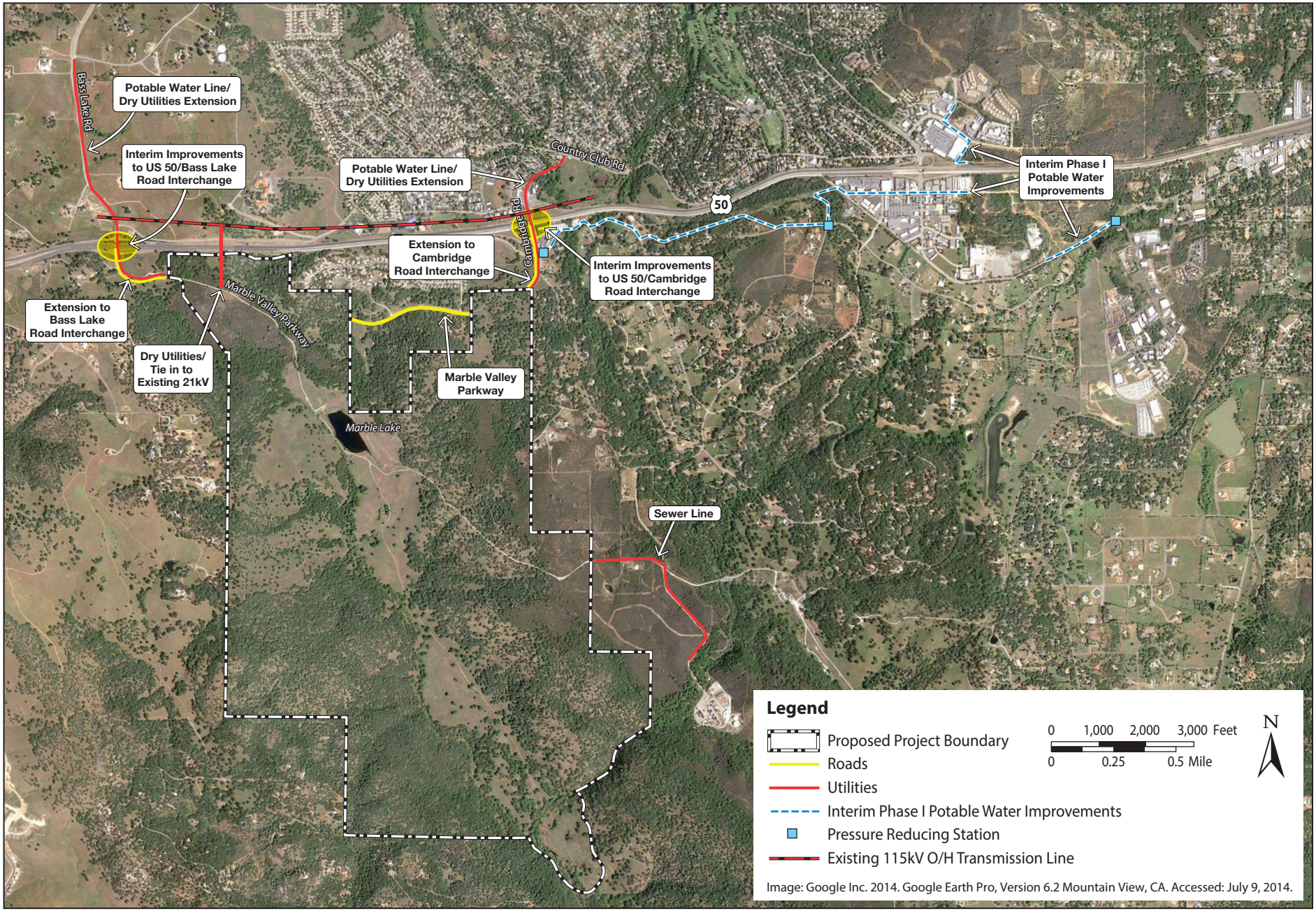
ICF Graphics... 00667.12 (7-5-2018)

Figure 2-11
Conceptual Wastewater Plan



ICF Graphics... 00667.12 (7-5-2018)

Figure 2-12
Interim Phase I Potable Water Improvements



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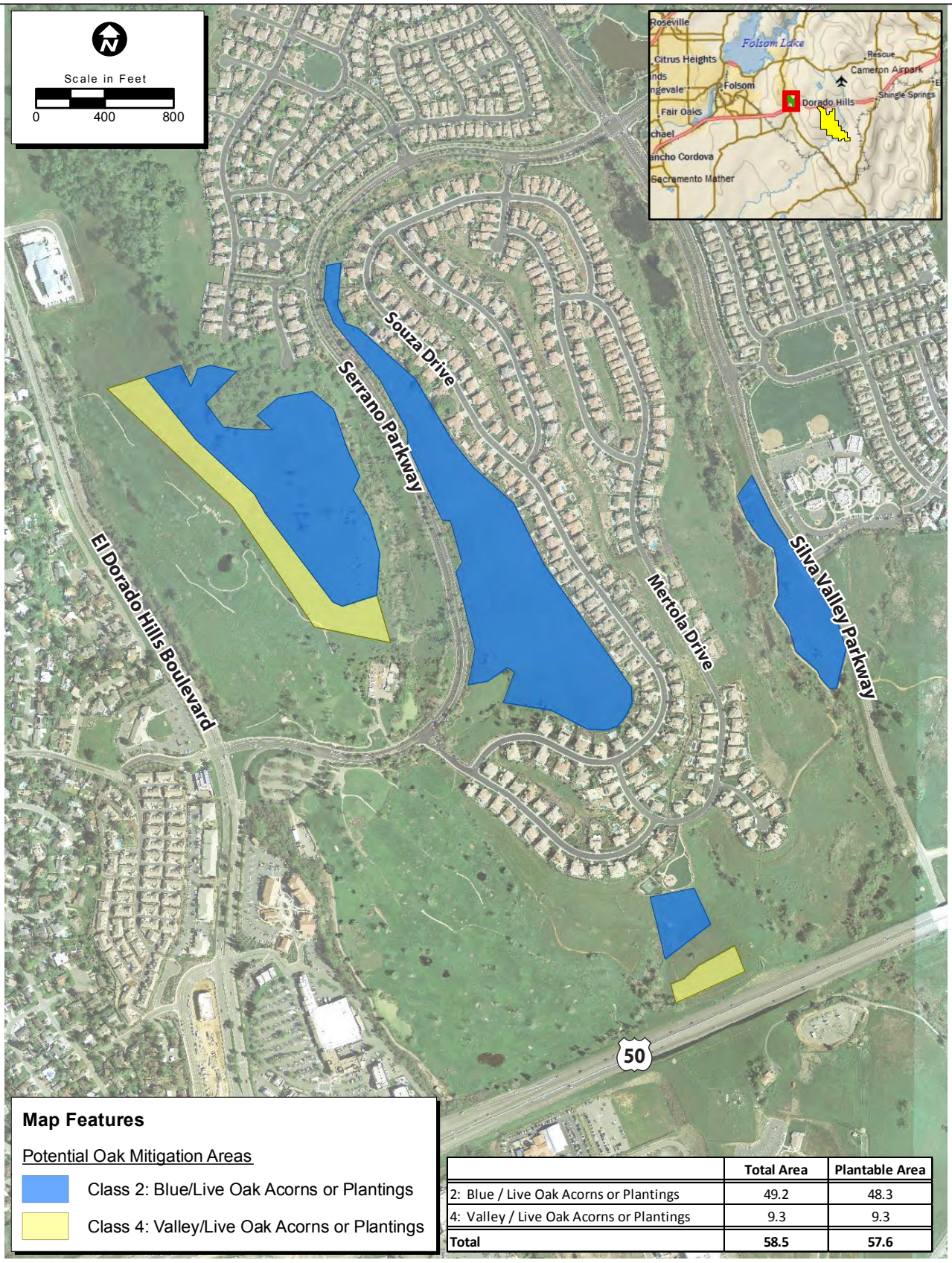
ICF

Figure 2-13
Offsite Infrastructure Improvements



	Total Area	Plantable Area
2: Blue / Live Oak Acorns or Plantings	49.2	48.3
4: Valley / Live Oak Acorns or Plantings	9.3	9.3
Total	**58.5**	**57.6**

Map Date: 1/24/2014. Photo Source: USGS (2011)

Source: ECORP Consulting, 2014.

ICF Graphics... 00667.12 (7-5-2018)

Figure 2-14
Potential Off-Site Oak Tree Mitigation Areas

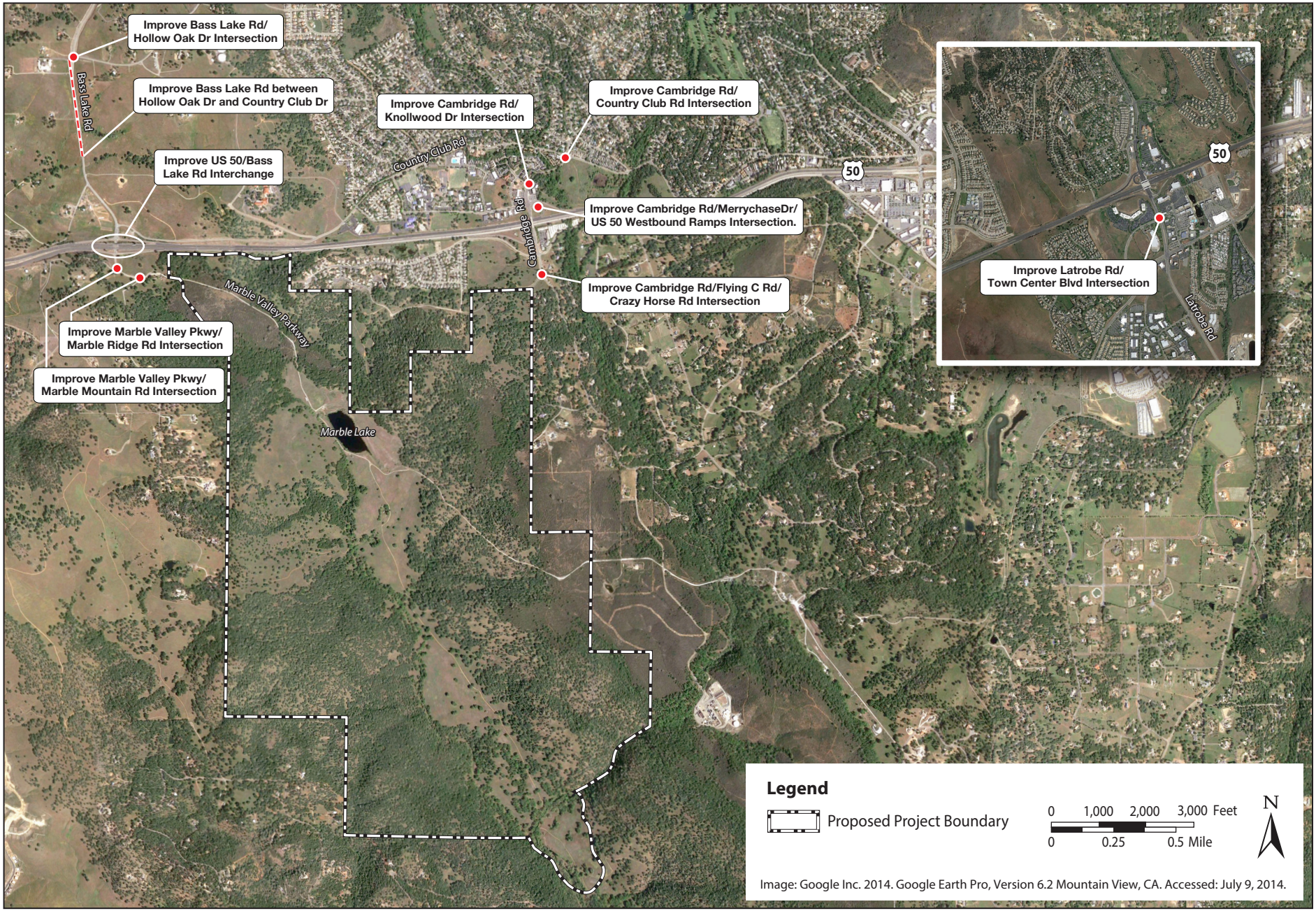


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Figure 2-15
Measure E Traffic Improvements

Chapter 3
Impact Analysis

This chapter contains an evaluation of the environmental impacts of the proposed project for compliance with the California Environmental Quality Act (CEQA). The sections in this chapter examine the short-term, permanent, direct, and indirect effects on the physical environment. Cumulative impacts are evaluated in Section 5.2, *Cumulative Impacts*, in Chapter 5, *Other CEQA Considerations*.

Resources Considered in the Environmental Impact Report

- 3.1, *Aesthetics*
- 3.2, *Air Quality*
- 3.3, *Biological Resources*
- 3.4, *Cultural Resources*
- 3.5, *Geology, Soils, Minerals, and Paleontological Resources*
- 3.6, *Greenhouse Gas Emissions*
- 3.7, *Hazards and Hazardous Materials*
- 3.8, *Hydrology, Water Quality, and Water Resources*
- 3.9, *Land Use Planning and Agricultural Resources*
- 3.10, *Noise and Vibration*
- 3.11, *Population and Housing*
- 3.12, *Public Services and Utilities*
- 3.13, *Recreation*
- 3.14, *Transportation and Circulation*

Terminology

For each resource topic, the environmental impact report (EIR) presents the following information.

- **Regulatory Setting**—describes pertinent federal, state, and local policies, regulations, and standards.
- **Environmental Setting**—describes existing site and study area conditions.
- **Impacts and Mitigation Measures**
    - **Methods of Analysis**—describes the technical methodology for impact assessment. If models were used to assess impacts, they are described in this section, as are other technical tools.

- **Thresholds of Significance**—presents the thresholds used to determine the significance of the impacts. The significance conclusions that can be noted at the end of each impact discussion are defined below.
  - *No impact* is used for impacts where there is clearly no effect on a particular resource topic.
  - A *less-than-significant impact* is considered to cause no substantial adverse change in the environment and requires no mitigation measures.
  - A *significant impact* is considered to cause a substantial adverse effect on the environment but can be reduced to a less-than-significant level by implementing mitigation measures.
  - A *significant and unavoidable impact* is considered to cause a substantial adverse effect on the environment for which feasible mitigation measures are not available to reduce the impact to a less-than-significant level.
- **Impacts and Mitigation Measures**—describes the effects of the proposed project. For each identified significant or potentially significant impact, mitigation measures are identified. Where mitigation is not available or feasible to reduce the impact to a less-than-significant level, the impact is identified as significant and unavoidable.

CEQA requires that each public agency mitigate or avoid, wherever feasible, the significant impacts of any project it approves or implements (State CEQA Guidelines 15126.4). State CEQA Guidelines Section 15370 defines mitigation as follows.

- *Avoiding* the impact altogether by not taking a certain action or part of an action.
- *Minimizing* the impact by limiting the degree or magnitude of the action and its implementation.
- *Rectifying* the impact by repairing, rehabilitating, or restoring the affected environment.
- *Reducing or eliminating* the impact over time by preservation and maintenance operations during the life of the action.
- *Compensating* for the impact by replacing or providing substitute resources or improvements to the environment.

As required by the State CEQA Guidelines, this EIR recommends feasible mitigation measures to reduce impacts of the proposed project. *Feasible* means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors (CEQA Guidelines 15364).

Topics that CEQA requires in addition to the resource topics addressed in this chapter are addressed in Chapter 4, *Alternatives Analysis*, and Chapter 5, *Other CEQA Considerations*. Chapter 4 examines a range of feasible alternatives to the project that would reduce one or more of its potential environmental impacts, including the no project alternative. Chapter 5 includes the following additional topics.

- Cumulative Impacts
- Growth-Inducing Impacts
- Significant and Unavoidable Impacts

- Significant Irreversible Environmental Changes
- Mitigation Measures with the Potential for Environmental Effects under CEQA

3.1 Aesthetics

This section describes existing conditions and the regulatory setting related to aesthetics or visual resources and analyzes potential impacts that could result from implementation of the Village of Marble Valley Specific Plan (VMVSP; proposed project).

3.1.1 Concepts and Terminology

Identifying a project area's visual resources and conditions involves three steps.

1. Objective identification of the visual features (visual resources) of the landscape.
2. Assessment of the character and quality of those resources relative to overall regional visual character.
3. Determination of the importance to people, or sensitivity, to views of visual resources in the landscape.

The aesthetic value of an area is a measure of its visual character and quality, combined with the viewer response to the area (Federal Highway Administration 1988:26–27, 37–43, 63–72). Scenic quality can best be described as the overall impression that an individual viewer retains after driving through, walking through, or flying over an area (U.S. Bureau of Land Management 1980:2–3). Viewer response is a combination of viewer exposure and viewer sensitivity. Viewer exposure is a function of the number of viewers, number of views seen, distance of the viewers, and viewing duration. Viewer sensitivity relates to the extent of the public's concern for a particular viewshed. These terms and criteria are described in detail below.

Scenic vistas generally encompass a wide area with long-range views to the middleground and background of surrounding elements in the landscape. Scenic vistas are typically visible from elevated vantages (e.g., hilltops, high points, slopes higher than the surrounding area); flat landscapes, such as out and over open agricultural lands; and roadways with cleared rights-of-way on hilly and flat terrain that run through or near the study area. In addition, vistas have a directional range. Some areas have scenic vistas with a 360-degree view in all directions, while others may be limited in one direction in a manner that reduces the line-of-sight angle and amount of vista that is visible, for a narrower vista view. Scenic vistas (viewsheds) provide expansive views of a highly valued landscape for the benefit of the general public.

Visual Character

Natural and artificial landscape features contribute to the visual character of an area or view. Visual character is influenced by geologic, hydrologic, botanical, wildlife, recreational, and urban features. Urban features include those associated with landscape settlements and development, including roads, utilities, structures, earthworks, and the results of other human activities. The perception of visual character can vary significantly seasonally, even hourly, as weather, light, shadow, and elements that compose the viewshed change. The basic components used to describe visual character for most visual assessments are the elements of form, line, color, and texture of the landscape features (U.S. Department of Agriculture Forest Service 1995:28–34, 1-2–1-15; Federal

Highway Administration 1988:37–43). The appearance of the landscape is described in terms of the dominance of each of these components.

Visual Quality

Visual quality is evaluated using the well-established approach to visual analysis adopted by the Federal Highway Administration, employing the concepts of vividness, intactness, and unity (Federal Highway Administration 1988:46–59; Jones et al. 1975:682–713), which are described below.

- Vividness is the visual power or memorability of landscape components as they combine in striking and distinctive visual patterns.
- Intactness is the visual integrity of the natural and human-built landscape and its freedom from encroaching elements; this factor can be present in well-kept urban and rural landscapes, and in natural settings.
- Unity is the visual coherence and compositional harmony of the landscape considered as a whole; it frequently attests to the careful design of individual components in the landscape.
- Visual quality is evaluated based on the relative degree of vividness, intactness, and unity, as modified by its visual sensitivity. High-quality views are highly vivid, relatively intact, and exhibit a high degree of visual unity. Low-quality views lack vividness, are not visually intact, and possess a low degree of visual unity.

Visual Exposure and Sensitivity

The measure of the quality of a view must be tempered by the overall sensitivity of the viewer. Viewer sensitivity or concern is based on the visibility of resources in the landscape, proximity of viewers to the visual resource, elevation of viewers relative to the visual resource, frequency and duration of views, number of viewers, and type and expectations of individuals and viewer groups.

The importance of a view is related in part to the position of the viewer relative to the resource; therefore, visibility and visual dominance of landscape elements depend on their placement within the viewshed. A viewshed is defined as all of the surface area visible from a particular location (e.g., an overlook) or sequence of locations (e.g., a roadway or trail) (Federal Highway Administration 1988:26–27). To identify the importance of views of a resource, a viewshed must be broken into distance zones of foreground, middleground, and background. Generally, the closer a resource is to the viewer, the more dominant it is and the greater its importance to the viewer. Although distance zones in a viewshed may vary between different geographic regions and types of terrain, the standard foreground zone is 0.25–0.5 mile from the viewer, the middleground zone from the foreground zone to 3–5 miles from the viewer, and the background zone from the middleground to infinity (Litton 1968:3).

Visual sensitivity depends on the number and type of viewers and the frequency and duration of views. Visual sensitivity is also modified by viewer activity, awareness, and visual expectations in relation to the number of viewers and viewing duration. For example, visual sensitivity is generally higher for views seen by people who are driving for pleasure; people engaging in recreational activities such as hiking, biking, or camping; and homeowners. Sensitivity tends to be lower for views seen by people driving to and from work or as part of their work (U.S. Department of Agriculture Forest Service 1995:3-3–3-13; Federal Highway Administration 1988:63–72; U.S. Soil

Conservation Service 1978:3, 9, 12). Commuters and non-recreational travelers have generally fleeting views and tend to focus on commute traffic, not on surrounding scenery; therefore, they are generally considered to have low visual sensitivity. Residential viewers typically have extended viewing periods and are concerned about changes in the views from their homes; therefore, they are generally considered to have high visual sensitivity. Viewers using recreation trails and areas, scenic highways, and scenic overlooks are usually assessed as having high visual sensitivity.

Judgments of visual quality and viewer response must be made based in a regional frame of reference (U.S. Soil Conservation Service 1978:3). The same landform or visual resource appearing in different geographic areas could have a different degree of visual quality and sensitivity in each setting. For example, a small hill may be a significant visual element on a flat landscape but have very little significance in mountainous terrain.

3.1.2 Existing Conditions

Regulatory Setting

Federal and State

There are no roadways within the project area that are designated in federal or state plans as a scenic roadway or as a corridor worthy of protection for maintaining and enhancing scenic viewsheds (California Department of Transportation 2014, 2019). Applicable local policies and guidelines are discussed below.

Local

El Dorado County General Plan

The El Dorado County General Plan identifies two categories of visual resources: scenic resources and scenic views. Scenic resources include specific features that are visually significant, or geologically or botanically unique and are usually a focal point. Scenic views are broader viewsheds, such as mountain ranges, valleys, or ridgelines. The *El Dorado County General Plan* (County General Plan) Land Use Element, Public Services and Utilities Element, and Conservation and Open Space Element (El Dorado County 2019:34, 37–42; El Dorado County 2004:94–95, 100, 135, 142–143, 149, 155–157) include the following relevant goals, objectives, and policies. The full text of these goals, objectives, and policies can be found in Appendix B, *Consistency with El Dorado County General Plan Policies*, which provides an analysis of the project's consistency with County General Plan policies as required under State California Environmental Quality Act (CEQA) Guidelines Section 15125.

Land Use Element

- Goal 2.2, *Land Use Designations,* addresses maintenance of the rural and open character of the county and includes Objective 2.2.5, *General Policy Section*, and Policy 2.2.5.21.
- Goal 2.3, *Natural Landscape Features*, addresses the unique landscapes of each area of the county and includes Objective 2.3.2, *Hillsides and Ridge Lines,* and Policy 2.3.2.1.
- Goal 2.4, *Existing Community Identity*, seeks to maintain and enhance the existing character of communities, and includes Objective 2.4.1, *Community Identity,* and Policy 2.4.1.4.

- Goal 2.5, *Community Identity*, addresses incorporating visual elements to enhance and maintain rural character and promote a sense of community. It includes Objective 2.5.1, *Physical and Visual Separation*, and Policies 2.5.1.1 and 2.5.1.2; and Objective 2.5.2, *Commercial Facilities*, and Policy 2.5.2.1.
- Goal 2.6, *Corridor Viewsheds*, addresses scenic road corridors, and includes Objective 2.6.1, *Scenic Corridor Identification*, and Policies 2.6.1.5 and 2.6.1.6.
- Goal 2.7, *Signs*, addresses issues related to size, quantity, and location of signs to maintain and enhance the visual appearance of the county, and includes Objective 2.7.1, *Sign Regulation*, and Policy 2.7.1.1.
- Goal 2.8, *Lighting*, addresses issues related to lighting and glare, and includes Objective 2.8.1, *Lighting Standards,* and Policy 2.8.1.1.

Public Services and Utilities Element

- Goal 5.4, *Storm Drainage*, includes Objective 5.4.1, *Drainage and Flood Management Program,* and Policy 5.4.1.2, which addresses aesthetic qualities of drainage ways.
- Goal 5.6*, Gas, Electric, and Other Utility Services*, includes Objective 5.6.1, *Provide Utility Services*, and Policy 5.6.1.1, which addresses aesthetic issues related to overhead utilities.

Conservation and Open Space Element

- Goal 7.1, *Soils Conservation*, includes Objective 7.1.2, *Erosion/Sedimentation,* and Policy 7.1.2.2, which addresses conforming earthworks to natural contours.
- Goal 7.3, *Water Quality and Quantity*, includes Objective 7.3.3, *Wetlands*, and Policy 7.3.3.5, which addresses the preservation of the scenic value of wetland features; Objective 7.3.4, *Drainage*, and Policy 7.3.4.1, which encourages the integration of natural water courses; and Objective 7.3.5, *Water Conservation,* with Policy 7.3.5.1, which encourages the use of native plants.
- Goal 7.4, *Wildlife and Vegetation Resources*, includes Objective 7.4.4, *Forest and Oak Woodland Resources*, and Policies 7.4.4.2, 7.4.4.4, and 7.4.4.5, which encourage the protection of native trees.
- Goal 7.5, *Cultural Resources*, includes Objective 7.5.2, *Visual Integrity*, which addresses the visual integrity of historic resources, and Policies 7.5.2.4, and 7.5.2.5.
- Goal 7.6, *Open Space Conservation*, includes Objective 7.6.1, *Importance of Open Space*, and Policies 7.6.1.2 and 7.6.1.3.

El Dorado County Community Design Guide

The El Dorado County *Community Design Guide* implements the Design Review Ordinance, which regulates design within designated districts of special natural beauty or that contribute to the County's character and tourist economy and provides design review for sites and structures of special historical interest. Commercial, industrial, professional, service station, restaurant, motel, shopping center, and multifamily residential projects being implemented within districts must comply with the design standards and go through the County's design review process. The design review process looks at the project's layout, landscaping, parking, signs, lighting, and how the proposed buildings would look and where project aesthetics are important. Site planning criteria

establish that topography, natural terrain, and vegetation should be preserved; open space and views of natural features be maintained and protected; parking and service areas are screened; and light and glare is minimized. Building design criteria establish that buildings should have exterior treatments are subdued and restrained, with natural-looking architectural details that are well designed. Landscaping design criteria establish that existing vegetation and rock formations be incorporated into the design, when possible; plants be chosen for suitability to the environment, parking areas be landscaped; and that trees be heavily utilized to improve aesthetics, screen certain uses, and provide shade to reduce glare. In addition, design criteria for buffering adjacent land uses and commercial signage design (El Dorado County 2018a).

El Dorado County Mixed Use Design Manual

The El Dorado County *Mixed Use Design Manual* applies to mixed-use development that is allowed to occur in five of the County's zoning districts: Commercial Professional Office (CPO), Commercial, Limited (CL), Commercial, Main Street (CM), Commercial, Community (CC), and Residential, Multi-unit (RM). The proposed project includes commercial and multi-unit/multifamily residential land uses and is subject to the Design Review Ordinance. The design manual establishes residential densities, maximum building heights, Floor Area Ratios, lot dimensions and lot coverage, setbacks, screening, landscaping, parking lot design, parking, loading area, mobility and access, site amenities, signage, lighting, odor and noises, building entrance, and building façade standards and guidelines. The design manual also provides prototypes to help guide mixed-use projects (El Dorado County 2018b).

El Dorado County Landscaping and Irrigation Standards

Landscaping installed as part of the proposed project would be required to comply with El Dorado County *Landscaping and Irrigation Standards.* These standards "enhance the appearance of development, increase property values, and protect the public health, safety, and welfare by providing buffers; parking lot shading; incentives for outdoor art and water features; a means to reduce impervious surfaces and site runoff by incorporating stormwater best management practices into landscape areas; and requirements for water conservation methods that encourage the use of native, drought tolerant species, reclaimed water and graywater systems." The standards provide details on conformance for landscape buffers, general landscape requirements, parking lot landscaping, irrigation, and nonconforming landscaping and water efficiency requirements (El Dorado County 2015a).

El Dorado County Outdoor Lighting Standards

Landscaping installed as part of the proposed project would be required to comply with El Dorado County *Outdoor Lighting Standards.* These standards "minimize high-intensity lighting and glare by establishing standards for lighting practices and systems that will balance lighting levels, minimize light trespass, and conserve energy in concert with state and federal requirements, while maintaining nighttime safety, utility, and security consistent with prudent safety practices" (El Dorado County 2015b). These standards support zoning ordinance Section 130.34, *Outdoor Lighting*, detailed below.

Oak Resources Management Plan and Oak Resources Conservation Ordinance

The *El Dorado County Oak Resources Management Plan* (ORMP) and Oak Resources Conservation Ordinance is described in Section 3.3, *Biological Resources*, and would also affect aesthetic resources by establishing mitigation ratios for impacts to oak woodlands and Heritage Oaks.

El Dorado County Zoning Ordinance

In addition, the following provisions contained in the El Dorado County Zoning Ordinance are relevant to the visual resources in the project area and that are applicable to the proposed project.

130.33 Landscaping Standards

This ordinance identifies the use types which require the submittal of landscape plans, subject to the County's adopted *Landscaping and Irrigation Standards*, described above, prior to the issuance of a building permit.

130.34 Outdoor Lighting

This ordinance complies with General Plan Objective 2.8.1, providing standards consistent with prudent safety practices for the elimination of excess nighttime light and glare.

130.34.020. Outdoor Lighting Standards

All outdoor lighting shall be located, adequately shielded, and directed such that no direct light falls outside the property line, or into the public right-of-way as illustrated in Figure 130.34.020.1 (Light Source Not Directly Visible Outside Property Perimeter) below in this Section.

130.34.030. Exemptions

The following lighting shall be exempt from the provisions of this Section:

A. Airport lighting that is required for the safe and efficient movement of aircraft during flight, take off, landing, and taxiing. All other outdoor lighting at airport facilities shall comply with the provisions of this Chapter.

B. Lighting used by law enforcement or other emergency personnel.

C. Lighting used by public agencies for nighttime public works or road construction projects.

D. Lighting used for the illumination of the United States flag subject to the requirements for nighttime illumination of the United States Flag Code.

E. Temporary outdoor lighting that is designed to eliminate glare and minimize light pollution as much as possible in compliance with this Chapter. To qualify for this exemption a completed application form for an Administrative or Temporary Use Permit and a site plan shall be provided demonstrating location of proposed fixtures, manufacturer's specification sheets including lamp type, wattage, initial lumen output and shielding, intended use of lighting, and other information as the Director may require.

F. Seasonal or holiday type lighting.

G. Street Lights.

130.34.040. Effect on Existing Outdoor Lighting

Lighting lawfully in place prior to the effective date of this Chapter may remain in use except as provided below:

A. Any nonconforming lighting that is replaced, re-aimed, or relocated must meet the standards of this Chapter.

B. Nonconforming lighting that direct light toward streets in such a manner as to cause potentially hazardous glare to motorists or cyclists shall be either replaced or re-directed so as to meet full-cutoff requirements.

130.40.130 Communication Facilities

A. Applicability. This Section provides for the orderly development of commercial and private wireless communication facilities including transmission and relay towers, dishes, antennas, and other similar facilities. The Board finds that minimizing the number of communication facilities through co-locations on existing and new towers and siting such facilities in areas where their potential visual impact on the surrounding area is minimized will provide an economic benefit and will protect the public health, safety and welfare.

1. Communication service providers shall:

    a. Employ all reasonable measures to site their antennas on existing structures as facade mounts, roof mounts, or co-location on existing towers prior to applying for new towers or poles;

    b. Work with other service providers and the Department to co-locate where feasible. Where co-location on an existing site is not feasible, develop new sites which are multi-carrier to facilitate future co-location, thereby reducing the number of sites countywide;

2. Generally, the County will seek to minimize the visual impacts of wireless communication facilities by limiting the number of facilities. However, the County may require construction of a number of smaller facilities instead of a single monopole or tower if it finds that multiple smaller facilities are less visually obtrusive or otherwise in the public interest.

B. Permit Requirements. Communication Facilities, as defined in Article 8 (Glossary: See "Communication Facilities") of this Title, shall be allowed subject to the following standards and permitting requirements:

1. Repeaters and Other Small Facilities. Repeaters and other similar small communication facilities that do not exceed five square feet and do not protrude more than 18 inches from the mounting surface or extend more than three feet above the roofline may be allowed by right in any zone provided that no additional equipment is required.

2. Building Facade-Mounted Antennas. In all zones, building facade-mounted antennas may be allowed subject to an Administrative Permit in compliance with Section 130.52.010 (Administrative Permit, Relief, or Waiver) in Article 5 (Planning Permit Processing) of this Title subject to the requirements below in this Section. Those facilities not meeting the requirements below are subject to a Conditional Use Permit in compliance with Section 130.52.021 (Conditional Use Permits) in Article 5 (Planning Permit Processing) of this Title.

    a. No portion of the antenna, support equipment, or cables shall project above the roofline unless consistent with Subsection 3 (Roof Mounted Antennas) below in this Section;

    b. The surface area of all antenna panels shall not exceed 10% of the surface area of the facade of the building on which it is mounted or 30 square feet, whichever is greater;

    c. No portion of the antenna or equipment shall extend out more than 24 inches from the facade of the building;

    d. Antennas and equipment shall be constructed and mounted to blend with the predominant architecture and color of the building, or otherwise appear to be part of the building to which it is attached;

    e. The lowest portion of all antennas shall be located a minimum of 15 feet above grade level; and

f. All equipment shelters, cabinets, or other ancillary structures shall be located within the building being utilized for the communication facility, or on the ground screened from public view. Equipment located on the roof must be screened from public view from adjacent streets and properties by an architecturally compatible parapet wall or other similar device.

3. Roof Mounted Antennas. The construction or placement of communication facilities as roof mounted antennas may be allowed as follows:

   a. In all commercial, industrial and research and development zones, except where located adjacent to a state highway or designated scenic corridor, roof mounted antennas may be allowed subject to approval of an Administrative Permit. Those facilities not meeting the requirements under Subsections B.2.c, B.2.d, and B.2.f (Building Façade Mounted Antennas) above in this Section and the following requirement shall be subject to a Conditional Use Permit in compliance with Section 130.52.021 (Conditional Use Permits) in Article 5 (Planning Permit Processing) of this Title;

      i. (1) Facilities located on the roof of the building shall be located towards the center of the roof if technologically feasible.

      ii. (2) The height of the facility shall not exceed 15 feet above the roof top or the maximum height for the zone, whichever is less.

   b. In all other zones, or where located adjacent to a state highway or designated scenic corridor, roof mounted antennas shall be subject to Commission approval of a Conditional Use Permit in compliance with Section 130.52.021 (Conditional Use Permits) in Article 5 (Planning Permit Processing) of this Title.

4. Co-location on Existing Non-building Structures or Public Facilities. In all zones, the co-location of antennas on signs, water tanks, utility poles and towers, light standards, and similar structures may be allowed subject to Zoning Administrator approval of a Minor Use Permit in compliance with Section 130.52.020 (Minor Use Permits) in Article 5 (Planning Permit Processing) of this Title. Those facilities not meeting the requirements below are subject to a Conditional Use Permit in compliance with Section 130.52.021 (Conditional Use Permits) in Article 5 (Planning Permit Processing) of this Title:

   a. Antennas shall not exceed the maximum height for the zone or 15 feet above the height of the existing structure, whichever is less;

   b. Antennas and mounting brackets shall be constructed and mounted to blend with the design and color of the existing structure;

   c. All equipment shelters, cabinets, or other ancillary structures shall be located within the structure being utilized for the communication facility, or on the ground screened from public view; and

   d. If proposed to be attached to a structure, utility pole, or tower located within a public utility easement, both the utility and the property owner must authorize submittal of an application for such use.

5. Co-location on Existing Approved Monopoles or Towers. In all zones, the placement of antennas on an existing approved monopole or tower may be allowed subject to an Administrative Permit. Those facilities not meeting the requirements below are subject to a Conditional Use Permit in compliance with Section 130.52.021 (Conditional Use Permits) in Article 5 (Planning Permit Processing) of this Title.

   a. New antennas shall be located at or below the topmost existing antenna array, either on the same pole, or at the same height on a replacement pole within the approved lease area;

b. New antennas shall not extend out horizontally from the pole more than the existing widest projection. Use of designs similar to the existing antenna array is encouraged;

c. All equipment shelters, cabinets, or other ancillary structures shall be located within the building being utilized for the communication facility, or on the ground screened from public view;

d. The antennas and pole or tower shall be designed to match the existing facility, or to blend with the natural features or vegetation of the site; and

e. Additional antenna arrays added above the existing approved antenna array or that requires the tower height to be increased shall be considered a new tower and shall be subject to the provisions of Subsection B.6 (New Towers or Monopoles) below in this Section.

6. New Towers or Monopoles. The construction or placement of communication facilities on new towers or monopoles, or an increase in height of existing towers or monopoles may be allowed as set forth below:

a. In all commercial, industrial, and research and development zones, except where located adjacent to a state highway or designated scenic corridor or within 500 feet of any residential zone, a new tower or monopole may be allowed subject to Zoning Administrator approval of a Minor Use Permit in compliance with Section 130.52.020 (Minor Use Permits) in Article 5 (Planning Permit Processing) of this Title.

b. In all other zones, or where located adjacent to a state highway or designated scenic corridor or within 500 feet of any residential zone, new towers or monopoles shall be subject to Commission approval of a Conditional Use Permit in compliance with Section 130.52.021 (Conditional Use Permits) in Article 5 (Planning Permit Processing) of this Title.

7. Other Types of Facilities Not Listed Above. Application proposals that do not conform to the above requirements of Subsections B.2 through B.5 above in this Section will be subject to Commission approval of a Conditional Use Permit in compliance with Section 130.52.021 (Conditional Use Permits) in Article 5 (Planning Permit Processing) of this Title, as determined by the Director.

8. Speculative Towers. Towers for which no licensed communication carriers have committed to utilize shall be prohibited.

C. Visual. Visual simulations of the wireless communications facility, including all support facilities, shall be submitted. A visual simulation can consist of either a physical mockup of the facility, balloon simulation, computer simulation, or other means.

D. Development Standards. All facilities shall be conditioned, where applicable, to meet the criteria below:

1. Screening. All facilities shall be screened with vegetation or landscaping. Where screening with vegetation is not feasible, the facilities shall be disguised to blend with the surrounding area. The facility shall be painted or constructed with stealth technology to blend with the prevalent architecture, natural features, or vegetation of the site.

2. Setbacks. Compliance with the applicable zone setbacks is required. Setback waivers shall be considered to allow flexibility in siting the facility in a location that best reduces the visual impact on the surrounding area and roads, subject to Zoning Administrator approval of a Minor Use Permit in compliance with Section 130.52.020 (Minor Use Permits) in Article 5 (Planning Permit Processing) of this Title.

3. Maintenance. All improvements associated with the communication facility, such as equipment shelters, towers, antennas, fencing, and landscaping shall be properly maintained

at all times. Design, color, and textural requirements under the approved conditions shall be maintained to ensure a consistent appearance over time.

G. Unused Facilities. All obsolete or unused communication facilities shall be removed within six months after the use of that facility has ceased or the facility has been abandoned. The applicant shall notify the Department at the time of abandonment. All site disturbance related to the facility shall be restored to its pre-project condition.

H. Permit Application Requirements. In order to protect the visual character of established neighborhoods and to protect school children from safety hazards that may result from a potentially attractive nuisance, in addition to the noticing requirements of Article 5, the following notification shall occur:

1. School District Notification. If the proposed wireless facility is located within 1,000 feet of a school, the appropriate school district shall be notified during the initial consultation.

2. Homeowners Association Notification. For facilities proposed to be located on residentially-zoned land, the applicant shall identify any homeowners association which might govern the property and homeowners associations that are adjacent to the property. Any that are identified shall be notified during the initial consultation.

130.52.030 Design Review Permit

A. Applicability. The Design Review Permit process is established in specific areas of the County to ensure compatibility with historical, scenic, or community design criteria. This process is applied only to commercial, industrial, mixed-use, and multi-unit residential projects in the following areas:

1. Meyers Area Plan.

2. Land adjacent to designated State Scenic Highway Corridors.

3. Other areas where the Design Review-Community (-DC), -Historic (-DH), or Scenic Corridor (-DS) Combining Zones have been applied.

4. Mixed-use development projects in Community Regions.

B. Review Authority, Procedure, and CEQA. The Director shall have the review authority of original jurisdiction for those projects not adjacent to or visible from designated state scenic highway corridors. The procedure shall be staff-level with public notice. The Commission shall have the review authority of original jurisdiction for those projects that are adjacent to or visible from designated state scenic highway corridors. The adoption of Design Standards in accordance with Subsection 130.27.050.F (Establishment of Community Design Review Areas; Guidelines and Standards) in Article 2 (Zones, Allowed Uses, and Zoning Standards) of this Title, is a discretionary project pursuant to CEQA. The approval of a Design Review Permit is a ministerial project pursuant to CEQA, when in compliance with adopted Design Standards. The Design Review process shall be limited to consideration of compliance with established standards, provided that the use proposed for the project site is an allowed use within the zone.

C. Design Review Committee. If a project is located within a district for which a design review committee has been established in compliance with Section 130.60.070 (Design Review Committee) in Article 6 (Zoning Ordinance Administration) of this Title, the Director shall transmit the application to the committee prior to rendering a written decision or making a recommendation to the Commission. The application review process by the committee shall provide an opportunity for the applicant or other interested persons to provide testimony. After public testimony, the committee shall discuss the proposed project and by motion present a recommendation to the Director. The Director may approve or deny the permit and may incorporate conditions to ensure compliance with the applicable design standards.

Environmental Setting

Regional Visual Character

The project site is located in El Dorado County, approximately 26 miles east of the city of Sacramento, California. The project region, as discussed in this section, is considered the area within 30 miles of the project site. The gently rolling project site lies in the transition zone between the flat Sacramento Valley and the Sierra Nevada Mountains. The Sierra Nevada foothills and mountains, including the Eldorado National Forest, largely form the easternmost portion of the region. The westernmost portion of the region primarily consists of agricultural and suburban land uses, with the urban core of Sacramento located in the southwestern portion of the region. The landscape pattern is influenced by development extending from existing city cores and the major roadways in the region, such as U.S. Highway (US) 50, State Route (SR) 99, Interstate (I-) 5 and I-80.

Much development in the western region is located between and just outside of the I-80, US 50, I-5, and SR 99 corridors, with remaining lands still largely in agricultural production and grazing. However, there has been and continues to be conversion of agricultural land to urban and suburban land uses as development grows along expanding and upgraded transportation corridors, such as along SR 65, north of I-80 in Placer County, and smaller local roadways. This trend is evident throughout the region, such as in Natomas, Roseville, Folsom, Rancho Cordova, El Dorado Hills, Cameron Park, Elk Grove, and West Sacramento. Smaller valley and foothill towns and communities in this region, such as Lincoln, Rocklin, Placerville, Diamond Springs, and Wilton, are experiencing similar growth. However, agricultural land, planted predominantly with row crops, and grazing land stretch for miles in the region. When haze is at a minimum, views can extend from the foreground to the middleground and background.

While development is centralized along I-80, US 50, and SR 49 in the eastern region, terrain and vegetation play a major role in limiting development patterns in this portion of the region. High-intensity development transitions to sparser development near the project site, where the terrain is rolling, and where slopes influence where development can feasibly occur. In addition, mature oak woodlands and coniferous forests limit where development occurs due to a natural proclivity to retain such vegetation and visual features, and because El Dorado County policies and zoning regulate the removal of trees within these plant communities. Development within the foothills tends to be older residential and commercial development that is often centered around local business enterprises and agriculture, such as near the apple and Christmas tree farms of Apple Hill and Camino, near Sierra Pacific Industries.

Depending on the viewer's location within the western region, middleground and background views consist of Sutter Buttes to the northwest, Sierra Nevada foothills and mountains to the east, and the high-rise buildings of downtown Sacramento rising up above the horizon and Vaca Mountains to the west. These types of landscape views are strongly characteristic of the Sacramento Valley and contribute to the region's identity. Within the western part of the region, topography and vegetation limit many views to the immediate foreground. However, transportation corridors with cleared rights-of-way and public and private vantages that are elevated and sparsely vegetated—such as where a hillside or hilltop residence has cleared or thinned vegetation to allow for views—facilitate views that extend beyond the immediate foreground, toward the middleground and background.

Growth, radiating outward from the city and town cores, is reducing the amount of open land in the region and closing the gap between the Sacramento metropolitan region and outlying cities and

towns. This growth is changing the visual character from rural to suburban. The development of the smaller cities in the region is typified by a growing core of residential, commercial, and some industrial land uses with agricultural fields or vegetated foothills surrounding the city outskirts. Residential and commercial development in the western region tends to be homogenous in nature, having similar architectural styles, building materials, plan layouts, and commercial entities. While the eastern region has retained a great deal of its older architectural styles and visual character, newer development is occurring in this portion of the region, as well, introducing more homogenous development.

Overall, a mix of developed and natural landscapes characterizes the region. Water features include Pleasant Grove, Orchard, Deer, Elder, and Morrison Creeks; Auburn Ravine; Folsom, Bass, and Stone Lakes; Lake Natoma; the Sacramento and American Rivers and their tributaries; the Yolo Bypass (when flooded); and numerous other smaller lakes, creeks, drainages, and local irrigation ditches.

A list of scenic views in El Dorado County was developed through a series of public workshops held during the development of a Scenic Highway Ordinance called for in the 1996 General Plan (EDAW 2003). The ordinance was never adopted by the County. The scenic views include views from US 50 near El Dorado Hills looking south to Marble Valley and west to the Sacramento Valley. The VMVSP project site is located within the scenic vista described as Marble Valley (visible from vista point 1a) in the *El Dorado County General Plan Environmental Impact Report* (EDAW 2003).

Project Vicinity Visual Character

The project vicinity is defined as the area within 0.5 mile of the project site, which is located directly south of US 50 and approximately 1.5 miles east of Latrobe Road, at the closest southwestern corner of the project site. The project site and vicinity are located at the beginning of the Sierra Nevada foothills, with rolling terrain that is undeveloped and primarily supports mature oak woodlands, intermixed with grassland and riparian vegetative communities. The project site is closed to public access and is privately accessed through gates on Marble Valley Road, approximately 0.25 mile from the US 50 on- and off-ramps, and on a dirt road that is located off Deer Creek Road. Representative photograph locations of the project site are illustrated on Figure 3.1-1, with the corresponding photographs shown in Figures 3.1-2a through 3.1-2f. Photos in these figures were taken on July 30, 2021, for locations outside of the site with views looking toward the project site (Photos 1-6) and on June 7, 2013, for locations within the project site interior (Photos 7-12).

North of the project site lies the small residential development of Cambridge Oaks, immediately south of US 50. This development is expanding slightly to the south of Canfield Circle via an extension of Voltaire Drive, which is evident by new paved roadway segments and lot pads at this location. Paving and street signage in this area indicates that Beasley and Deer Creek Drives will be paved in the future and renamed Marble Valley Road. Existing and near-future residents, roadway users, and recreationists in Cambridge Oaks (i.e., residents walking, jogging, cycling, and playing outside of their homes in the community) have more open views of the project site where roadways and elevation provide views out and over the landscape, such as from Gina Way (Figure 3.1-2a, Photo 1). Most views are limited by terrain, development, and trees, but roadways do sometimes provide glimpses of the site down narrow vegetated corridors, such as along segments of Beasley Drive (future Marble Valley Road) and the future Stone Ranch Drive south of the development (Figure 3.1-2a, Photo 2). In addition, residents recreating in the area may informally access and have views of the project site from dirt trails located through the oak woodlands. Suburban residential development associated with the western edge of Cameron Park exists north of US 50 and the

project site. However, views of the project site from this area are limited to elevated vantage points that are closest to US 50, such as from Holy Trinity Parish located north of Country Club and east of Tierra De Dios Drive (Figure 3.1-2b, Photo 3), that have scenic vista views toward the site. Some vantages may see very limited views of the site through existing development and vegetation (Figure 3.1-2b, Photo 4); however, views of the project site are most often not available from these developed areas. Views from Tierra De Dios Drive (Figure 3.1-2c, Photo 5). Views of the project site are offered along eastbound US 50, but the median barrier on US 50 limits views for westbound travelers, and trees and terrain prevent views of substantial portions of the project site's interior (Figure 3.1-2c, Photo 6).

The east, south, and west sides of the site are predominantly a mix of oak woodlands and grasslands with scattered rural residential lots near the project site borders. Rural residential homes are generally tucked into the oak woodland canopy, but some residents have cleared vegetation on their lots more than others. Homes range from smaller to mid-sized older homes to larger, more modern homes. Views from rural residential lots surrounding the site are mostly limited to the foreground and middleground by the rolling topography, trees, and scattered development (Figure 3.1-2d, Photo 6). However, some residents located north of South Shingle Road have scenic vista views out and over the project site, such as those located closest to the project boundary along Gild Creek, Tyler Ranch, China Diggins, Marble Ridge, and Grazing Hill Roads; Dust Cloud Drive; Summer Creek and Grazing Hill Courts; and Diablo Trail (Figure 3.1-2d, Photo 8). Some background views do exist in more open areas when the viewer is at a higher elevation than the surrounding terrain and via roadway corridors.

The site is undeveloped and consists of a mix of oak woodlands and grasslands. Views on the interior of the site are limited to private use, because public access to the site is prohibited, and include picturesque, enclosed views from under the oak canopy (Figure 3.1-2e, Photo 9) to more open views of grasslands and the surrounding oak woodlands (Figure 3.1-2e, Photo 10). As discussed above, views of the project vicinity are offered along eastbound US 50; however, there are only limited glimpses of the project site's interior because trees and terrain prevent views of substantial portions of the interior. Topography and trees can limit views to the exterior of the site, as seen in Photo 10 (Figure 3.1-2e), but can also allow for framed vista views over the site and beyond (Figure 3.1-2f, Photo 11). Water features on the site include Marble Lake on the central portion of the project site and Deer Creek, which runs through the southern portion of the project site and provides a visual amenity (Figure 3.1-2f, Photo 12). In addition to these features, cultural features on the site also contribute to the aesthetic qualities of the site and include remnant buildings and features associated with past mining and ranching operations (Figure 3.1-2g, Photo 13), as described in Section 3.4, *Cultural Resources*.

Views vary seasonally; for example, in the winter and spring grasses are green, whereas in the summer and fall grasses are lighter browns and tans. Wildflowers and redbud trees also contribute to the aesthetic quality of views in the late winter and early spring when they are in bloom. In addition, deciduous trees partially obscure portions of the project site when in leaf, while more views are visible when the trees have dropped their leaves, and the form of the oak trees contributes to the aesthetic nature of views in the vicinity.

The project site does not contain any sources of light and only a minimal source of glare in the form of Marble Lake's water surface. However, the lake's water surface is obscured from public view and is not seen by nearby sensitive viewers. Existing artificial light sources are primarily associated with the internal and external lighting of suburban and rural residential development, street lighting in

suburban areas, and vehicle headlights on local roadways at night. US 50 is mostly unlit, except for overhead cobra lighting near the US 50/Bass Lake Road exit. Smaller local roadways south of US 50, in rural residential areas, also tend to be mostly unlit. Viewers located on hillsides above the project site see the site unlit. Because the area is largely unlit, residential viewers surrounding the site experience largely uninterrupted views of the nighttime sky, with the moon and constellations, because those nighttime views are not obstructed by sky glow or other forms of light pollution associated with more developed areas nearby, and which can create a reduction in the amount of dark sky visible for enjoyment. The scenic qualities of the project vicinity and the lack of light pollution also contribute to picturesque views of the sky during sunrise and sunset, which provide a display of color variation in the sky and views of the rising and setting sun over the varied terrain. Views of the night skies, sunrises, and sunsets can be constrained by atmospheric conditions such as rain, cloud cover, fog, and haze.

The project vicinity has a limited number of wooden transmission poles that parallel local roadways in the vicinity, including US 50. In addition, weathered tubular steel poles, which are 65-90 feet tall, and 115 kV lines parallel the north side US 50 through the project area. Aside from a transmission line crossing the northern portion of the site and providing power to the caretaker's staging site, the project site is free of utilities and paved roadways. The project vicinity is characterized by US 50 and smaller local roadways; institutional, commercial, and suburban development of Cameron Park along US 50; rural residential land uses; and rolling terrain and open space oak woodlands and grasslands. The predominance of open space oak woodlands and grasslands create a project vicinity that is moderately high in vividness, intactness, and unity due to pleasant views offered in undeveloped areas combined with the presence of transportation and utility infrastructure and suburban development in proximity to US 50. Therefore, the overall visual quality of the project vicinity is moderately high.

Viewer Groups and Viewer Response

Residents

Most residents on the southwestern edge of Cameron Park and Emerald Peak, generally between Benevento Drive and US 50, Country Club Drive and US 50, and US 50 and Strolling Hills Road, do not have views of the project site because of their elevation; the presence of trees, landscaping, and surrounding development; and their location in proximity to the project site prevent such views. However, very limited portions of the project site may be visible through breaks in vegetation and development. Residents north of the project site, within Cambridge Oaks, do not have views of the project site unless they are on ground elevated enough to have unobscured views or are located in an area where a street corridor provides an unobstructed view out and over surrounding development toward the project site and surrounding landscape. Rural residential homes east, south, and west of the project site are generally tucked into the oak woodland canopy and do not have views of the site because the terrain and trees limit such views. However, some rural residents located north of South Shingle Road have views out and over the project site because they are at higher elevations than the surrounding terrain and vegetation surrounding the homes is sparse enough to allow for such views. Although rolling terrain and trees limit the viewers' ability to see the entire project site, residents are likely to have high sensitivity to visual changes because they are likely to have a high sense of ownership of views of the surrounding picturesque landscape that is largely undeveloped.

Businesses

Businesses in Cameron Park north of US 50 and the project site and between Cambridge Road and Greenwood Lane have limited views of the northeastern project boundary because their elevation and lack of dense trees allow for such views. Holy Trinity Parish has the most direct views of the project site due to its location in proximity to the site and its elevation, which is higher than the surrounding terrain. Other businesses in the vicinity do not have views of the project site because their elevation and location in proximity to the project site and the presence of the rolling terrain and trees prevent such views. Businesses and churches with views of the site have low sensitivity to their surroundings because their focus is concentrated on tasks associated with running the business or church activities.

Recreationists

There are no formal recreational facilities on the project site that would offer public views of the proposed project. However, recreationists may have views of the site while using local roadways bike lanes and sidewalks for walking, jogging, running, or cycling and while using the bicycle/pedestrian trail (former Country Club Drive) north of US 50. Given the distance between the project site and residential areas, the number of recreationists with public views of the site is anticipated to be moderate. Recreationists are likely to be moderately sensitive to visual changes at the project site. They are more likely to regard the natural and built surroundings as a holistic visual experience. However, they are accustomed to the presence of infrastructure and development occurring in the project vicinity.

Roadway Users

The County considers a portion of US 50 passing near the project site to be a corridor with important scenic viewpoints for its views of Marble Valley, as shown on Figure 3.1-1. Eastbound travelers on this portion of US 50 have views of the site where breaks in terrain and vegetation allow for such views, but they would be traveling at high rates of speed—the posted speed limit is 65 miles per hour. Views for westbound travelers are limited because an existing concrete median in US 50 obstructs views. Figure 3.1-3 is a viewshed analysis from US 50 that illustrates the visibility of the proposed project from the roadway and indicates portions of the project that would be the most visible (blue shading), moderately visible (green shading), and less visible (yellow shading). While views are of short duration at highway speeds, and drivers are focused on surrounding traffic, drivers and passengers on US 50 who are traveling between the Lake Tahoe area and cities within the region for recreational purposes enjoy the scenic nature of views from US 50 as they travel through the foothills. Viewers on scenic portions of US 50 would have moderate sensitivity to their surroundings because while scenic views are of a higher quality, roadway users pass by the site quickly.

Travelers on local roadways include suburban and rural residents, agricultural workers, people accessing the local businesses, and commuters driving in and through the area. Portions of the project site are obscured by the rolling terrain and trees, except when in very close proximity to the site or when an elevated vantage point affords views. The passing landscape becomes familiar for roadway users, and their attention typically is not focused on the passing views. At standard roadway speeds, views are of short duration and roadway users are only fleetingly aware of surrounding traffic, road signs, their immediate surroundings within the automobile, and other visual features, especially due to the winding nature of local roadways in the vicinity. Roadway

users, as a whole, have moderately low sensitivity to their surroundings because their focus is concentrated on driving and roadway conditions.

3.1.3 Environmental Impacts

Methods of Analysis

Using the concepts and terminology described at the beginning of this section and criteria for determining significance, described below, analysis of the visual effects of the project are based on the following.

- Direct field observation from vantage points, including neighboring buildings, property, and roadways (June 7, 2013, and July 30, 2021).
- Photographic documentation of key views of and from the project site.
- Evaluation of regional visual context.
- Review of the project description and proposed land uses and zoning.
- Review of the project in regard to compliance with state and local ordinances and regulations and professional standards pertaining to visual quality.
- Review of photo simulations.

Professional Standards

Professional standards result from professional and direct expertise gained by staff working on visual analyses and consulting with other experienced staff, subconsultants, and clients on visual effects, including knowledge gained from public input on a broad range of projects. The effects listed represent collective knowledge that is professionally agreed upon and represents common, general public concerns. According to professional standards, a project may be considered to have significant impacts if it would substantially:

- Conflict with local guidelines or goals related to visual quality.
- Alter the existing natural viewsheds, including changes in natural terrain where the project dominates the view.
- Alter the existing visual quality of the region or eliminate visual resources.
- Increase light and glare in the project vicinity.
- Result in backscatter light into the nighttime sky.
- Result in a reduction of sunlight or introduction of shadows in community areas.
- Obstruct or permanently reduce visually important features.
- Result in long-term (i.e., persisting for 2 years or more) adverse visual changes or contrasts to the existing landscape as viewed from areas with high visual sensitivity.

Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the proposed project would be considered to have a significant effect if it would result in any of the conditions listed below.

- Have a substantial adverse effect on a scenic vista.
- Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings along a scenic highway.
- 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, conflict with applicable zoning and other regulations governing scenic quality.
- Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.

As described in Section 3.9, *Land Use*, the project site is within a Rural Region. Therefore, the proposed project would be located entirely within the boundaries of a non-urbanized area. Therefore, the proposed project would not conflict with applicable zoning and other regulations governing scenic quality in an urbanized area and there would be no impact. Discussion of this topic is, therefore, excluded from further discussion in the analysis below.

Impacts and Mitigation Measures

Impact AES-1: Temporary visual impacts caused by construction activities (significant and unavoidable)

As described in Chapter 2, *Project Description*, construction would be phased over multiple years and take place Monday through Friday, between 7 a.m. and 7 p.m., and between 8 a.m. and 5 p.m. on the weekends, as dictated by County noise ordinances. Construction of the project would create changes in views of and from the project site over the course of phased development. Construction activities would introduce considerable heavy equipment and associated vehicles, including backhoes, compactors, tractors, and trucks into the viewshed of all viewer groups. While viewers are accustomed to seeing heavy machinery associated with construction of roadway improvements and development projects in the region and project vicinity, viewers would not be accustomed to seeing intense and isolated construction activities on the project site because construction operations of this scale are not common in this portion of the project vicinity.

Construction activities would occur on approximately 1,057 acres of the total 2,341 acres of the project site, leaving 1,284 acres in open space. Construction of the project would require temporary facilities such as access roads, parking areas, construction management offices, and staging areas. Dust control would be implemented during construction to reduce the potential for slow-moving dust clouds that would attract attention from visual receptors and reduce the availability of short-range views. Construction traffic would access the project site via local roads connecting to the site that would be upgraded as a part of the proposed project, and traffic would be visible in the foreground and middleground, in addition to staging areas and associated facilities.

The VMVSP includes policies that would ensure that the proposed project would integrate a suburban community environment with the rural character of the area (Policies 5.1 through 5.11), be sensitive to the site's natural and aesthetic resources (Policies 3.4, 3.6, and 3.9), and minimize the

visual intrusion on the landscape by preserving oak trees (Policies 6.29 through 6.35), cultural resources (Policies 5.12 through 5.14 and 6.36 through 6.39), and other aesthetic qualities and features of the project site (Policies 6.3 through 6.28 and 6.40 through 6.48). The project would also be required to comply with County General Plan policies and County zoning ordinances that seek to reduce project impacts and aid in preserving onsite visual resources. These policies and zoning ordinances are listed under *Regulatory Setting* in Section 3.1.2, *Existing Conditions*, and detailed in Appendix B. The policies include development standards and protocols to limit and guide the establishment of compatible land uses and design guidelines, minimize tree impacts, create land use buffers, limit excessive grading and development on slopes and ridgelines, minimize outdoor lighting, protect natural drainages and wetlands, install utilities underground, guide the installation of telecommunication facilities, limit the modification of National Register of Historic Places (NRHP)/California Register of Historical Resources (CRHR) structures, and limit the alteration of open space land uses. All of these measures would aid in reducing construction-related impacts associated with the proposed project and the proposed project's long-term impacts by ensuring that the project is designed to be sensitive to the existing landscape; that natural, cultural, and onsite visual resources are preserved to the degree possible; and that buffers aid in screening onsite development from surrounding land uses.

The project applicant would be required to comply with the County's Oak Woodland Preservation and Replacement Policy (General Plan Policy 7.4.4.4), and other County policies and zoning ordinances that seek to minimize impacts on the site's natural resources; however, these natural resources would still be substantially affected, as described in Section 3.3, *Biological Resources.* Mitigation Measure BIO-1d would reduce impacts on these natural resources to a less-than-significant level. In addition, these policies and measures would aid in reducing construction-related impacts associated with the proposed project and the proposed project's long-term impacts by ensuring that the project minimizes impacts to oak woodlands, which are an aesthetic resource. Nevertheless, many mature oak trees and grasslands would be removed and the project site would be graded, altering the naturally rolling terrain to accommodate building pads. As addressed in Section 3.3, the oak canopy impact area totals 227.2 acres, as defined under General Plan Policy Section 7.4.4.4, and the oak woodland impact under the Oak Resources Conservation Ordinance and the ORMP (El Dorado County 2017) totals 689.4 acres of oak woodland, and 9,244 inches of individual native oak trees. Impacts on biological resources in this area may be mitigated both onsite and offsite. Because mitigation may be provided offsite, affected resources are not likely to be replaced in kind onsite. In addition, oaks are slow growing and it would take more than 2 years for newly planted trees to mature and replace some of the visual value lost as a result of tree removals. Compliance with County General Plan Policy 7.4.4.4 and implementation of the Important Habitat Mitigation Program prepared for the project and compliance with the ORMP would result in the retention and replacement of oak woodland.

Due to the hours of construction (7 a.m. to 7 p.m., Monday through Friday, and 8 a.m. to 5 p.m. on weekends), high-intensity nighttime lighting would generally not be needed. This is because sunrise hours occur before or around 7a.m. for the majority of the year, except in December through the middle of March when sunrise generally occurs between 7 a.m. and 7:20 a.m. During these months, it is not anticipated that lights would be needed during these twenty minutes in the morning because that would be when staff would be preparing to initiate construction for the day. Similarly, sunset occurs after 7 p.m. for a little over half of the year but falls between 4:40 p.m. and 7 p.m. toward the end of September through early March, with the earliest sunset occurring in December (Time and Date AS 2021). If outside construction activities occur past sunset, then high-intensity

lighting would be required for construction operations. However, existing nearby residents, who have the potential to be impacted by such lighting, are separated from the project site by existing oak woodland areas not included within the proposed project and by areas that are proposed for open space and park uses that would retain the existing oak woodlands. The oak woodlands and rolling terrain would provide adequate distance and buffering so that nearby residents would not be affected by any high-intensity lighting that may be needed for construction in the winter and early spring. Therefore, construction would not result in a substantial amount of nighttime lighting to operate in the dark that would negatively affect existing sensitive residential viewers.

Construction activities would be visible to all viewer groups for a period of time greater than 2 years, starting and stopping based on market demands. While many construction activities would be obscured by terrain and the remaining trees, construction would still be visible and viewers would observe a noticeable transition of the visual character of the project site over time. A smaller subset of viewers may view the visual impacts associated with construction on the site neutrally or beneficially, as a sign of growth and development. However, a larger subset of viewers on scenic and non-scenic portions of eastbound US 50, who have views of the project site, and local roadways, residents in suburban and rural locations, businesses, and recreationists would be likely to see this transition and have a negative view of the conversion of scenic oak woodlands and grasslands through construction of a development. Even though Mitigation Measure BIO-1d would reduce long-term impacts on oak woodlands by retaining as many oak trees (i.e., an aesthetic resource) as possible, impacts on visual resources related to operation and construction would be significant and unavoidable.

Mitigation Measure BIO-1d: Avoid and minimize potential disturbance of oak woodland habitat and compensate for loss of oak woodland and individual trees

Impact AES-2: Have a substantial adverse effect on a scenic vista (significant and unavoidable)

The project site is currently undeveloped, and scenic vista views would be affected by vegetation removal and construction of a large mixed-use planned community associated with the proposed project. Vista views are likely to include more visible project elements than ground-level views of the proposed project because viewers can see out and over the proposed project from vista vantages located on hillsides around the project area at a higher elevation than the proposed project. The proposed project would result in a substantial amount of oak tree removal; alteration of grasslands and oak woodlands; introduction of a substantial number of built features associated with a large-scale, mixed-use planned community where none presently exist; and alteration of the existing visual context in which cultural resources, Marble Lake and Marble Creek, and remaining oak woodlands and grasslands occur. These changes would be noticeable in scenic vista views available from Holy Trinity Parish, the bicycle/pedestrian trail (former Country Club Drive), the south side of US 50, and the western edge of Cameron Park and rural residential areas south and west of the project site.

Figure 3.1-4 illustrates visible changes from portions of US 50 with County-designated scenic viewpoints, but this simulation is also representative of the visual changes that would be available from scenic vista views. However, while such views are limited, vista views are likely to provide views of more visible project elements than shown in this simulation because views are at a higher elevation than the simulated vantage point. Figure 3.1-4 shows existing conditions and the proposed conditions of the VMVSP. As seen in this figure, the site-sensitive design of the development

minimizes visual intrusion on the landscape. However, compared to existing conditions, the proposed project would permanently alter the existing visual character of the project site and these changes would be more apparent in vista views. The proposed project would change the visual landscape from oak woodland and grassland to a planned development, permanently altering the existing visual character and aesthetic resources of this foothill transition area and decreasing the amount of such resources available in the region and vicinity, as evident in the simulation (Figure 3.1-4). The proposed project would introduce a large-scale office building in foreground views visible from eastbound US 50, Holy Trinity Parish, and the bicycle/pedestrian trail (former Country Club Drive) and would result in residential units that would be visible on the hillsides, left of center in the simulation. In addition, the scale of the commercial areas seen in the center of the simulation, in the valley, makes this area visible from eastbound US 50, Holy Trinity Parish, and the bicycle/pedestrian trail (former Country Club Drive). Lighter colored roofs and building facades would make buildings stand out among the darker oak woodland canopy. These changes would be visible in scenic vista views. County policies, zoning ordinances, design review, and the proposed VMVSP ensure that the proposed project would be well designed, sensitive to the site's natural and aesthetic resources, and seek to minimize the visual intrusion on the landscape by preserving oak trees, cultural resources, and other aesthetic qualities and features of the project site to the degree feasible.

Open space buffers, terrain, and remaining oak trees would reduce visibility of some portions of the project site in vista views but other portions of the project site would be more readily visible because rural residential areas are at higher elevations than the project site. When seen from these higher elevations, the permanent conversion of the project site from a scenic natural area to one with a large-scale, mixed-use planned community would reduce the visual quality of these views and would be likely to have an impact on sensitive viewers. Some viewers may view the visual changes associated with the proposed project neutrally or beneficially, as a sign of growth and development. Conversely, other viewers may see this transition and view conversion of scenic oak woodlands and grasslands to a development negatively because many viewers enjoy the scenic nature of foothill views that are available from their properties and have a high sense of ownership of such views. As described above, County policies, zoning ordinances, design review, and the proposed VMVSP policies would ensure that the proposed project minimizes visual impacts to the degree feasible. Compliance with the County General Plan policies listed under *Regulatory Setting* in Section 3.1.2, and detailed in Appendix B, would guide the establishment of compatible land uses and design guidelines, minimization of tree impacts, creation of land use buffers, restriction of excessive grading and development on slopes and ridgelines, use of outdoor lighting, protection of natural drainages and wetlands, install utilities underground, installation of telecommunication facilities, modification of NRHP/CRHR structures, and alteration of open space land uses. However, the combination of potential viewer sensitivity, permanent visual changes resulting on the project site, and the existing scenic nature of the undeveloped scenic vista views toward Marble Valley would result in impacts that would be significant. Mitigation Measure AES-2 would reduce the visual prominence of the buildings located within oak woodland and grassland areas and Mitigation Measure BIO-1e would ensure that trees conserved in residential lots are maintained and replaced when dead, retaining the oak canopy that remains, but would not reduce visual impacts associated with the proposed project to a less-than-significant level. The impact on scenic vista views in the project vicinity would be significant and unavoidable.

Mitigation Measure AES-2: Apply aesthetic design treatments to buildings within oak woodland and grassland areas

Appendix B, *Site Design Standards*, of the VMVSP shall be revised to include Section B.6, *Building Design Standards*, as follows. These requirements will be adopted as Conditions, Covenants and Restrictions and recorded prior to the County's approval of the first final maps.

B.6 Building Standards

Buildings associated with the proposed project that are to be located in oak woodland and grassland areas will be designed to blend with the surrounding built and natural environments so that these structures complement the visual landscape. The U.S. Bureau of Land Management has conducted extensive research on color selection techniques illustrating the efficacy of color choice in reducing visual impacts in natural environments. Methods consistent with this study will be applied to design treatments for buildings within oak woodlands and grassland areas.[1] The following measures will be applied subject to County review and approval upon review of final maps.

- Roofing materials within oak woodlands and grasslands will be colored using a shade that is two to three shades darker than the general surrounding area.
- Building facades within oak woodlands will be painted in mid-range to darker earth tones to help buildings blend better within the oak canopy. Lighter beiges and tans, which would make buildings stand out and contrast against the oak canopy, will be avoided.
- Building facades within grasslands will be painted in mid-range earth tones to help buildings blend better within grassland areas. Very light off-whites, very light beiges, and very light tans, which would make buildings stand out and contrast against grassland areas, will be avoided.

Mitigation Measure BIO-1e: Maintain retained oaks in development areas

Impact AES-3: Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings along a scenic highway (significant and unavoidable)

There are no federal- or state-designated scenic roadways in the project area but, as shown on Figure 3.1-1, a portion of US 50 bordering the project site is recognized by the County as a corridor with important public scenic viewpoints because of existing views of Marble Valley. Figure 3.1-3 is a viewshed analysis from US 50 that illustrates the visibility of the proposed project from eastbound US 50. Portions of the project closest to US 50 that are designated Office Park (OP) would be the most visible, indicated by the blue shading, while portions of the interior that are designated Village Commercial (VC); Village Residential, High (VRH); Village Residential, Medium (VRM); Village Park (VP); and Agriculture Tourism (AT) would be less visible, as indicated by the yellow shading.

[1] The U.S. Department of the Interior Bureau of Land Management has conducted extensive research on color selection techniques and has prepared a standard color chart to help reduce the visibility of projects in the natural environment that can be applied to both public and private lands. These tools are available online at http://www.ntc.blm.gov/krc/uploads/35/Unit%206%20Design%20Fundamentals%2011%2005%2008.pdf, http://www.ntc.blm.gov/krc/uploads/35/Unit%207%20Design%20Strategies%2011%2005%2008.pdf, and http://www.blm.gov/wo/st/en/prog/Recreation/recreation_national/RMS/3.html.

Portions of the Village Residential, Low (VRL) and Open Space (OS) on the eastern and western portions of the site would be moderately visible, as indicated by the green shading.

The site is currently undeveloped. The proposed project would result in a substantial amount of oak tree removal; alteration of grasslands and oak woodlands; introduction of a substantial number of built features associated with a large-scale, mixed-use planned community where none presently exists; and alteration of the existing visual context in which cultural resources, Marble Lake and Marble Creek, and remaining oak woodlands and grasslands occur.

Such changes would be visible from US 50, as illustrated in Figure 3.1-4 that shows existing conditions and the proposed conditions of the VMVSP. As seen in this figure, the site-sensitive design of the development minimizes visual intrusion on the landscape in an effort to avoid a more highly developed and manipulated, post-project visual landscape. Compared to existing conditions, the proposed project would permanently alter the existing visual character of the view for which this portion of US 50 was designated as scenic. The proposed project would change the visual landscape from oak woodland and grassland open space to a planned development, permanently altering the existing visual character and aesthetic resources of this foothill transition area and decreasing the amount of such resources available in the region and vicinity. The proposed project would alter the existing visual character of the site in this manner, as evident in the simulation. The proposed project would also develop housing that would be visible on the hillsides, left of center and behind the office building complex in the simulation. In addition, the scale of the commercial areas that would be developed in the valley (in the center of the simulation), makes this area visible from eastbound US 50. Lighter colored roofs and building facades would make buildings stand out amongst the darker oak woodland.

The permanent conversion of the project site from a scenic natural area to one with built features associated with development would be likely to affect sensitive viewer groups and views from US 50. Some roadway users may view the visual changes associated with the proposed project neutrally or beneficially, as a sign of growth and development. Conversely, other roadway users on scenic portions of US 50 may see this transition and have a negative view of conversion of scenic oak woodlands and grasslands to a development because many travelers on US 50 are local commuters living in the foothills and recreational travelers who enjoy the scenic nature of views from US 50 as they travel through the foothills. The combination of potential viewer sensitivity, permanent visual changes resulting on the project site, and County designation of US 50 in the vicinity of the project as a corridor with important public scenic viewpoints would result in impacts that would be significant and unavoidable.

As described above, the VMVSP includes policies that would ensure that the proposed project would be designed to integrate with the rural character of the area (Policies 5.1 through 5.11), sensitive to the site's natural and aesthetic resources (Policies 3.4, 3.6, and 3.9), and would minimize the visual intrusion on the landscape by preserving oak trees (Policies 6.29 through 6.35), cultural resources (Policies 5.12 through 5.14 and 6.36 through 6.39), and other aesthetic qualities and features of the project site (Policies 6.3 through 6.28 and 6.40 through 6.48). The project would also be required to comply with County General Plan policies and County zoning ordinances that seek to reduce project impacts and aid in preserving onsite visual resources. These policies and zoning ordinances are listed under *Regulatory Setting* in Section 3.1.2 and detailed in Appendix B. The policies include development standards and protocols to limit and guide the establishment of compatible land uses and design guidelines, minimize tree impacts, create land use buffers, limit excessive grading and development on slopes and ridgelines, minimize outdoor lighting, protect natural drainages and

wetlands, underground utilities, guide the installation of telecommunication facilities, limit the modification of NRHP/CRHR structures, and limit the alteration of open space land uses. However, the impact on a scenic resource would be significant. Mitigation Measure AES-2 would reduce the visual prominence of the buildings located within oak woodland and grassland areas and Mitigation Measure BIO-1e would ensure that trees conserved in residential lots are maintained and replaced when dead, retaining the oak canopy that remains, but would not reduce visual impacts on views from US 50 associated with the proposed project to a less-than-significant level. The impact on scenic resources along a scenic highway would be significant and unavoidable.

Mitigation Measure AES-2: Apply aesthetic design treatments to buildings within oak woodland and grassland areas

Mitigation Measure BIO-1e: Maintain retained oaks in development areas

Impact AES-4: 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, conflict with applicable zoning and other regulations governing scenic quality (significant and unavoidable)

The proposed project would result in a substantial amount of oak tree removal, alteration of grasslands and oak woodlands, introduction of substantial number of built features associated with a large-scale, mixed-use planned community where none presently exist, and alteration of the existing visual context in which cultural resources, Marble Lake and Marble Creek, and remaining oak woodlands and grasslands occur. Figure 3.1-4 illustrates visible changes from the scenic portion of eastbound US 50, but this simulation is also representative of the visual changes that other viewers in the vicinity would be likely to see where views are available, such as from rural residential areas and local roadways. The figure shows existing conditions and the proposed conditions of the VMVSP. Compared to existing conditions, the proposed project would permanently alter the existing visual character of the site and these changes would be more apparent to viewers at the Holy Trinity Parish, the bicycle/pedestrian trail (former Country Club Drive), residents of Cambridge Oaks, and rural residents with available views toward the site. The proposed project would change the visual landscape from oak woodland and grassland to a planned development, permanently altering the existing visual character and aesthetic resources of this foothill transition area and decreasing the amount of undeveloped land in the region and vicinity. The proposed project would introduce a large-scale office building complex in foreground views visible from eastbound US 50, Cambridge Oaks residential area, Holy Trinity Parish, and the bicycle/pedestrian trail (former Country Club Drive). The proposed project would also develop housing that would be visible on the hillsides, left of center and behind the office building complex in Figure 3.1-4. In addition, the scale of the commercial areas that would be developed in the valley (center of the simulation), makes this area visible from eastbound US 50, Cambridge Oaks residential area, Holy Trinity Parish, and the bicycle/pedestrian trail (former Country Club Drive). Lighter colored roofs and building facades would make buildings stand out among the darker oak woodland canopy.

The existing trees in the open space buffers would limit views toward the project site for a large number of viewers east, south, and west of the site, but where trees are sparse and elevation and terrain permit, views may be available. Views out and over the site would also be seen from rural residential areas at higher elevations south and west of the project site. The permanent conversion of the site from a scenic natural area to one with built features associated with development would

reduce the visual quality of these views and are likely to affect sensitive viewer groups and views from the project vicinity.

As specified in Mitigation Measure NOI-1b and shown on Figure 3.10-2 in Section 3.10, *Noise and Vibration*, noise barriers may be needed to lessen the impacts associated with noise. Mitigation Measure NOI-1b establishes that solid noise barriers may be used and that the final design, including heights, materials, and type of barrier, will be determined during final design when the locations of residences and noise sources are finalized. If the barriers are designed without aesthetic consideration, negative visual impacts could result by degrading the quality of views from local roadways and the surrounding area and by installing a visual barrier. This would result in a significant visual impact.

Some viewers may view the visual changes associated with the proposed project neutrally or beneficially, as a sign of growth and development. Conversely, other viewers may see this transition and have a negative view of conversion of scenic oak woodlands and grasslands to a development because many viewers enjoy the scenic nature of foothill views that are available from their properties and have a high sense of ownership of such views. As described above, the VMVSP includes policies that would ensure that the proposed project would integrate a suburban community environment with the rural character of the area (Policies 5.1 through 5.11), be sensitive to the site's natural and aesthetic resources (Policies 3.4, 3.6, and 3.9), and minimize the visual intrusion on the landscape by preserving oak trees (Policies 6.29 through 6.35), cultural resources (Policies 5.12 through 5.14 and 6.36 through 6.39), and other aesthetic qualities and features of the project site (Policies 6.3 through 6.28 and 6.40 through 6.48). The project would also be required to comply with County General Plan policies and County zoning ordinances that seek to reduce project impacts and aid in preserving onsite visual resources. These policies and zoning ordinances are listed under *Regulatory Setting* in Section 3.1.2 and detailed in Appendix B. The policies include development standards and protocols to limit and guide the establishment of compatible land uses and design guidelines, minimize tree impacts, create land use buffers, limit excessive grading and development on slopes and ridgelines, minimize outdoor lighting, protect natural drainages and wetlands, underground utilities, guide the installation of telecommunication facilities, limit the modification of NRHP/CRHR structures, and limit the alteration of open space land uses. The combination of potential viewer sensitivity, permanent visual changes to the site, and scenic nature of existing, undeveloped views toward Marble Valley would result in impacts that would be significant. Mitigation Measure AES-2 would reduce the conspicuousness of the buildings located within oak woodland and grassland areas, Mitigation Measure AES-4 would improve noise barrier aesthetics and ensure that the appearance of noise barriers is consistent with the surrounding project vicinity, and Mitigation Measure BIO-1e would ensure that trees conserved in residential lots are maintained and replaced when dead, retaining the oak canopy that remains. However, these mitigation measures would not reduce visual impacts associated with the proposed project to a less-than-significant level. The impact on the visual character and quality of the project site and its surroundings would be significant and unavoidable.

Mitigation Measure AES-2: Apply aesthetic design treatments to buildings within oak woodland and grassland areas

Mitigation Measure AES-4: Design proposed noise barriers with aesthetic design treatments

Existing noise barriers in the El Dorado Hills area, such as along Serrano Parkway, utilize a combination of solid barriers, earthen berms, and landscaping to mitigate the effects of noise and improve site aesthetics. The earthen berms and landscaping not only improve the quality of views along roadways, but also act to screen and reduce the visibility and apparent scale of the solid barrier. Therefore, any new noise barriers to be installed as a part of the proposed project will be designed and constructed in a manner that is visually consistent with the design of existing barriers located along Serrano Parkway and should include similar dimensions, barrier materials, and plant species to ensure visual consistency with existing barriers in the El Dorado Hills area.

Mitigation Measure BIO-1e: Maintain retained oaks in development areas

Impact AES-5: Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area (significant and unavoidable)

Once the proposed project has been built, permanent features such as windows and building surfaces and temporary features such as parked cars would introduce new sources of glare. Mature vegetation in the area would aid in reducing the amount of glare from these sources, but glare would still be substantially increased compared to existing conditions.

The site is currently unlit. There is some ambient light associated with land uses north of the project site, in the Cameron Park area, but rural land uses on the east, west, and south sides of the project site are not highly lit and existing tree canopies act to filter and reduce the amount of visible light pollution and ambient sky glow radiating from rural residential areas. As described above, County policies, zoning ordinances (130.34 Outdoor Lighting), design review, and the proposed VMVSP would ensure that the proposed project minimizes lighting impacts to the degree feasible. Specifically, County Code Section 130.34 requires shielding to avoid impacts on adjoining areas. However, even with VMVSP Policies 3.4, 5.7, 6.20, 7.16, 7.17, 9.20, and 9.21, which establish use of shielding for lights to aid in reducing light pollution and protecting dark-sky conditions, the proposed project would substantially increase the amount of ambient light in the vicinity compared to existing conditions where there is no lighting, resulting in visible light pollution and introducing ambient sky glow to the project vicinity. Even with the presence of the remaining tree canopy, new permanent sources of light would be introduced from lighted residences, commercial and entertainment areas, walkways, roadways, parking lots, and accent lighting that would be visible to all viewer groups and would greatly increase light at the project site, which is currently unlit. These light sources would draw offsite viewers' attention toward the proposed project at night. This would affect rural residential viewers living in rural residential development to the east and south, on ridgelines on the west, and in the Cambridge Oaks development on the north, and passing motorists on portions of US 50 that have scenic viewpoints. Therefore, these impacts would be significant. Mitigation Measure AES-2 would reduce the amount of glare coming from buildings in oak woodland and grassland areas and Mitigation Measure BIO-1e would ensure that trees conserved in residential lots are maintained and replaced when dead, retaining the oak canopy that remains to filter onsite lighting, but would not reduce light and glare impacts associated with the proposed project to a less-than-significant level. The impact from new sources of light or glare from the project site would be significant and unavoidable.

Mitigation Measure AES-2: Apply aesthetic design treatments to buildings within oak woodland and grassland areas

Mitigation Measure BIO-1e: Maintain retained oaks in development areas

Impact AES-6: Adversely affect scenic highways and vistas, the existing visual character or quality of the site and its surroundings, or create a new source of substantial light or glare as a result of offsite improvements (less than significant)

As described in Chapter 2, *Project Description*, and shown in Figure 2-13, the proposed project would require offsite improvements, including interim interchange improvements at Bass Lake and Cambridge Roads; extension of the new Marble Valley Parkway to the US 50/Cambridge Road interchange; an upgraded connection of Marble Valley Parkway to the US 50/Bass Lake Road interchange; a new section of Marble Valley Parkway between the east and west sides of the northern portion of the proposed project site (Beasley Road); extension of the new Lime Rock Valley Road to Deer Creek Road; water, recycled water (potentially) and sewer line extensions to connect to existing El Dorado Irrigation District infrastructure; and connections to electricity and natural gas services to be constructed by Pacific Gas and Electric Company.

The most notable interim interchange improvements at Bass Lake Road include installing traffic signals at off- and on-ramp intersections with Bass Lake and Marble Valley Roads, widening the eastbound US 50 off-ramp to Marble Valley Road, widening northbound Bass Lake Road to two lanes under US 50 and past the westbound US 50 on- and off-ramps to provide for turn and through lanes, and additional safety signage such as stop signs. The most notable interim interchange improvements at Cambridge Road include installing traffic signals at off and on-ramp intersections with Cambridge Road and Merrychase Drive, potentially creating a new westbound US 50 on-ramp, widening ramps and ramp approaches to provide for turn and through lanes, and additional safety signage such as yield signs. Changes at these intersections would result in minor visual changes that are in keeping with the existing visual character of these facilities. Therefore, the interim interchange improvements would not greatly alter the existing visual character or visual quality associated with these interchanges or detract from available views of and from the freeway or from adjacent roadways. The roadway changes would widen existing rural roadways, giving them a more suburban appearance by removing unpaved shoulders and replacing them with curbs and gutters and adding more roadway striping; introduce new roadways where none presently exist; and require vegetation removal to trench and install underground water and sewer lines. These changes would result in slight, localized increases in glare from vegetation removal and increases in the amount of pavement and isolated and minor increases in nighttime lighting from traffic lights and streetlights. These changes are not likely to be seen in vista views because topography, site development, and trees on the site would obscure them from view. The natural gas connections, water and sewer lines, and Lime Rock Valley Road extension would not be visible because these improvements would occur out of view from sensitive viewers. The connection to the existing 21-kilovolt line would result in minimal visual change. The Marble Valley Parkway improvements to provide a connection from Bass Lake to Cambridge Roads, however, may be seen by sensitive viewers living in Cambridge Oaks and by residents living in the home located at the end of the paved and publicly accessible portion of Marble Valley Road near Bass Lake Road. These changes would result in slight, localized increases in glare from vegetation removal and increases in the amount of pavement and isolated and minor increases in nighttime lighting from traffic lights and streetlights. The existing trees in the open space buffers would serve to limit most views toward the Marble

Valley Parkway improvements for Cambridge Oak residents, but where trees are sparse and elevation and terrain permit, views would be available and roadway lighting may be seen. The existing Beasley Road is both paved and unpaved and the Marble Valley Parkway improvements would widen the existing corridor that is currently free of development. The approach to development of these improvements would minimize grading and vegetation removal and, thereby, lessen the potential visual impacts. The new roadway segment needed to connect to the current Marble Valley Road alignment, which Marble Valley Parkway would follow, would require tree removal and grading. However, views of this segment are expected to be very limited due to intervening terrain, onsite trees, and landscaping and homes associated with Cambridge Oaks that would obscure most views. The widened connection to Flying C Road would not result in substantial visual impacts because the existing corridor is paved. Construction to widen this roadway would minimize grading and vegetation removal, lessening potential visual impacts and potential for glare from a slight increase in roadway pavement. In addition, most views from the one nearby residence south of Deer Creek Road, near Flying C Road, would be obscured by existing vegetation surrounding the house.

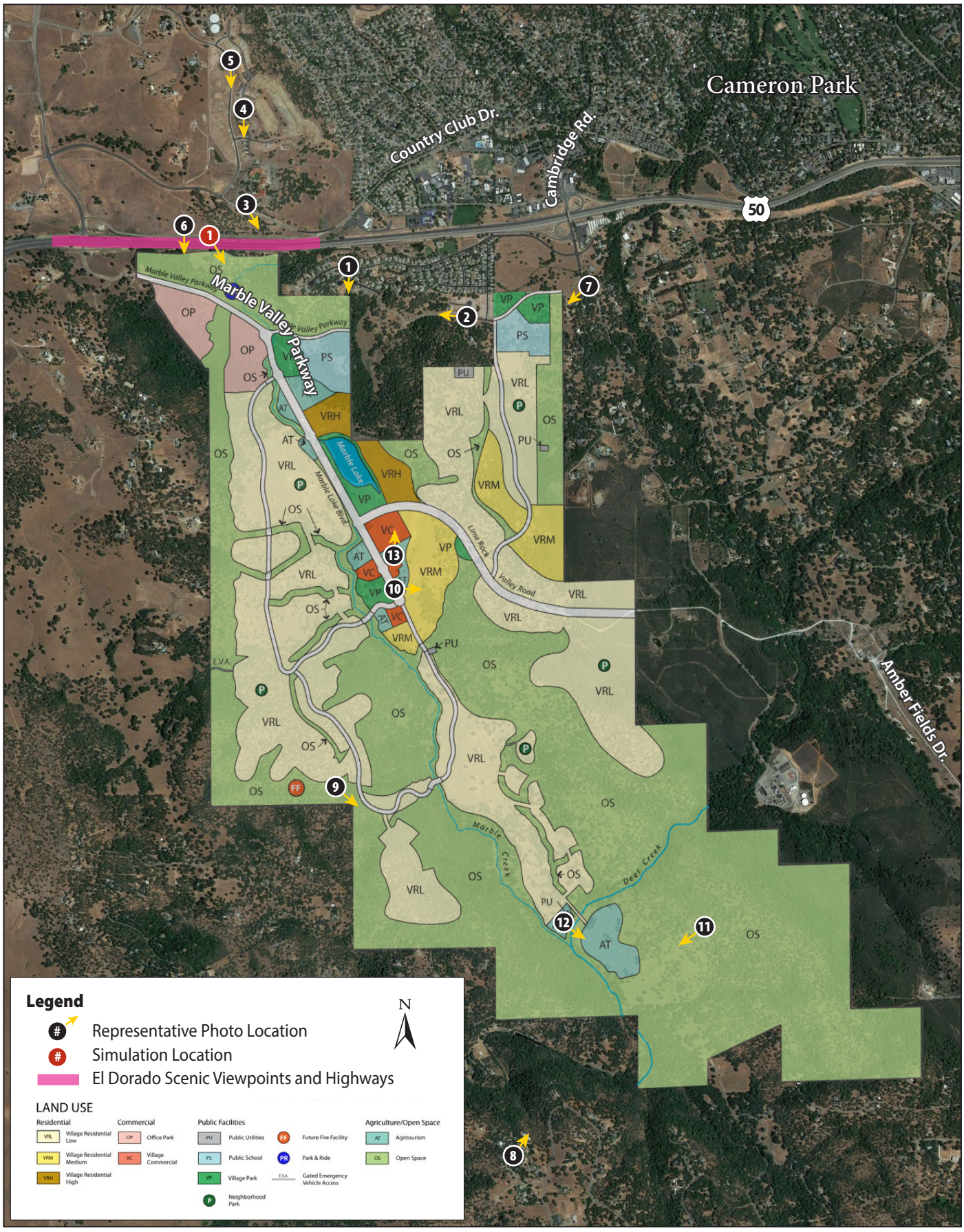
Views from the portions of US 50 that have scenic viewpoints would not be substantially affected because the proposed Marble Valley Parkway connection to Bass Lake Road would widen an existing roadway corridor and the increase in glare from additional roadway pavement would be nominal compared to existing conditions. Terrain and existing trees would also limit views of Marble Valley Parkway to the bend in the road to near its intersection with the eastbound US 50 on- and off-ramps at Bass Lake Road. Because the existing roadway corridor is present and travelers on US 50 pass by quickly, views from scenic portions of US 50 would not appear to be substantially altered and glare would not be an issue.

Only limited views of changes would be visible and changes would not substantially alter the existing visual landscape or result in a notable increase in light or glare. As described above, County policies, zoning ordinances, design review, and the proposed VMVSP would ensure that the proposed project further minimizes visual impacts associated with offsite improvements. Therefore, these impacts would be less than significant.

Impact AES-7: Adversely affect scenic highways and vistas, the existing visual character or quality of the site and its surroundings, or create a new source of substantial light or glare as a result of implementing of General Plan Policy TC-Xf traffic improvements (less than significant)

As described in Chapter 2, *Project Description*, and shown in Figure 2-15, the proposed project would require implementation of General Plan Policy TC-Xf traffic improvements that would facilitate interchange and intersection improvements in proximity to the project site at the US 50 intersections with Bass Lake and Cambridge Roads and along Bass Lake Road, and Cambridge Road. These improvements would tie into other completed roadway improvement projects, such as the Bass Lake Road widening and the US 50/El Dorado Hills Boulevard interchange and US 50/Silva Valley Parkway interchange improvements, and would provide additional safety and traffic control measures, such as installing traffic signal controls, providing turn lanes, providing through lanes, and improving access ramps to US 50. Some of these improvements have already been completed or will be completed prior to development of the project site. Visual changes from implementing General Plan Policy TC-Xf traffic improvements at these intersections would result in minor visual changes that are in keeping with the existing visual character of these facilities, would be a visual continuation of recently completed or soon to be completed roadway improvement projects in the

area, and would result in only nominal increases in light and glare from the installation of localized traffic lights and the increases in paved surfaces. Such projects are common to the project vicinity as a result of increased development. Therefore, the intersection improvements would not greatly alter the existing visual character or visual quality associated with these intersections and roadways and would not detract from available views of and from the freeway or from adjacent roadways. These changes are not likely to greatly affect views from the portions of US 50 that have scenic viewpoints or scenic vista views (such as from Holy Trinity Parish at the intersection of Country Club Drive and Tierra De Dios Drive and the bicycle/pedestrian trail) because the visual changes would be part of the existing roadway infrastructure system and would not be notable. Furthermore, views from scenic portions of US 50 would not appear to be substantially altered because travelers on US 50 pass quickly by the improvement sites and nuisance light and glare would not be an issue. In addition, County policies, zoning ordinances, and design review would ensure that the proposed project further minimizes visual impacts associated with General Plan Policy TC-Xf traffic improvements. Therefore, these impacts would be less than significant.



ICF Graphics... 00667.12 (8/30/21) AB

Figure 3.1-1
Representative Photo and Simulation Locations

Photo 1: Looking south down Gina Way from Crazy Horse Road towards the project site.

Photo 2: Looking west towards the project site from the intersection of Beasley Drive/future Marble Valley Road and the future Stone Ranch Drive.

Graphics ... 00667.12 (8/30/21) AB

ICF

Figure 3.1-2a
Representative Photographs

Photo 3: Looking southeast towards the proposed project from Holy Trinity Parish located at the intersection of Country Club and Tierra De Dios Drives.

Photo 4: Looking south towards the proposed project from Savona Drive, within the Emerald Peak community.

Graphics ... 00667.12 (8/30/21) AB

Figure 3.1-2b
Representative Photographs

Photo 5: Looking south towards the proposed project from Tierra De Dios Drive.

Photo 6: Looking south towards the project site from the bicycle/pedestrian trail (former Country Club Drive), just north of US 50.

Graphics ... 00667.12 (8/30/21) AB

ICF

Figure 3.1-2c
Representative Photographs

Photo 7: Looking southwest towards the proposed project from Flying C Road, near the gated entrance for Cameron Estates.

Photo 8: Looking northeast towards the project site from Grazing Hill Court.

Graphics ... 00667.12 (8/30/21) AB

Figure 3.1-2d
Representative Photographs

Photo 9: Looking southeast down a proposed roadway alignment under an existing blue oak canopy within a proposed VRL/OS land use area in the western portion of the proposed project.

Photo 10: Looking east towards existing grasslands surrounded by blue oak woodlands within a proposed VRM land use area in the central portion of the proposed project.

ICF

Figure 3.1-2e
Representative Photographs

Photo 11: Vista views looking southwest towards rolling foothills and the Sacramento Valley within a proposed OS land use area in the southern portion of the proposed project.

Photo 12: Looking southeast towards Deer Creek near areas proposed for AT and OS land uses in the southern portion of the proposed project.

Graphics ... 00667.12 (8/30/21) AB

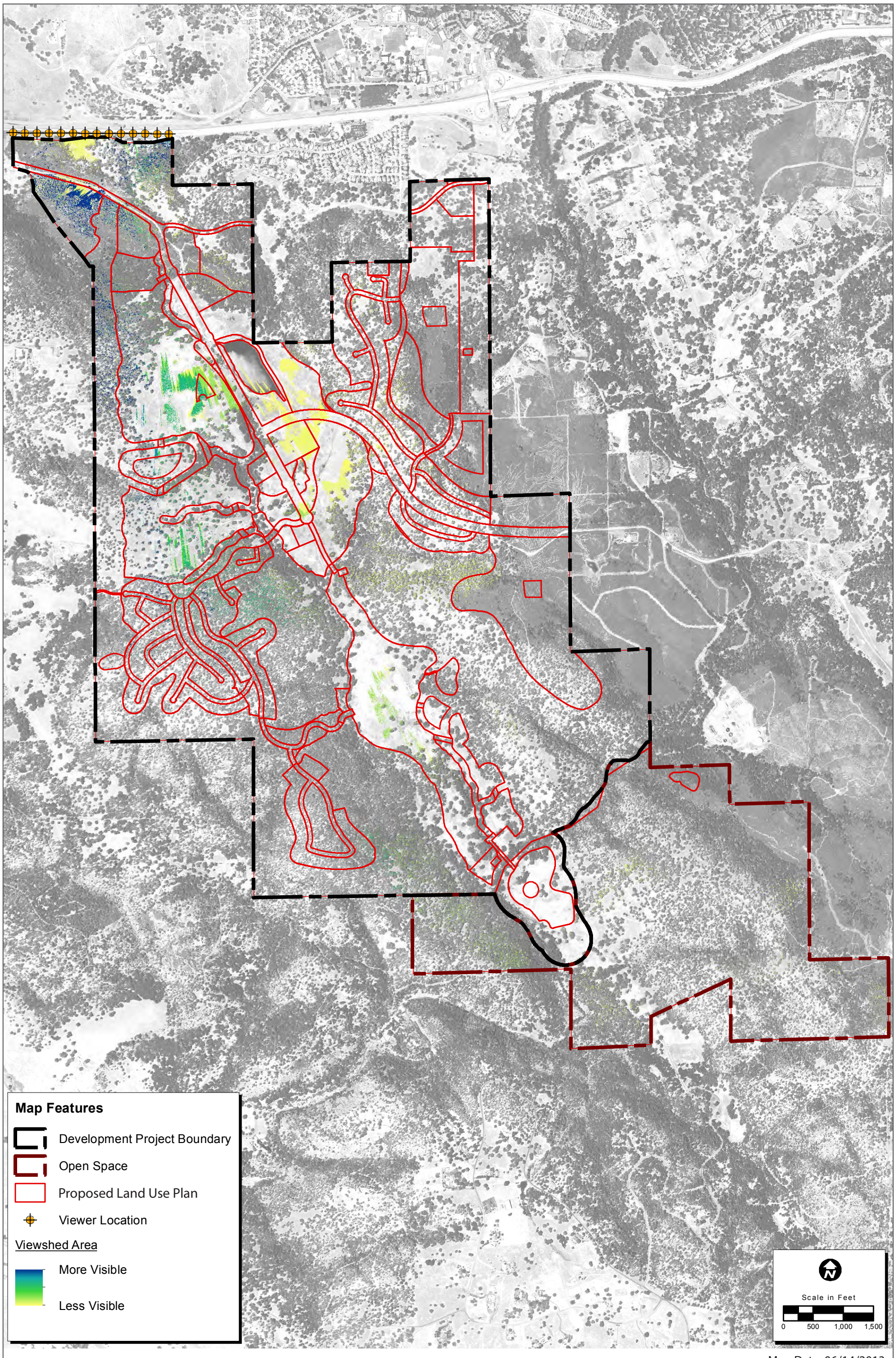
ICF

Figure 3.1-2f
Representative Photographs

Photo 13: Looking north towards a remnant limestone outcropping from the historic Cowell Limestone Quarry within a proposed VC land use area in the central portion of the proposed project.

Graphics ... 00667.12 (8/30/21) AB

Figure 3.1-2g
Representative Photographs



Source: ECORP Consulting, Inc. (2013)

Map Date: 06/14/2013
Photo Source: NAIP (2012)

ICF Graphics... 00667.12 (7-5-2018)

Figure 3.1-3
Viewshed Analysis of the Proposed Project from US 50

Source: Architectural Nexus (2014)

ICF Graphics... 00667.12 (7-5-2018)

Figure 3.1-4
Visual Simulation of the Proposed Project from US 50

3.2 Air Quality

Air quality describes the amount of air pollution to which the public is exposed. Air quality is an important consideration for buildout of the VMVSP because of current regional air quality conditions, which exceed certain federal and state ambient air quality standards. The air quality study area encompasses the areas directly and indirectly affected by construction activities and operation of new development within the VMVSP. Two geographic scales define the study area: the *local study area* is the construction footprint plus areas within 1,000 feet, and the *regional study area* is the affected air basin. The VMVSP is in unincorporated El Dorado County, which is within the Mountain Counties Air Basin (MCAB).

This section discusses applicable air quality regulations as they pertain to the VMVSP. The section also describes ambient air quality conditions, including existing pollutant concentrations, meteorology, and general locations of sensitive receptors in the local air quality study area. It describes the air quality impacts, if any, that would result from buildout of the VMVSP and provides feasible mitigation for significant impacts where possible. Impacts related to GHGs are described in Section 3.6, *Greenhouse Gas Emissions*.

3.2.1 Existing Conditions

Regulatory Setting

The agencies of direct importance to the proposed project for air quality are the U.S. Environmental Protection Agency (USEPA), California Air Resources Board (CARB), and El Dorado County Air Quality Management District (EDCAQMD). USEPA has established federal air quality standards for which CARB and EDCAQMD have primary implementation responsibility. CARB and EDCAQMD are also responsible for ensuring that state air quality standards are met.

Federal

Clean Air Act and National Ambient Air Quality Standards

The federal Clean Air Act (CAA) was first enacted in 1963 and has been amended numerous times in subsequent years (1965, 1967, 1970, 1977, and 1990). The CAA establishes federal air quality standards, known as *national ambient air quality standards* (NAAQS), and specifies future dates for achieving compliance. The CAA also mandates that the state submit and implement a State Implementation Plan (SIP) for local areas not meeting those standards. The plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA identify specific emission-reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or meet interim milestones. Table 3.2-1 shows the NAAQS currently in effect for each criteria pollutant. The California ambient air quality standards (CAAQS) (described below) are also provided for reference.

Table 3.2-1. National and State Ambient Air Quality Standards

Criteria Pollutant	Average Time	California Standards	National Standards [a]	
			Primary	Secondary
Ozone	1-hour	0.09 ppm*	None [b]	None [b]
	8–hour	0.070 ppm	0.070 ppm [c]	0.070 ppm [c]
Particulate matter (PM_{10})	24-hour	50 μg/m³**	150 μg/m³	150 μg/m³
	Annual mean	20 μg/m³	None	None
Fine particulate matter ($PM_{2.5}$)	24-hour	None	35 μg/m³	35 μg/m³
	Annual mean	12 μg/m³	9.0 μg/m³ [d]	15.0 μg/m³
Carbon monoxide	8-hour	9.0 ppm	9 ppm	None
	1-hour	20 ppm	35 ppm	None
	8-hour (Lake Tahoe)	6 ppm	None	None
Nitrogen dioxide	Annual mean	0.030 ppm	0.053 ppm	0.053 ppm
	1-hour	0.18 ppm	0.100 ppm	None
Sulfur dioxide [e]	Annual mean	None	0.030 ppm	None
	24-hour	0.04 ppm	0.14 ppm	None
	3-hour	None	None	0.5 ppm
	1-hour	0.25 ppm	0.075 ppm	None
Lead	30-day average	1.5 μg/m³	None	None
	Calendar quarter	None	1.5 μg/m³	1.5 μg/m³
	3-month average	None	0.15 μg/m³	0.15 μg/m³
Sulfates	24-hour	25 μg/m³	None	None
Visibility-reducing particles	8-hour	–[f]	None	None
Hydrogen sulfide	1-hour	0.03 ppm	None	None
Vinyl chloride	24-hour	0.01 ppm	None	None

Source: CARB 2016a.

[a] National standards are divided into primary and secondary standards. Primary standards are intended to protect public health, whereas secondary standards are intended to protect public welfare and the environment.

[b] The federal 1-hour standard of 12 parts per hundred million was in effect from 1979 through June 15, 2005. The revoked standard is referenced because it was employed for such a long period and is a benchmark for State Implementation Plans.

[c] The federal 8-hour standard of 75 parts per billion was lowered to 70 parts per billion on October 1, 2015.

[d] The federal annual standard of 12.0 μg/m³ was lowered to 9.0 μg/m³ on February 7, 2024.

[e] The annual and 24-hour national ambient air quality standards for sulfur dioxide only apply for 1 year after designation of the new 1-hour standard to those areas that were previously nonattainment for 24-hour and annual national ambient air quality standards.

[f] The California ambient air quality standards for visibility-reducing particles is defined by an extinction coefficient of 0.23 per kilometer: visibility of 10 miles or more due to particles when relative humidity is less than 70%.

* ppm = parts per million.

** μg/m³ = micrograms per cubic meter.

Nonroad Diesel Rule

USEPA established a series of increasingly strict emission standards for new off-road diesel equipment, on-road diesel trucks, and harbor craft. New construction equipment used to implement the proposed project, including heavy-duty trucks and off-road construction equipment, will be required to comply with the emission standards.

Vehicle Emission Standards

The National Highway Traffic Safety Administration (NHTSA) and USEPA set corporate average fuel economy (CAFE) standards for passenger cars and light trucks (collectively, light-duty vehicles) and separately sets fuel consumption standards for medium- and heavy-duty trucks and engines. CAFE standards require an industry-wide fleet average of approximately 49 miles per gallon for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8% annually for model years 2024 and 2025, and 10% annually for model year 2026. Phase 2 of the *Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles* applies to medium- and heavy-duty vehicle model years 2019 through 2027.

On April 12, 2023, USEPA proposed two new federal vehicle standards that will build on the existing CAFE and Phase 2 standards. The *Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles* proposes more stringent emission standards for light-duty and medium-duty vehicles for model years 2027 through 2032 and accelerates the deployment of electric and clean vehicles. The *Greenhouse Gas Standards for Heavy-Duty Vehicles—Phase 3* establishes fleet mix performance standards for vocational vehicles (e.g., delivery trucks) and trucks typically used to haul freight.

Radon Action Level

There are no current state or federal regulations related to permissible exposure levels for radon. However, USEPA has recommended an indoor action level for radon exposure, which is 4 picocurie[1] per liter (pCi/L). In existing homes with radon levels of more than 4 pCi/L, USEPA recommends taking corrective measures to reduce exposure to radon gas. Although USEPA has developed an action level of 4 Ci/L for radon exposure, there is no known safe level of exposure to radon (USEPA 2014).

State Regulations

California Clean Air Act and California Ambient Air Quality Standards

In 1988, the state legislature adopted the California Clean Air Act (CCAA), which established a statewide air pollution control program. CCAA requires all air districts in the state to endeavor to meet the CAAQS by the earliest practical date. Unlike the federal CAA, the CCAA does not set precise attainment deadlines. Instead, the CCAA establishes increasingly stringent requirements for areas that will require more time to achieve the standards. CAAQS are generally more stringent than the NAAQS and incorporate additional standards for sulfates (SO_4), hydrogen sulfide (H_2S), vinyl chloride (C_2H_3Cl), and visibility-reducing particles. The CAAQS and NAAQS are listed together in Table 3.2-1.

CARB and local air districts bear responsibility for achieving California's air quality standards, which are to be achieved through district-level air quality management plans that would be incorporated into the SIP. In California, USEPA has delegated authority to prepare SIPs to CARB, which, in turn, has delegated that authority to individual air districts. CARB traditionally has established state air quality standards, maintaining oversight authority in air quality planning, developing programs for

[1] A *picocurie* (pCi) is a measure of the rate of radium decay, or radiation. Radium decays at a rate of about 2.2 trillion disintegrations (2.2x1012) per minute. Thus, a picocurie represents 2.2 disintegrations per minute.

reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological data, and approving SIPs.

The CCAA substantially adds to the authority and responsibilities of air districts. The CCAA designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures. The CCAA also emphasizes the control of "indirect and area-wide sources" of air pollutant emissions. The CCAA gives local air pollution control districts explicit authority to regulate indirect sources of air pollution and to establish traffic control measures.

Vehicle Efficiency and Zero-Emissions Standards

AB 1493 (Pavley I) required CARB to develop and implement regulations to reduce automobile and light-truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with model year 2009. In 2012, additional strengthening of the Pavley standards (referred to as the Advanced Clean Cars measure) was adopted for vehicle model years 2017 through 2025. Together, the two standards are expected to increase average fuel economy to roughly 54.5 miles per gallon in 2025.

In August 2022, CARB Board members voted to approve the Advanced Clean Cars II proposal, which will dramatically reduce emissions from passenger cars for model years 2026 through 2035. This requires an increasing proportion of new vehicles to be zero-emission vehicles, with the goal of 100% zero-emission vehicles for new vehicles sold by 2035.

CARB also adopted the Advanced Clean Truck Regulation to accelerate a large-scale transition of zero-emission medium- and heavy-duty vehicles. The regulation requires the sale of zero-emission medium- and heavy-duty vehicles as an increasing percentage of total annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales would need to be 55% of Class 2b and 3 truck sales, 75% of Class 4 through 8 straight truck sales, and 40% of truck tractor sales. By 2045, every new medium- and heavy-duty truck sold in California will be zero-emission. Large employers, including retailers, manufacturers, brokers, and others, are required to report information about shipments and shuttle services to better ensure that fleets purchase available zero-emission trucks.

Carl Moyer Program Air Quality Standards Attainment Program

The Carl Moyer Memorial Air Quality Standards Attainment Program (Carl Moyer Program) is a voluntary program that offers grants to owners of heavy-duty vehicles and equipment. The program is a partnership between CARB and the local air districts throughout the state to reduce air pollution emissions from heavy-duty engines. Locally, the air districts administer the Carl Moyer Program.

Toxic Air Contaminant Regulation

California regulates toxic air contaminants (TACs) primarily through the Toxic Air Contaminant Identification and Control Act (Tanner Act) and the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (Hot Spots Act). In the early 1980s, CARB established a statewide comprehensive air toxics program to reduce exposure to air toxics. The Tanner Act created California's program to reduce exposure to air toxins. The Hot Spots Act supplements the Tanner Act by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks.

CARB has identified diesel particulate matter (DPM) as a TAC and approved a comprehensive Diesel Risk Reduction Plan to reduce emissions from both new and existing diesel-fueled engines and vehicles. The plan identifies 14 measures that target new and existing on-road vehicles (e.g., heavy-duty trucks and buses), off-road equipment (e.g., graders, tractors, forklifts, sweepers, boats), portable equipment (e.g., pumps), and stationary engines (e.g., stand-by power generators). The Tanner Act sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB designates a substance as a TAC. To date, CARB has identified 21 TACs and has also adopted the USEPA's list of hazardous air pollutants (HAPs) as TACs.

Local Regulations

El Dorado County General Plan

The *Public Health, Safety, and Noise Element* of the *El Dorado County General Plan* (General Plan) (El Dorado County 2004) includes the following goals, objectives, and policies regarding air quality. The full text of these goals, objectives, and policies can be found in Appendix B of the Draft EIR, which provides an analysis of the proposed project's consistency with County General Plan policies as required under State CEQA Guidelines Section 15125.

- **Goal 6.7, *Air Quality Maintenance***, strives to achieve and maintain ambient air quality standards that USEPA and CARB established and minimize public exposure to toxic or hazardous air pollutants and air pollutants that create unpleasant odors. This goal includes the following objectives.
    - **Objective 6.7.2, *Vehicular Emissions***, and implementing Policy 6.7.2.5, which encourages use of and facilities for alternative-fuel vehicles, including low-emission vehicles used in construction.
    - **Objective 6.7.4, *Project Design and Mixed Uses***, and implementing Policies 6.7.4.1, 6.7.4.2, and 6.7.4.4, which encourage project design that protects air quality and minimizes direct and indirect emissions of air contaminants.
    - **Objective 6.7.6, *Air Pollution-Sensitive Land Uses***, and implementing Policies 6.7.6.1 and 6.7.6.2, which direct that air pollution-sensitive land uses be separated by significant sources of air pollution.
    - **Objective 6.7.7, *Construction-Related, Short-Term Emissions***, and implementing Policy 6.7.7.1, which requires that short-term construction, long-term operations, and toxic and odor-related impacts be evaluated in accordance with EDCAQMD CEQA Guidelines and feasible mitigation developed for such impacts.

In addition, the *Public Health, Safety, and Noise Element* includes the following goal that addresses naturally occurring asbestos (NOA).

- **Goal 6.3, *Geologic and Seismic Hazards***, addresses minimizing threats to life and property from geologic hazards, such as NOA, through evaluation of NOA hazards and includes Objective 6.3.1, *Building and Site Standards*, and implementing Policies 6.3.1.1, 6.3.1.2, and 6.3.3.3.
    - **Policy 6.3.1.1** requires that all discretionary projects and all projects requiring a grading permit, or a building permit that would result in earth disturbance, that are located in areas likely to contain NOA retain a California-registered geologist knowledgeable about asbestos-

containing formations to inspect the project area for the presence of asbestos using appropriate test methods.

El Dorado County Code

The following code addresses NOA.

- **Chapter 8.44 of the County Code**, including Sections 8.44.030 (General Requirements for Grading, Excavation and Construction Activities), 8.44.050 (General Procedures for Abatement and Penalties), and 8.44.060 (Real Estate Transfer Disclosure). The requirements and enforcement that these codes provide would apply to the proposed project and the mitigation adopted herein.

El Dorado County Air Quality Management District

At the local level, responsibilities of air quality districts include overseeing stationary-source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality–related sections of environmental documents required by CEQA. The air quality districts are also responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws and ensuring that NAAQS and CAAQS are met.

The proposed project falls under the jurisdiction of EDCAQMD, which has local air quality jurisdiction over projects in El Dorado County. EDCAQMD has adopted advisory emission thresholds to assist CEQA lead agencies in determining the level of significance of a project's emissions, which are outlined in its *Determining Significance of Air Quality Impacts under the California Environmental Quality Act* (CEQA Guidelines) (EDCAQMD 2002). EDCAQMD has also adopted the *Sacramento Regional 2015 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (2015 Ozone Plan) (EDCAQMD et al. 2023). Air districts within the Sacramento Federal Nonattainment Area (SFNA) developed the 2015 Ozone Plan,[2] which outlines how the SFNA will meet the 70 parts per billion (ppb) 8-hour ozone NAAQS.

In addition to air quality plans, EDCAQMD also adopts rules and regulations to improve existing and future air quality. The following rules are most pertinent to the proposed project.

- **Rule 202, *Visible Emissions***. Limits emissions that are darker in shade than No. 1 on the Ringelmann Chart, or of such opacity as to obscure an observer's view to a degree equal to or greater than smoke.
- **Rule 205, *Nuisance***. Prohibits discharge of air contaminants or other material that 1) cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; 2) endanger the comfort, repose, health, or safety of any such persons or the public; or 3) cause, or have a natural tendency to cause, injury, or damage to business or property.
- **Rule 207, *Particulate Matter***. Limits particulate matter (PM) emissions in excess of 0.1 grains per cubic foot of dry exhaust gas.

[2] The SFNA includes Sacramento and Yolo counties, the western portion of El Dorado and Placer counties, the southern portion of Sutter County, and the northeastern portion of Solano County. Air districts in SFNA consist of the Sacramento Metropolitan Air Quality Management District (SMAQMD) and Yolo–Solano Air Quality Management District, as well as parts of EDCAQMD, Placer County Air Pollution Control District, and Feather River Air Quality Management District.

- **Rule 215, *Architectural Coatings***. Specifies volatile organic compound (VOC) content limits for architectural coatings applied within El Dorado County.
- **Rule 223-1, *Fugitive Dust***. Limits fugitive-dust emissions from construction and construction-related activities. The rule requires submission of a detailed fugitive-dust control plan to EDCAQMD prior to the start of any construction activity for which El Dorado County issued a grading permit.
- **Rule 223-2, *Asbestos Hazard Mitigation***. Requires that an asbestos dust mitigation plan must be prepared, submitted, approved, and implemented when more than 20 cubic yards of earth will be moved at all sites identified as being in Asbestos Review Areas, as shown on the EDCAQMD's *El Dorado County Naturally Occurring Asbestos Review Map*.
- **Rule 224, *Cutback Asphalt Paving Material***. Specifies VOC content limits for cutback asphalt.
- **Rule 233, *Stationary Internal Combustion Engines***. Limits nitrogen oxides (NO_X) and carbon monoxide (CO) emissions from stationary internal combustion engines.

Environmental Setting

Climatological conditions, topography, and the types and amounts of pollutants emitted all affect ambient air quality. The following sections summarize how air pollution moves through the air, water, and soil within the air basin and how it is chemically changed in the presence of other chemicals and particles. This section also summarizes local climate conditions, existing air quality conditions, and sensitive receptors that project-generated emissions may affect.

Regional Climate and Meteorology

The primary factors that contribute to overall air quality are the locations of air pollutant sources and the amount of pollutants emitted from those sources. Meteorological conditions and topography are also important contributing factors. Atmospheric conditions, such as wind speed, wind direction, and air temperature gradients, interact with the physical features of the landscape to direct the movement and dispersal of air pollutants.

California is divided into 15 air basins based on geographic features that create distinctive regional climates. The proposed project's air quality study area is in the MCAB, which lies along the northern Sierra Nevada, close to or contiguous with the California–Nevada state line, and covers roughly 11,000 square miles. Elevations range from over 10,000 feet at the Sierra Nevada crest down to several hundred feet above sea level at the Sacramento County boundary. Throughout El Dorado County, the topography is highly variable and includes rugged mountain peaks and valleys with extreme slopes and altitude differences in the Sierra Nevada and rolling foothills to the west. The western slope of El Dorado County, from the Tahoe Basin rim on the east to the Sacramento County boundary on the west, lies within the MCAB.

The general climate of the MCAB varies considerably with elevation and proximity to the Sierra Nevada crest. The MCAB's terrain features enable various climates to occur in relatively close proximity. The pattern of mountains and hills causes a wide variation in rainfall, temperature, and localized winds throughout the MCAB. Temperature variations have an important influence on basin wind flow, dispersion along mountain ridges, vertical mixing, and photochemistry.

The Sierra Nevada receives large amounts of precipitation from storms moving in from the Pacific Ocean in the winter, with lighter amounts from intermittent monsoonal moisture flows from the

south and cumulus buildup during the summer. Precipitation levels are high in the highest mountain elevations but decline rapidly toward the western portion of the basin. Winter temperatures in the mountains can be below freezing for weeks at a time, and substantial depths of snow can accumulate. In the western foothills, however, winter temperatures usually dip below freezing only at night, and precipitation is mixed as rain or light snow. In the summer, temperatures in the mountains are mild, with daytime peaks in the 70s to low 80 degrees Fahrenheit (°F), but the lower elevations in western portions of the county can routinely exceed 100°F.

The topography and meteorology of the MCAB combine such that local conditions predominate in directing the effect of emissions in the basin. The mountains and hills affect regional airflows by hindering dispersion, directing surface air flows, causing shallow vertical mixing, and creating areas of high pollutant concentrations. Inversion layers (where warm air overlays cooler air) frequently form and trap pollutants close to the ground. In the winter, these conditions can lead to elevated CO concentrations, known as *hot spots*, along heavily traveled roads and at busy intersections.

During longer daylight hours in summer, stagnant air, high temperatures, and plentiful sunshine provide the conditions and energy for the photochemical reaction between reactive organic compounds (ROG) and NO_X (i.e., ozone precursors) that results in the formation of ozone. In the summer, the strong upwind valley air flowing into the basin from the Central Valley to the west is an effective transport medium for ozone precursors and ozone generated in the San Francisco Bay Area and the Sacramento and San Joaquin valleys to flow into the MCAB. These transported pollutants are the predominant cause of ozone in the MCAB and are largely responsible for exceedances of the federal and state ozone standards in the MCAB. CARB has officially designated the MCAB as "ozone impacted" by transport from those areas (Title 17 California Code of Regulations [CCR] § 70500).

Criteria Pollutants of Concern

As discussed above, the federal and state governments have established NAAQS and CAAQS, respectively, for six criteria pollutants: ozone, CO, lead (Pb), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and PM, which consists of PM 10 microns in diameter or less (PM10) and PM 2.5 microns in diameter or less (PM2.5). Ozone is considered a regional pollutant because its precursors combine to affect air quality on a regional scale. Pollutants such as CO, NO_2, SO_2, and Pb are considered local pollutants that tend to accumulate in the air locally. PM is both a local and a regional pollutant. The primary criteria pollutants of concern that would be generated by the VMVSP are ozone precursors (ROG and NO_X), CO, and PM.[3, 4] Principal characteristics surrounding these pollutants are described below.

All criteria pollutants can result in human-health and environmental effects at certain concentrations. The ambient air quality standards for these pollutants (Table 3.2-1) have been established to protect public health and the environment within an adequate margin of safety (CAA § 109). Epidemiological, controlled human exposure, and toxicology studies evaluate potential health and environmental effects of criteria pollutants and form the scientific basis for new and revised ambient air quality standards.

[3] As discussed above, there are also ambient air quality standards for SO_2, Pb, sulfates, hydrogen sulfide, vinyl chloride, and visibility particulates. However, these pollutants are typically associated with industrial sources, which are not included as part of the project. Accordingly, they are not evaluated further.

[4] Most emission of NO_X are in the form of nitric oxide (Reşitoğlu 2018). Conversion to NO_2 occurs in the atmosphere as pollutants disperse downwind. Accordingly, NO_2 is not considered a local pollutant of concern for the proposed project and is not evaluated further.

Principal characteristics and possible health and environmental effects from exposure to the primary criteria pollutants the proposed project may generate are discussed below.

Ozone

Ozone, or smog, is photochemical oxidant formed when ROGs and NO_X (both by-products of the internal combustion engine) react with sunlight. ROGs are compounds primarily composed of hydrogen and carbon atoms. Internal combustion associated with motor-vehicle usage is the major source of hydrocarbons. Other sources of ROGs include emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products, such as aerosols. The two major forms of NO_X are nitric oxide (NO) and NO_2. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion occurs under high temperatures and/or high pressure. NO_2 is an irritating, reddish-brown gas formed by the combination of NO and oxygen. In addition to serving as an integral participant in ozone formation, NO_X also directly acts as an acute respiratory irritant and increases susceptibility to respiratory pathogens by causing impairments to the immune system.

Ozone poses a higher risk to those who already suffer from respiratory diseases (e.g., asthma), children, older adults, and people who are active outdoors. Exposure to ozone at certain concentrations can make breathing more difficult, cause shortness of breath and coughing, inflame and damage the airways, aggregate lung diseases, increase the frequency of asthma attacks, and cause chronic obstructive pulmonary disease. Studies show associations between short-term ozone exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest that long-term exposure to ozone may increase the risk of respiratory-related deaths (USEPA 2018a). The concentration of ozone at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding no symptoms to the least responsive individual after a 2-hour exposure to 400 ppb of ozone and a 50% decrement in forced airway volume in the most responsive individual. Although the results vary, evidence suggests that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum ozone concentration reaches 80 ppb (USEPA 2016).

In addition to human-health effects, ozone has been tied to crop damage, typically in the form of stunted growth, leaf discoloration, cell damage, and premature plant death. Ozone can also act as a corrosive and oxidant, resulting in property damage, such as the degradation of rubber products.

Carbon Monoxide

CO is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. In the study area, high CO levels are of greatest concern during the winter, when periods of light winds combine with the formation of ground-level temperature inversions from evening through early morning. These conditions trap pollutants near the ground, reducing the dispersion of vehicle emissions. Moreover, motor vehicles exhibit increased CO emission rates at low air temperatures. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation. Exposure to CO at high concentrations can also cause fatigue, headaches, confusion, dizziness, and chest pain. No ecological or environmental effects are associated with ambient CO (CARB 2016b).

Particulate Matter

PM consists of finely divided solids or liquids, such as soot, dust, aerosols, fumes, and mists. Two forms of particulates are currently generally considered: PM_{10} and $PM_{2.5}$. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind on arid landscapes also contributes substantially to local particulate loading.

Particulate pollution can be transported over long distances, and both PM_{10} and $PM_{2.5}$ may adversely affect human health, especially for people who are naturally sensitive or susceptible to breathing problems. Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms. In 2008, CARB estimated that annual $PM_{2.5}$ emissions for the entire Sacramento metropolitan area[5] causes 90 premature deaths, 20 hospital admissions, 1,200 asthma and lower respiratory symptom cases, 110 acute bronchitis cases, 7,900 lost workdays, and 42,000 minor restricted activity days (SMAQMD 2013). Depending on composition, both PM_{10} and $PM_{2.5}$ can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain (USEPA 2018b).

Existing Air Quality Conditions

CARB collects ambient air quality data through a network of air-monitoring stations throughout the state. In El Dorado County, three stations record ozone levels, and one station records PM10 levels. No monitoring stations in the County collect data on PM2.5 or NO_2. The closest ozone-monitoring station is the Placerville–Gold Nugget Way station, which is approximately 11 miles east of the project area. The PM10 monitoring station is in the Lake Tahoe Air Basin (LTAB) portion of El Dorado County. Given the distinct meteorological conditions in the LTAB, which can influence pollutant concentrations, PM10 data from the Sacramento–Branch Center Road monitoring station in Sacramento County,[6] approximately 20 miles west of the project area, are used as representative data for the project area. PM2.5 and NO_2 data are from the Folsom–Natoma Street station, also in Sacramento County.

Table 3.2-2 summarizes ozone and PM10 levels for the last 3 years for which complete data are available (i.e., 2020–2022). As shown in Table 3.2-2, the Placerville–Gold Nugget Way station has experienced frequent violations of the ozone standards. At least 10 violations of the state 24-hour PM_{10} standard were recorded at the Sacramento–Branch Center Road station in 2020, 4 violations in 2021, and 1 violation in 2020; 10 violations of the PM2.5 standard were recorded at the Folsom–Natoma Street station in 2021 and 2 violations in 2022. No violations of the NO_2 standards were recorded at the Folsom–Natoma Street station over the past 3 years. As discussed above, the CAAQS and NAAQS represent concentration limits of criteria air pollutants needed to adequately protect human health and the environment. Existing violations of the ozone and PM ambient air quality standards indicate that certain individuals exposed to this pollutant may experience certain health effects, including increased incidence of acute and chronic cardiovascular and respiratory ailments.

[5] The Sacramento metropolitan area includes Sacramento and Yolo counties and portions of Placer, Solano, and El Dorado counties.

[6] Sacramento County is in the Sacramento Valley Air Basin, which borders the MCAB to the west.

Table 3.2-2. Ambient Criteria Air Pollutant Monitoring Data (2020–2022)

Pollutant Standards	2020	2021	2022
Ozone (O_3)			
Maximum 1-hour concentration (ppm)	0.127	0.090	0.062
Maximum 8-hour concentration (ppm)	0.101	0.080	0.056
Number of Days Standard Exceeded [a]			
CAAQS 1-hour (>0.09 ppm)	4	0	0
CAAQS 8-hour (>0.070 ppm)	20	10	0
NAAQS 8-hour (>0.075 ppm)	20	10	0
Particulate Matter (PM_{10}) [c]			
National maximum 24-hour concentration (µg/m³) [b]	201.0	57.0	55.0
National second-highest 24-hour concentration (µg/m³) [b]	109.0	56.0	49.0
State maximum 24-hour concentration (µg/m³) [c]	203.0	58.0	54.0
State second-highest 24-hour concentration (µg/m³) [c]	109.3	56.0	49.0
National annual average concentration (µg/m³)	33.2	24.2	21.8
State annual average concentration (µg/m³)	–	24.8	22.3
Number of Days Standard Exceeded [a]			
NAAQS 24-hour (>150 µg/m³)	7	0	0
CAAQS 24-hour (>50 µg/m³)	10	4	1
Particulate Matter ($PM_{2.5}$)			
National maximum 24-hour concentration (µg/m³) [b]	19.6	265.7	73.0
National second-highest 24-hour concentration (µg/m³) [b]	19.3	133.0	64.2
State maximum 24-hour concentration (µg/m³) [c]	21.5	265.7	73.5
State second-highest 24-hour concentration (µg/m³) [c]	19.6	133.0	64.3
National annual average concentration (µg/m³)	–	10.3	6.3
State annual average concentration (µg/m³)	–	9.3	7.3
Number of days standard exceeded [a]			
NAAQS 24-hour (>35 mg/m³)	0	10	2
Nitrogen Dioxide (NO_2)			
National maximum 1-hour concentration (ppm) [b]	–	14.0	23.0
State maximum 1-hour concentration (ppm) [c]	–	14	23
State annual average concentration (ppm) [c]	–	13	20
Number of Days Standard Exceeded [a]			
NAAQS 1-hour (98th percentile >0.100 ppm)	0	0	0
CAAQS 1-hour (0.18 ppm)	0	0	0

Source: CARB 2023a.

[a] Mathematical estimate of how many days concentrations would have been measured as higher than the level of the standard had each day been monitored. Values have been rounded. An exceedance of a standard is not necessarily a violation because each pollutant has specific criteria on which a violation of the federal and state standards would occur.

[b] National statistics are based on standard conditions data and samplers using federal reference or equivalent methods.

[c] State statistics are based on local conditions data, except in the South Coast Air Basin, for which statistics are based on standard conditions data. In addition, state statistics are based on California-approved samplers.

"–" = data not available; µg/m³ = micrograms per cubic meter; CAAQS = California Ambient Air Quality Standards; mg/m³ = milligrams per cubic meter; NAAQS = national ambient air quality standards; ppm = parts per million.

Attainment Status

Local monitoring data (Table 3.2-2) are used to designate areas as nonattainment, maintenance, attainment, or unclassified for the NAAQS and CAAQS. The four designations are defined as follows.

- **Nonattainment**. Assigned to areas where monitored pollutant concentrations consistently violate the standard in question.
- **Maintenance**. Assigned to areas where monitored pollutant concentrations exceeded the standard in question in the past but are no longer in violation of that standard.
- **Attainment**. Assigned to areas where pollutant concentrations meet the standard in question over a designated period of time.
- **Unclassified**. Assigned to areas where data are insufficient to determine whether a pollutant is violating the standard in question.

Table 3.2-3 summarizes the attainment status of the project area with regard to the NAAQS and CAAQS.

Table 3.2-3. Federal and State Attainment Status for the Project Area

Criteria Pollutant	Federal Designation	State Designation
O_3 (8-hour)	Serious nonattainment (P) [a]	Nonattainment
CO	Attainment	Unclassified
PM_{10}	Attainment	Nonattainment
$PM_{2.5}$	Moderate nonattainment (P)	Unclassified
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	(No federal standard)	Attainment
Hydrogen Sulfide	(No federal standard)	Unclassified
Visibility-reducing Particles	(No federal standard)	Unclassified

Source: CARB 2023b; USEPA 2024.

[a] (P) Designation applies to the project area portion of El Dorado County.

CO = carbon monoxide; O_3 = ozone; PM_{10} = particulate matter less than or equal to 10 microns; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns; NO_2 = nitrogen dioxide; SO_2 = sulfur dioxide.

Toxic Air Contaminants

Although ambient air quality standards have been established for criteria pollutants, no ambient standards exist for TACs. Many pollutants are identified as TACs because of their potential to increase the risk of developing cancer or because of their acute or chronic health risks. For TACs that are known or suspected carcinogens, CARB has consistently found that there are no levels or thresholds below which exposure is risk-free. Individual TACs vary greatly in the risks they present. At a given level of exposure, one TAC may pose a hazard that is many times greater than another. The California Office of Environmental Health Hazard Assessment identifies TACs and studies their toxicity. The primary TACs of concern associated with the proposed project are DPM and asbestos, both of which are discussed below.

Diesel Particulate Matter

DPM is generated by diesel-fueled equipment and vehicles. CARB estimates that DPM emissions are responsible for about 70% of the total ambient air toxics risk (CARB 2000). Short-term exposure to DPM can cause acute irritation (e.g., eye, throat, bronchial), neurophysiological symptoms (e.g., lightheadedness, nausea), and respiratory symptoms (e.g., cough, phlegm). USEPA (2002) has determined that diesel exhaust is "likely to be carcinogenic to humans by inhalation."

The closest proposed residential unit in the project area is approximately 330 feet south of U.S. Highway 50 (US 50), which is a heavily traveled roadway and a source of DPM. Based on data from SMAQMD (2023), the existing cancer risk at 330-feet south of US 50, which is the distance to the closest proposed residential land use, is 32 per million.[7]

Asbestos

Asbestos is the name given to a number of naturally occurring fibrous silicate minerals that have mined for applications requiring thermal insulation, chemical and thermal stability, and high tensile strength. Before the adverse health effects of asbestos were identified, it was widely used as insulation and fireproofing in buildings, and asbestos can still be found in some older buildings. It is also found in its natural state in rock or soil (i.e., NOA).

Exposure and disturbance of rock and soil that contain asbestos can result in the release of fibers to the air and consequent exposure to the public. Asbestos can result in a human-health hazard when airborne. The inhalation of asbestos fibers into the lungs can result in a variety of adverse health effects, including inflammation of the lungs, respiratory ailments (e.g., asbestosis, which is scarring of lung tissue that results in constricted breathing), and cancer (e.g., lung cancer and mesothelioma, a cancer of the linings of the lungs and abdomen). NOA most commonly occurs in ultramafic rock (i.e., igneous and metamorphic rock with low silica content) that has undergone partial or complete alteration to serpentine rock (or serpentinite) and often contains chrysotile asbestos. Another form of asbestos, tremolite, is associated with ultramafic rock, particularly near geologic faults. Bands of NOA, trending in a north–south direction, occur in western El Dorado County in the general vicinities of Georgetown and El Dorado Hills (California Department of Conservation 2000). Construction activities in ultramafic rock deposits may be a source of asbestos emissions if NOA is present.

As shown in Figure 3.2-1, portions of the project lie within areas known to contain NOA. Youngdahl Consulting Group completed an assessment of NOA for the proposed development. Traces (less than 0.25%) of NOA were found in 4 of 48 samples of rock and soil collected from test pits in the project area (Youngdahl Consulting Group 2012). Geological conditions were identified for some areas of the VMVSP that could indicate a higher likelihood for NOA.

Radon

Although not a TAC, nor USEPA-, CARB-, or EDCAQMD-regulated, *radon* is a naturally occurring odorless, tasteless, and invisible radioactive gas formed from the natural decay of uranium in soil, rock, and water. Typical exposure is from inhalation of radon as it moves up through the ground into

[7] Because the risk-mapping tool only includes data for Sacramento County, values 330-feet south of US 50, at the Sacramento–El Dorado County line, were selected. The corresponding health risks at this location are likely greater than those at the project site because traffic volumes at the county border are greater than at the Bass Lake Road interchange.

the air. Radon can seep into homes through cracks in foundations, walls, and joints (CDPH 2014; USEPA n.d.), and it is estimated the average indoor radon concentration in U.S. homes is approximately 1.3 pCi/L of air, whereas the average outdoor radon concentration is 0.4 pCi/L (USEPA 2014). Prolonged human exposure to radon can lead to lung cancer; USEPA estimates that radon is the second leading cause of lung cancer in the United States and results in approximately 21,000 cancer-related deaths each year (USEPA 2012). Radon exposure is the leading cause of lung cancer among nonsmokers (USEPA n.d.).

Radon is found throughout California because it exists in all soil and rock, although certain areas of the state have higher radon levels than others (CDPH 2014). It is estimated that nearly 1 out of every 15 homes in the United States has elevated radon levels (USEPA 2012). Within El Dorado County, most radon potential is found in the Lake Tahoe area (California Geological Survey 2009), although non-Lake Tahoe areas within the County also have elevated tested levels (California Department of Health Services 2010). Although certain areas within the state and county are more likely to contain higher radon levels than others, the California Department of Public Health (CDPH) notes that radon is a house-to-house issue: a house in an area with low radon potential may have elevated radon levels, but a neighboring house could have low radon levels (CDPH 2014).

As discussed above, neither USEPA nor EDCAQMD has established exposure limits for radon, given that background concentrations vary and are highly dependent on household conditions and site-specific geology. Moreover, because radon is most concentrated in the Lake Tahoe portion of the County, exposure in the project area is not anticipated to represent a substantial concern (e.g., the CDPH radon-sampling database indicates that out of 31 tests, only three reported concentrations in excess of 4 pCi/L). Accordingly, radon is not discussed further in this analysis.

Sensitive Receptors

EDCAQMD generally defines *sensitive receptors* as people, or facilities that generally house people (e.g., schools, hospitals, clinics, elderly housing, residences), who may experience adverse effects from unhealthful concentrations of air pollutants. There are no schools, churches, or medical facilities within 1,000 feet of the project area. The proposed project area is bounded by the Cambridge Oaks residential development to the north, rural residential land uses to the west and south, and the proposed Lime Rock Valley Specific Plan (LRVSP) to the east. The nearest residential receptors are adjacent to the northern and eastern boarders of the project area.

Odors

Although offensive odors rarely cause physical harm, they can be unpleasant and lead to considerable distress among the public, which often generates citizen complaints to local governments and air districts. A project that includes activities that could frequently expose the public to objectionable odors would be deemed as one having a significant impact. According to the EDCAQMD CEQA Guidelines and CARB's *Air Quality and Land Use Handbook* (CARB 2005), land uses associated with odor complaints typically include sewage-treatment plants, landfills, recycling facilities, and manufacturing processes.

The Deer Creek Wastewater Treatment Plant (WWTP) is approximately 0.25 miles from the nearest proposed sensitive land use (single-family homes) in the project area. The Deer Creek WWTP does not have any active odor control systems (e.g., foul air and biofilter facilities) that would help contain odors onsite at the WWTP if they were generated. Consultation with EDCAQMD further indicates that air district staff consider the Deer Creek WWTP problematic with respect to odors,

and that EDCAQMD foresees a likelihood that residents near the Deer Creek WWTP could complain of odors associated with the facility if odor controls are not installed. (Serieh pers. comm.).

Neither EID nor EDCAQMD has received any odor complaints for the Deer Creek WWTP in the past 3 years (Serieh pers. comm). However, the complaint history is not a valid indicator of the likelihood of exposure of new residences to nuisance odors because there are only a few existing scattered residential receptors within 1,500 feet of the WWTP.

In 1998, in conjunction with revising its National Pollutant Discharge Elimination System permit for a 3.6-million-gallon-per-day (mgd) plant, El Dorado Irrigation District (EID) prepared and certified an environmental impact report (EIR) that evaluated the environmental impacts of constructing and operating the 3.6-mgd-capacity plant. The EIR also evaluated potential expansion to an ultimate capacity of 10.8 mgd. Along with other mitigation measures to address environmental effects, EID adopted mitigation measures to address the potential for odor generated as a result of its operations. The odor-related mitigation measures require that EID implement an odor complaint monitoring program, install odor control mechanisms in response to odor generation problems or future potential odor complaints, and comply with regulatory requirements regarding odor control (El Dorado Irrigation District 1998). An updated odor study was recently conducted for the WWTP and the results are currently being analyzed for the next course of action, including specific odor control strategies (Serieh pers. comm).

3.2.2 Environmental Impacts

This section describes the impact analysis related to air quality for the proposed project, describes the methods used to determine the impacts of the proposed project, and lists the thresholds used to conclude whether an impact would be significant. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion.

Methods of Analysis

This section was partially based on the Air Quality and Greenhouse Gas Modeling Technical Report for the Village of Marble Valley Specific Plan (Air Quality and GHG Technical Report) (Ascent 2024), which is provided in Appendix C-2. Please refer to the Air Quality and GHG Technical Report for further information on the emissions quantification and analysis method used in this analysis.

Construction Emissions

Construction of the proposed project would generate emissions of ROG, NO_X, CO, PM_{10}, and $PM_{2.5}$ that would temporarily change ambient air quality in the study area. Emissions would originate from mobile and stationary construction-equipment exhaust, employee-vehicle exhaust, dust from land clearing, and application of architectural coatings. Although it is not possible to develop a refined construction inventory without specific project-level details,[8] criteria pollutant emissions from construction of development that would be supported by the proposed project were estimated using the California Emissions Estimator Model (CalEEMod), version 2022.1.

Modeling inputs included project-specific land use types and sizes and construction phasing, timing, and activities included in Chapter 2, *Project Description*, and summarized in the Air Quality and GHG

[8] Project-level information includes details such as the size and scale of the project to be constructed, construction schedule, equipment fleet, construction worker-crew estimates, and demolition and grading quantities.

Technical Report (Appendix C-2). Model defaults for all other assumptions were used for construction emissions modeling. Buildout of the proposed project was assumed to occur over an extended period, beginning in 2025, with full buildout anticipated around 2045.

Although mass emissions generated during construction of the proposed project have been estimated, the potential for construction DPM emissions to expose sensitive receptors to substantial health risks was evaluated qualitatively based on the types of DPM-generating equipment (e.g., heavy-duty equipment) expected during project construction. Accurately quantifying DPM concentrations and predicting associated health risks (e.g., excess cancer cases) requires detailed, site-specific information about the locations of specific construction activity. Given the preliminary level of design available at this time, the inventory of construction-generated DPM was prepared based on generalized project information and model defaults. Specific details about the timing and locations of individual equipment and vehicles are currently unavailable, and, as such, a quantitative health-risk assessment was not possible.

Operational Emissions

Operation of the proposed project would generate emissions of ROG, NO_X, CO, PM_{10}, and $PM_{2.5}$ that could result in long-term changes to ambient air quality. Three types of air pollutant sources are expected during occupancy of the VMVSP: mobile, area, and energy. *Mobile sources* are sources of emissions from motor-vehicle trips associated with the future land uses. *Area sources* include emissions from landscaping activities, consumer products (e.g., personal care products), and periodic paint and architectural coatings emissions from facility upkeep. *Energy-source* emissions originate from natural-gas combustion utilized for heating and cooking requirements.

Operational emissions were estimated with CalEEMod, version 2022.1, using a combination of project-specific information and model defaults. Modeling inputs included land use types, sizes, and other project details (e.g., vehicle miles traveled [VMT]), as described in the Air Quality and GHG Technical Report (Appendix C-2). Modeling was conducted under the assumption that project operations would start in 2027 and reach full buildout around 2045.

The analysis of localized CO impacts was conducted using the CARB's EMFAC2021 model, CALINE4 dispersion model, and evening peak-hour traffic data in the transportation impact assessment (Appendix L). Buildout traffic conditions were modeled to evaluate CO hot-spot concentrations at four study area intersections. Receptors were placed 9.8 feet from the traveled way at each intersection corner. A standard receptor elevation of 5.9 feet was used, consistent with CO-protocol guidance (Garza et al. 1997). Worst-case wind angles and meteorological conditions were modeled to estimate conservative CO concentrations at each receptor. Pursuant to consultation with EDCAQMD staff, CO concentrations from EDCAQMD's 2002 *Guide to Air Quality Assessment, Determining Significance of Air Quality Impacts Under the California Environmental Quality Act* (EDCAQMD CEQA Guidelines) were used to define background CO levels because no monitoring stations in El Dorado County collect CO data (Baughman pers. comm.).

The potential for operational DPM emissions to expose sensitive receptors to substantial health risks was evaluated qualitatively based on the types of DPM-generating equipment expected to be used during project operations.

Other Air Quality Considerations Disclosed for Informational Purposes

The California Supreme Court's holding in California Building Industry Assoc. v. Bay Area Air Quality Management District (2015) 62 Cal.4th 369 (CBIA v. BAAQMD) clarified the reduced scope of what is an environmental impact under CEQA. The California Building Industry Association challenged the Bay Area Air Quality Management District's (BAAQMD) adoption of new CEQA guidance, including thresholds for determining whether a project's exposure to existing levels of TACs would result in a significant impact. The California Supreme Court's review of the case focused on whether CEQA requires "an analysis of how existing environmental conditions will impact future residents or users (receptors) of a proposed project." After reviewing the CEQA statute and State CEQA Guidelines Section 15126.2(a), the California Supreme Court concluded that "CEQA generally does not require an analysis of how existing environmental conditions will impact a project's future users or residents."

The California Supreme Court did not exclude all consideration of existing conditions from CEQA. An agency must "evaluate existing conditions in order to assess whether a project could exacerbate hazards that are already present." In addition, in a footnote, the California Supreme Court explained that CEQA does not prohibit an agency from considering, as part of an environmental review, how existing conditions might affect a project's future users or residents. However, the California Supreme Court stopped short of suggesting that the agency should determine the significance of such impacts and require mitigation. In light of the California Supreme Court's decision, existing air quality conditions that would not be exacerbated by the proposed project are not subject to CEQA analysis.

With respect to the VMVSP environmental analysis, these considerations include future resident exposure to existing radon and odors from the Deer Creek WWTP. These considerations are each discussed below.

Radon

As discussed in the *Environmental Setting*, radon is found throughout California because it exists in all soil and rock. Certain areas, such as the Lake Tahoe area, have higher radon levels than others. Radon is a naturally occurring substance. Outdoors, radon disperses rapidly and is generally not a health concern (USEPA 2022). Most radon exposure occurs indoors when radon enters and concentrates in homes through cracks or other holes in the foundation. The proposed project would not introduce additional material or exacerbate potential public exposure to increased indoor radon levels. Accordingly, exposure to radon is not subject to CEQA analysis under the California Supreme Court's holding in *CBIA v. BAAQMD*, and no mitigation is required. Nevertheless, it should be noted that, because radon is most concentrated in the Lake Tahoe portion of El Dorado County, exposure in the project area is not anticipated to represent a substantial concern. For example, the CDPH radon-sampling database indicates that, out of 31 tests, only three reported concentrations in excess of 4 pCi/L

Ambient Odor from the Deer Creek WWTP

Environmental Management Consulting (1999) analyzed wastewater flow rates at the Deer Creek WWTP to determine whether residents of the Marble Valley Master Plan (the current tentative map) would be exposed to nuisance odors. The study assumed the fully built 10.8-mgd capacity of the Deer Creek WWTP and worst-case odor source strengths and meteorological conditions. The results of the study indicated that six lots, as proposed under the 1998 Marble Valley Master Plan, could

have odor impacts above the CAAQS for hydrogen sulfide. Residents on lots directly adjacent to the plant may detect odors from the facility. The impacts identified by the Environmental Management Consulting study are conservative in that they assumed extremely low mixing meteorological conditions and odor emission rates that are more than three times the estimated peak emissions.

Although odors from the Deer Creek WWTP may be detected in the project area, additional wastewater flows from the project and adjacent VMVSP development would not exacerbate existing odors at the Deer Creek WWTP. The facility currently treats wastewater using preliminary and primary treatment, secondary treatment, and tertiary treatment. Odor problems associated with properly operated WWTPs stem from the quality of wastewater influent; the potential for the project to increase odors is therefore a function of flow. If the proposed project were to decrease flows below current conditions (2.64 mgd), it could decrease odor generation. On the other hand, if the project were to increase flows above the full-build 10.8-mgd capacity, the project could increase odors. The VMVSP would add 0.79 mgd, which when added to existing flows (2.64 mgd), yields a total flow rate of 3.43 mgd.[9] This flow is within the 10.8 mgd fully built scenario and existing 3.6-mgd permitted capacity for the Deer Creek WWTP. Accordingly, implementation of the project would not exacerbate existing odors associated with wastewater treatment at the Deer Creek WWTP (Michael Baker International 2016).

Accordingly, future resident exposure to ambient odors from the existing Deer Creek WWTP are not subject to CEQA analysis under the California Supreme Court's holding in *CBIA v. BAAQMD* and no mitigation is required. However, as discussed in the *Environmental Setting*, EID is subject to the odor control measures identified in previous EIRs and the odor study recently completed for the Deer Creek WWTP.

Correlation of Criteria Pollutants to Potential Human-Health Consequences

The California Supreme Court's decision in *Sierra Club v. County of Fresno* (6 Cal. 5th 502) (hereafter referred to as the *Friant Ranch Decision*) reviewed the long-term regional air quality analysis contained in the EIR for the proposed *Community Plan Update* and *Friant Ranch Specific Plan* (Friant Ranch Project). The Friant Ranch Project is a 942-acre master-plan development in unincorporated Fresno County within the San Joaquin Valley Air Basin, which is currently in nonattainment under the NAAQS and CAAQS for ozone and PM2.5. The California Supreme Court found that the EIR's air quality analysis was inadequate because it failed to provide enough detail "for the public to translate the bare [criteria pollutant emissions] numbers provided into adverse health impacts or to understand why such a translation is not possible at this time." The California Supreme Court's decision clarified that environmental documents must attempt to connect a project's regional air quality impacts on specific health effects or explain why it is not technically feasible to perform such an analysis.

Potential health effects associated with construction and operational criteria pollutants the VMVSP could generate were estimated using SMAQMD's *Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District* (Friant Ranch Guidance) (Ramboll 2020). The Friant Ranch Guidance provides two Microsoft Excel calculators that were developed from photochemical and health-effects modeling of hypothetical projects throughout the SFNA. The Friant Minor Project

[9] When flows from the LRVSP (0.19 mgd) are added to the VMVSP flows (0.79 mgd), the combined flow from both projects (0.98 mgd) plus existing flows would be 3.62 mgd, which is still within the current 3.6-mgd permitted capacity of the facility and would be above the current 2.64-mgd flows and below the maximum 10.8-mgd full build condition (Michael Baker International 2016).

Health Screening Tool provides insights on the health effects that may result from projects emitting NO_X, ROG, and $PM_{2.5}$ at levels at or below 82-pounds per day, which corresponds to the highest daily emissions threshold of all SFNA air districts. The Strategic Area Project Health Screening Tool estimates health effects that may result from projects emitting NO_X, ROG, and $PM_{2.5}$ at levels between 164- and 656-pounds per day and located within one of five strategic growth areas.

Importantly, outputs from SMAQMD's tools only include health effects of NO_X, ROG, and $PM_{2.5}$ that have been researched sufficiently to be quantifiable (Ramboll 2020). These include the following health endpoints.

- Mortality (from all causes)
- Hospital admissions (i.e., respiratory, asthma, cardiovascular)
- Emergency room visits (i.e., asthma/respiratory)
- Acute myocardial infarction (i.e., heart attack, nonfatal)

As noted in SMAQMD's guidance, research has identified other health effects for both $PM_{2.5}$ and ozone precursors (i.e., ROG and NO_X) (Ramboll 2020). For example, exposure to $PM_{2.5}$ at certain concentrations can: alter metabolism, leading to weight gain and diabetes; cause cognitive decline, brain inflammation, or reduced brain volume; and affect gestation, resulting in low birthweight or preterm birth (Ramboll 2020). Likewise, at high enough doses, exposure to ozone can increase lung permeability, increasing susceptibility to toxins and microorganisms (Ramboll 2020). These and other effects (refer to the *Environmental Setting*) have been documented, but a quantitative correlation to project-generated emissions cannot be accurately established based on published studies (Ramboll 2020). Accordingly, these *potential* health effects of project-generated air pollution are qualitatively documented and disclosed.

Thresholds of Significance

Based on State CEQA Guidelines Appendix G, the proposed project would be considered to have a significant effect if it would result in any of the conditions listed below.

- 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 a nonattainment area for an applicable federal or state ambient air quality standard.
- Expose sensitive receptors to substantial criteria pollutant concentrations.
- Result in other emissions (such as those leading to odors) that adversely affect a substantial number of people.

Local Air District Thresholds

According to the State CEQA Guidelines Section 15064.7, the significance criteria that the applicable air quality management or air pollution control district establishes may be relied on to make significance determinations for potential impacts on environmental resources. As described above, EDCAQMD is responsible for ensuring that federal and state ambient air quality standards are not violated within El Dorado County and has developed its own thresholds of significance to evaluate both construction and operational impacts (EDCAQMD 2002). The following section summarizes the local air district thresholds, presents sustainable evidence regarding the basis on which the

thresholds were developed, and describes how they were used to determine whether project construction and operational emissions would result in the following.

- Interfere or impede with attainment of federal or state ambient air quality standards (NAAQS and CAAQS, respectively).
- Cause increased risk to human health.

Attainment of Federal and State Ambient Air Quality Standards

As described in Section 3.2.1, *Existing Conditions*, the western portion of El Dorado County is in the SFNA for ozone. EDCAQMD has adopted ozone-precursor (i.e., ROG and NO_X) thresholds to assist the Sacramento area in reaching attainment status with the federal and state ozone standards. The thresholds, which are described below for both construction and operations, represent levels above which project-generated emissions could affect EDCAQMD's commitment to attain ozone standards in the Sacramento Region (EDCAQMD 2002). Similarly, thresholds for construction-generated fugitive dust and operations-generated CO and PM_{10}, which are the CAAQS, have been adopted to identify projects that could make a substantial contribution to an existing violation of the applicable CAAQS.

Adopted ozone thresholds for construction and operational emissions are described below, as well as thresholds for construction-generated fugitive dust and operations-generated CO and PM_{10}.

Construction-Generated Regional Ozone Precursors[10]

In 2002, EDCAQMD adopted a fuel-based screening threshold for criteria pollutant emissions, where projects with equipment (1996 engine year or newer) that consume less than 402 gallons of fuel per day are considered to have a less-than-significant impact (Resolution 079-2002). Modeling indicates that the proposed project would exceed this screening threshold. Accordingly, EDCAQMD's quantitative threshold of 82 pounds per day is used to evaluate ROG and NO_X emissions. This threshold is combined to obtain a total ozone-precursor threshold of 164 pounds per day. With the combined threshold, emissions of one pollutant may be in excess of 82 pounds per day; however, if the combined total is below 164 pounds per day, then EDCAQMD considers the impact to be less than significant. For example, a project with NO_X emissions of 100 pounds per day and ROG emissions of 20 pounds per day would be considered to have a less-than-significant impact because the combined total would be 120 pounds per day, which is below the combined threshold of 164 pounds per day (Otani pers. comm.).

EDCAQMD's ozone-precursor thresholds were developed to analyze emissions generated by a single project, and thus do not lend well to an evaluation of emissions from a land use plan, like the VMVSP. Large-scale land use plans that consist of numerous individual projects will, by their nature, produce more criteria pollutants than single projects, even if the plans include efficiency measures to reduce emissions. Use of project-level thresholds to evaluate land use plans may therefore unfairly penalize the plans, yielding a significant and unavoidable conclusion simply due to scale. Nevertheless, EDCAQMD's project-level thresholds are used to inform the plan's impacts on air quality.

[10] EDCAQMD CEQA Guidelines indicate that other criteria pollutants (e.g., CO) may result in a significant impact during construction if they exceed federal or state ambient air quality standards. However, the Guidelines (Chapter 4, page 3) also state that if ROG and NO_X emissions are deemed not significant, then exhaust emissions of CO and PM10 from construction equipment and worker commute vehicles may also be deemed not significant.

Construction-Generated Fugitive Dust

According to the EDCAQMD CEQA Guidelines, emissions of fugitive-dust PM_{10} need not be quantified and may be assumed to be not significant if the proposed project includes mitigation measures that prevent visible dust beyond the property lines (EDCAQMD 2002) because mitigation measures that control fugitive-dust emissions can reduce those emissions by approximately 50–75%. However, without mitigation, uncontrolled construction dust could contribute to exceedances of the CAAQS and would be considered a significant impact. Use of the PM10 standard as a surrogate for the assessment of PM2.5 impacts is considered appropriate because PM2.5 is a substituent of PM10.

Operations-Generated Regional Ozone Precursors

EDCAQMD has adopted size thresholds for various land uses to identify projects that would result in operational emissions in excess of EDCAQMD's threshold of 82 pounds per day for ROG and NO_X. Unlike with construction emissions, the 82-pound-per-day threshold for ROG and NO_X cannot be combined for a total ozone threshold. Accordingly, ROG and NO_X emissions associated with project operations must be evaluated separately against the 82-pound-per-day threshold (Otani pers. comm.). Based on the EDCAQMD CEQA Guidelines, the proposed project would exceed the residential screening thresholds (i.e., 230 single-family dwelling units, 350 multifamily dwelling units). Accordingly, EDCAQMD's quantitative threshold of 82 pounds per day is used to evaluate ROG and NO_X emissions.

As noted above, EDCAQMD's ozone-precursor thresholds were developed to analyze emissions generated by a single project, and thus do not lend well to an evaluation of emissions from a land use plan, like the CEDSHP. Nevertheless, EDCAQMD's project-level thresholds are used to inform the plan's impacts on air quality.

Operations-Generated Regional and Local CO and PM10[11]

EDCAQMD considers CO and PM10 emissions significant if they cause or contribute to violations of the NAAQS or CAAQS (EDCAQMD 2002).

Human-Health Concerns

As discussed in Section 3.2.1.2, *Environmental Setting*, all criteria pollutants that the proposed project could generate are associated with some form of health risk (e.g., asthma, lower respiratory problems). Criteria pollutants can be classified as either regional or localized pollutants. *Regional* pollutants can be transported over long distances and affect ambient air quality far from the emissions source. *Localized* pollutants affect ambient air quality near the emissions source. Ozone is considered a regional criteria pollutant, whereas CO, NO_2, SO_2, and Pb are localized pollutants. PM can be both a local and a regional pollutant, depending on its composition. As discussed above, the primary pollutants of concern for the VMVSP are ozone precursors (i.e., ROG and NO_X), CO, PM, and TACs (i.e., DPM and NOA). The following sections discuss thresholds and analysis considerations for regional and local emissions with respect to their human-health implications.

[11] The EDCAQMD's CEQA Guidelines (2002) also consider SO_2, Pb, sulfates, hydrogen sulfide, vinyl chloride, and visibility particulates to be significant if they exceed the federal or state ambient air quality standards. However, these pollutants are typically associated with industrial sources, which are not included as part of the VMVSP. Accordingly, they are not evaluated further.

Regional Project-Generated Criteria Pollutants (Ozone Precursors and Regional PM)

Adverse health effects induced by VMVSP -generated regional criteria pollutant emissions (i.e., ozone precursors and PM) are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). For these reasons, ozone precursors (i.e., ROG and NO_X) contribute to the formation of ground-borne ozone on a regional scale. Emissions of ROG and NO_X generated in one area may not equate to a specific ozone concentration in that same area. Similarly, some types of particulate pollution may be transported over long distances or formed through atmospheric reactions. As such, the magnitude and locations of specific health effects from exposure to increased ozone or regional PM concentrations are the products of emissions generated by numerous sources throughout a region, as opposed to a single individual project. Moreover, exposure to regional air pollution does not guarantee that an individual will experience an adverse health effect: as discussed above, there are large individual differences in the intensity of symptomatic responses to air pollutants. According to the El Dorado Community Health Assessment, approximately 24% of residents in El Dorado County have been diagnosed with asthma (2015–2016 data) and may therefore experience more intense symptomatic responses to air pollution (El Dorado County 2018). However, other variables, including the overall health of individuals and other underlying medical conditions, which cannot be known, strongly influence individual health consequences.

Nonetheless, VMVSP -generated emissions could increase photochemical reactions and the formation of tropospheric ozone and secondary PM, which, at certain concentrations, could lead to increased incidence of specific health consequences, such as various respiratory and cardiovascular ailments. As discussed previously, air districts develop region-specific CEQA thresholds of significance in consideration of existing air quality concentrations and attainment designations under the NAAQS and CAAQS. The NAAQS and CAAQS are informed by a wide range of scientific evidence that demonstrates that there are known safe concentrations of criteria pollutants. Accordingly, the VMVSP would expose receptors to substantial regional pollution if any of EDCAQMD's thresholds summarized above were exceeded.

Localized Project-Generated Criteria Pollutants and Air Toxics

Localized project-generated pollutants are deposited near the emissions source and potentially affect nearby populations. Because these pollutants dissipate with distance, emissions from individual projects can result in direct health impacts on adjacent sensitive receptors. The localized pollutants of concern associated with the VMVSP are DPM,[12] NOA, CO, and PM. The following subsections provide the applicable thresholds for each pollutant.

Diesel Particulate Matter

EDCAQMD has adopted a fuel-based screening threshold for DPM in which projects that consume less than 37,000 gallons of fuel over the construction period are considered to have a less-than-significant

[12] DPM is the primary TAC of concern for mobile sources: of all controlled TACs, emissions of DPM are estimated to be responsible for about 70% of the total ambient TAC risk (CARB 2000). Given the risks associated with DPM, tools and factors for evaluating human-health impacts from project-generated DPM have been developed and are readily available. Conversely, tools and techniques for assessing project-specific health outcomes that result from exposure to other TACs (e.g., benzene) remain limited. These limitations impede the ability to evaluate and precisely quantify potential public health risks posed by TAC exposure.

impact (Resolution 079-2002). Modeling indicates that the proposed project would exceed this screening threshold.

EDCAQMD considers health risks from projects that exceed this screening level to be significant if the lifetime probability of contracting cancer is greater than 10 in 1 million, or if ground-level concentration of noncarcinogenic toxic air contaminants would result in a hazard index (HI)[13] of greater than 1 (with implementation of best-available control technology). The project-level threshold of significance for evaluating DPM generated by a project can also be used to determine whether a project's DPM emissions are cumulatively considerable.

Naturally Occurring Asbestos

If a project does not comply with the applicable regulatory requirements outlined in Rule 223-2 to control NOA, then EDCAQMD considers that project to have a significant impact.

Particulate Matter and Carbon Monoxide

As discussed above, uncontrolled construction dust could contribute to exceedances of the health-protective PM CAAQS and would be considered a significant impact. EDCAQMD likewise considers operational CO and PM emissions significant if they would cause or contribute to violations of the NAAQS or CAAQS. EDCAQMD has also determined that if ROG and NO_X emissions are deemed not significant, then exhaust emissions of CO and PM10 may also be deemed not significant (EDCAQMD 2002). Special consideration should be given to potential CO hot spots associated with increased traffic congestion. CO concentrations from mobile sources in excess of the CAAQS could result in a CO hot spot and would constitute a significant impact (EDCAQMD 2002).

Odors

EDCAQMD recommends that, for projects near a source of odors where there is currently no nearby development and for odor sources located near existing receptors, the determination of significance should be based on the distance and frequency of odor complaints from the public regarding a similar facility.

Impacts and Mitigation Measures

Impact AQ-1: Conflict with or obstruct implementation of the applicable air quality plan (significant and unavoidable)

El Dorado County is currently designated a nonattainment area for the federal 8-hour ozone and $PM_{2.5}$ standards (Table 3.2-3). The applicable air quality plan is the 2015 Ozone Plan, which outlines how the SFNA, including western El Dorado County, will meet the 70 ppb 8-hour ozone NAAQS. The 2015 Ozone Plan estimates future emissions in the SFNA and determines strategies necessary for emissions reductions through regulatory controls. Emissions projections are based on population, vehicle, and land use trends typically developed by the regional air quality management districts (e.g., EDCAQMD, SMAQMD) and metropolitan planning organizations (MPOs), including the SACOG.

[13] The HI represents the sum of hazard quotients for toxics that affect the same target organ or organ system. An HI of 1 or lower means that air toxics are unlikely to cause adverse, noncancerous health effects over a lifetime of exposure.

The EDCAQMD considers projects consistent with the applicable air quality plan if the proposed project satisfies the following criteria.

- Does not require a change in the existing land use designation, such as through a General Plan amendment or rezone.
- Does not exceed EDCAQMD significance thresholds.
- Implements applicable ozone plan emissions-reduction measures.
- Complies with all applicable air district rules and regulations.

Project consistency with each criterion is evaluated below.

Change to Land Use Designation Plan

The VMVSP would amend the County General Plan to make the project area part of the El Dorado Hills Community Region and to change the County General Plan Land Use Map designation for the project area from Low-Density Residential (LDR) to Adopted Plan-Village of Marble Valley Specific Plan (AP-VMVSP). The project area is already approved for LDR development. Therefore, including the project site in the Community Region and replanning the site as a specific plan with mixed uses and higher density would not be inconsistent with the intention of the County General Plan in this regard. However, because the proposed project would require amending the County General Plan land use diagram, it would conflict with EDCAQMD's first criterion for defining consistency with the 2015 Ozone Plan.

Exceedance of EDCAQMD Significance Thresholds

As described in Impact AQ-2a, below, construction of the proposed project would not exceed EDCAQMD's significance criteria with implementation of Mitigation Measures AQ-2a through AQ-2e. Annual ROG and NO_X emissions generated during combined construction and operation and long-term operation of the proposed project would exceed 82 pounds per day (Impacts AQ-2b and AQ-2c). Accordingly, implementation of the project would exceed EDCAQMD's significance thresholds.

Implementation of Applicable Ozone Plan Reduction Measures

EDCAQMD CEQA Guidelines Appendix E outlines measures designed to reduce ozone emissions. The measures target mobile-source emissions through bicycle, pedestrian, and transit use, parking supply, and transportation-demand management strategies. The measures target area-source and energy emissions through building-design strategies. The proposed project is a specific plan that allows for pedestrian-scale development, a walkable community linking neighborhoods, and mixed-used development. This approach to land use would be consistent with the 2015 Ozone Plan and the County's long-term goal of encouraging infill and integrated land use planning. Siting land uses closer to employment opportunities would reduce VMT, encourage alternative transportation, and contribute to long-term mobile-source reductions. The VMVSP contains the following policies that reduce VMT and emissions from motor vehicles.

- **Policy 9.1**, Minimize off-street parking.
- **Policy 9.2,** Provide bicycle parking.
- **Policy 9.3,** Provide parking for low-emitting vehicles.
- **Policy 9.4**, Install plug-in electric vehicle charging stations.

- **Policy 9.5**, Pre-wire residential parking areas for future electric vehicles.
- **Policy 9.10**, Create a transportation management association.
- **Policy 4.6**, Develop a pedestrian network.
- **Policy 3.10**, Construct multiuse paths.

The VMVSP also includes the following energy efficiency and renewable energy measures that would reduce building energy consumption.

- **Policy 9.8** and **9.18**, Plant shade trees and vegetation.
- **Policy 9.9**, Encourage solar canopies.
- **Policy 9.11**, Exceed Title 24 standards.
- **Policy 9.12**, Promote sustainable building orientation.
- **Policy 9.13**, Install cool roofs.
- **Policy 9.14**, Use energy efficient glazing.
- **Policy 9.15**, Include programmable thermostats.
- **Policy 9.16**, Install Energy Star appliances.
- **Policy 9.17**, Encourage natural air drying.
- **Policy 9.19**, Obtain third-party commission and verification.
- **Policies 9.20** and **9.21**, Use high efficiency lighting.
- **Policy 9.22,** Promote renewable energy design.
- **Policy 9.23**, Encourage solar water heating systems.

These VMVSP policies would be consistent with the reduction measures in the 2015 Ozone Plan.

Compliance with Air District Rules and Regulations

As described below under Impact AQ-2a, implementation of Mitigation Measure AQ-2d would require compliance with EDCAQMD Rules 223 and 223-1, and, as described under Impact AQ-3d, Mitigation Measure AQ-3 would require consistency with EDCAQMD Rule 223-2. The proposed project also would comply with all other applicable EDCAQMD rules, as described under *Local Regulations* in Section 3.2.1.

Conclusion

The VMVSP Sustainability Element includes several policies that would contribute to criteria pollutant reductions. While these policies are consistent with reduction measures in the 2015 Ozone Plan, the project would require amending the County General Plan land use diagram. The proposed project would comply with applicable EDCAQMD rules and regulations, including Rules 223, 223-1 and 223-2. However, despite these project benefits, combined construction and operational ROG and NO_X and long-term operational ROG and NO_X emissions are estimated to exceed EDCAQMD's significance thresholds (see Impacts AQ-2b and AQ-2c), even with implementation of applicable VMVSP policies and mitigation measures identified in this EIR (Mitigation Measures AQ-2a through 2f, GHG-1, GHG-2, and TRA-2). Estimated ROG emissions would be primarily the result of personal

consumer products and architectural coatings on private residences. The VMVSP Sustainability Element contains several policies that would reduce operational criteria pollutant emissions. Beyond these policies, imposing restrictions on public behavior (e.g., use of certain consumer products) would infringe on personal rights of choice, and is, therefore, not a feasible mitigation measure for the project. There is no additional feasible mitigation (for the reasons described below) to reduce ROG and NO_X emissions below EDCAQMD's thresholds.

Accordingly, based on EDCAQMD's analysis criteria for consistency with applicable air quality plans, the VMVSP would conflict with the 2015 Ozone Plan for the SFNA. This impact would be significant and unavoidable, and no additional feasible mitigation is available to reduce the impact to a less-than-significant level.

Impact AQ-2a: Result in a cumulatively considerable net increase of any criteria pollutant during construction for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (less than significant with mitigation)

Construction of the proposed project has the potential to create air quality impacts through the use of heavy-duty construction equipment, construction-worker vehicle trips, and material-hauling truck trips. In addition, fugitive-dust emissions would result from site preparation and grading, and paving activities and application of architectural coatings would generate ROGs. These emissions were quantified using CalEEMod (Ascent 2024).

Estimated construction emission levels are summarized in Table 3.2-4. Several construction activities would likely occur concurrently. To ensure a conservative analysis, maximum daily emissions during these periods of overlap were estimated assuming that all equipment would operate at the same time. This approach identifies the maximum total project-related air quality impact during construction.

Table 3.2-4. Estimated Maximum Unmitigated Construction Emissions (pounds per day)[a]

				PM10			PM2.5		
Year	ROG	NO_X	CO	Dust	Exhaust	Total[b]	Dust	Exhaust	Total[b]
Year 1	612	152	131	712	5	717	79	5	83
Year 2	701	53	61	20	2	22	10	2	12
Year 3	753	72	84	34	3	36	17	3	19
Year 4	560	28	29	20	1	21	10	1	11
Year 5	612	26	29	20	1	21	10	1	11
Year 6	560	25	29	20	1	21	10	1	11
Year 7	781	24	28	20	1	21	10	1	11
Year 8	850	22	26	20	1	21	10	1	11
Year 9	626	36	55	20	1	21	10	1	11
Year 10	874	21	26	20	1	21	10	1	11
Year 11	819	33	54	20	1	21	10	1	11
Year 12	1,000	26	37	27	1	28	14	1	14
Year 13	804	37	61	27	1	28	14	1	14
Year 14	512	17	24	20	1	20	10	1	11
Year 15	513	28	51	20	1	21	10	1	11
Year 16	479	16	23	20	1	20	10	1	11
Year 17	517	26	50	20	1	20	10	1	11
Year 18	642	26	41	34	1	35	17	1	18
Threshold	82	82	–	BMPs[c]	–	–	BMPs[c]	–	–

Source: Ascent 2024.

[a] Exceedances of the EDCAQMD's mass emission thresholds are underlined.

[b] Values may not sum exactly due to rounding.

[c] EDCAQMD CEQA Guidelines consider dust impacts to be less than significant for projects that implement BMPs.

BMPs = best management practices; CO = carbon monoxide; NO_X = nitrogen oxides; PM10 = particulate matter less than or equal to 10 microns; PM2.5 = particulate matter less than or equal to 2.5 microns; ROG = reactive organic compounds.

As shown in Table 3.2-4, construction of the proposed project would exceed the EDCAQMD's threshold for ROG during all years. These emissions and exceedances correspond to the application of architectural coatings. NO_X emissions would also exceed EDCAQMD's threshold in Year 1. NO_X emissions would be primarily associated with use of heavy-duty off-road equipment (e.g., bulldozers). Based on the results presented in Table 3.2-4, construction-related combined emissions of ozone precursors would be considered a significant impact. These emissions could contribute to ozone ground-level formation in the MCAB, which, at certain concentrations, can contribute to short- and long-term human-health effects, if left unmitigated.

Implementation of Mitigation Measures AQ-2a through AQ-2c, identified below, is required to reduce ROG emissions from architectural coatings and NO_X emissions from construction equipment, respectively. These measures are consistent with local air district recommendations to reduce construction-generated exhaust emissions. Mitigation Measure GHG-1 in Section 3.6, *Greenhouse Gas Emissions*, would also achieve reductions through requirements for alternatively fueled equipment, idling limitations, local sourcing of materials, and other BMPs. EDCAQMD CEQA Guidelines consider dust impacts to be less than significant for projects that implement BMPs. Mitigation Measure AQ-2d outlines these BMPs, which are required for reducing the impact of construction-related fugitive

dust to a less-than-significant level. Table 3.2-5 summarizes maximum daily emissions with implementation of Mitigation Measures AQ-2a through AQ-2d (Mitigation Measure GHG-1 is not quantified).

Table 3.2-5. Estimated Maximum Mitigated Construction Emissions (pounds per day)[a]

				PM_{10}			$PM_{2.5}$		
Year	ROG[b,c]	NO_X[c,d]	CO[c]	Dust[e]	Exhaust[c]	Total[f]	Dust[d]	Exhaust[c]	Total[f]
Year 1	36	<u>137</u>	131	317	5	321	34	5	38
Year 2	29	48	61	6	2	7	3	2	4
Year 3	31	14	101	9	<1	9	4	<1	5
Year 4	22	4	36	5	<1	5	3	<1	3
Year 5	25	4	36	5	<1	5	3	<1	3
Year 6	22	4	36	5	<1	5	3	<1	3
Year 7	31	4	36	5	<1	5	3	<1	3
Year 8	34	6	46	7	<1	7	4	<1	4
Year 9	25	11	75	5	<1	6	3	<1	3
Year 10	35	4	36	5	<1	5	3	<1	3
Year 11	33	11	74	5	<1	5	3	<1	3
Year 12	40	6	51	7	<1	7	4	<1	4
Year 13	33	12	84	7	<1	7	4	<1	4
Year 14	21	4	36	5	<1	5	3	<1	3
Year 15	21	11	74	5	<1	5	3	<1	3
Year 16	19	4	36	5	<1	5	3	<1	3
Year 17	21	11	74	5	<1	5	3	<1	3
Year 18	26	7	61	9	<1	9	4	<1	5
Threshold	82	82	–	BMPs[f]	–	–	BMPs[f]	–	–

Source: Ascent 2024.

[a] Exceedances of the EDCAQMD's mass emission thresholds are <u>underlined</u>.

[b] Per Mitigation Measure AQ-2a, assumes use of low-volatile organic compound (VOC) coatings that have a VOC content of 10 grams per liter.

[c] Per Mitigation Measure AQ-2c, assumes use of Tier 4 Final construction equipment during Years 3–18.

[d] Per Mitigation Measure AQ-2b, assumes a 10% reduction in NO_X during Years 1–2.

[e] Per Mitigation Measure AQ-2d, assumes a 61% reduction in fugitive dust.

[f] Values may not sum exactly due to rounding.

[g] EDCAQMD CEQA Guidelines consider dust impacts to be less than significant for projects that implement BMPs. Mitigation Measure AQ-2d outlines these BMPs, which are required for reducing the impact of construction-related fugitive dust to a less-than-significant level.

BMPs = best management practices; CO = carbon monoxide; NO_X = nitrogen oxides; PM2.5 = particulate matter less than or equal to 2.5 microns; PM10 = particulate matter less than or equal to 10 microns; ROG = reactive organic compounds.

As shown in Table 3.2-5, the proposed project would exceed EDCAQMD's NO_X threshold in year 1, even with implementation of quantified mitigation. Combined ROG and NO_X emissions this year would also exceed EDCAQMD's total ozone threshold of 164 pounds per day. Mitigation Measure AQ-2e is therefore required to offset ozone-precursor (ROG and NO_X) emissions in construction year 1 to a level below EDCAQMD's threshold. The maximum total offset commitment may be recalculated prior to the start of construction as described under Mitigation Measure AQ-2e. The mitigation obligation may therefore change as regulations change and new control technologies

become available and effective. Mitigation Measure AQ-2e ensures that ozone precursors (ROG and NO_X) generated by construction of the project in year 1 would not exceed EDCAQMD's threshold. As such, NO_X emissions would not be expected to contribute a significant level of air pollution such that regional air quality within the MCAB would be degraded. Accordingly, construction emissions would result in a less-than-significant impact with implementation of Mitigation Measures AQ-2a through AQ-2e and GHG-1.

Mitigation Measure AQ-2a: Use low-VOC coatings during construction.

The project applicant will require all construction contractors use low-VOC coatings that have a VOC content of 10 grams/liter or less during construction. The project applicant will submit evidence of the use of low-VOC coatings to EDCAQMD prior to the start of construction.

Mitigation Measure AQ-2b: Implement BMPs to reduce construction-related exhaust emissions during early construction.

The project applicant, or its designee, will provide a plan for EDCAQMD approval that demonstrates that the heavy-duty off-road vehicles (50 horsepower or more) to be used 8 hours or more during the construction project will achieve a project-wide fleet-average 10% NO_X reduction compared to the most recent CARB fleet average. Acceptable options for reducing emissions may include use of cleaner engines (e.g., Tier 3 or Tier 4 engines), low-emission diesel products, alternative fuels, engine-retrofit technology, aftertreatment products, and/or other options as they become available. The plan will have two components, an initial report submitted before construction, and a final report submitted at the completion, and comply with the following specifications.

- Submit the initial report at least 4 business days prior to construction activity using SMAQMD's Construction Mitigation Tool (http://www.airquality.org/businesses/ceqa-land-use-planning/mitigation).
- Provide project information and construction company information.
- Include the equipment type, horsepower rating, engine model year, projected hours of use, and CARB equipment-identification number for each piece of equipment in the plan. Incorporate all owned, leased, and subcontracted equipment anticipated to be used.
- To demonstrate continued project compliance, submit the final report at the end of the job, phase, or calendar year, as pre-arranged with EDCAQMD staff and documented in the approval letter.

EDCAQMD and/or other officials may conduct periodic site inspections to determine project compliance. Nothing in this mitigation will supersede other federal, state, or EDCAQMD rules or regulations. This mitigation will sunset on January 1, 2028, provided that full implementation of the CARB In-Use Off-Road Regulation has occurred or equally effective or superior regulations have been implemented, as EDCAQMD determines.

Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks.

Beginning in 2028, following the sunsetting of the NO_X performance standard outlined in Mitigation Measure AQ-2b, the project applicant will require that off-road equipment utilize USEPA-certified Tier 4 Final or more-advanced engines. A copy of each unit's certified tier

specification, emissions rating, and any required CARB or air pollution control district operating permit will be made available to EDCAQMD at the time each piece of equipment is mobilized.

The project applicant will also require contractors to use onsite diesel on-road trucks (e.g., water trucks) that have model-year engines manufactured or retrofitted ideally within the past 5 years of when the vehicles are brought to the construction site, but no more than 8 years from overall project ground-breaking. The project applicant will consider use of electric or hybrid-electric vehicles over diesel counterparts to the extent that they become commercially available and earn a track record for reliability in real-world construction conditions and become cost effective.

Mitigation Measure AQ-2d: Implement an EDCAQMD-approved fugitive-dust control plan during construction.

As required by EDCAQMD Rule 223-1, the project applicant will implement all feasible and practicable fugitive-dust control measures during construction. Emissions-reduction measures will include, at a minimum (and as applicable), the EDCAQMD Rule 223-1 BMPs identified in Appendix D of this EIR, such as application of soil stabilizers, pre-watering unpaved construction roads and soil prior to cut-and-fill activities, and covering haul vehicles. EDCAQMD or the contractor may identify additional measures, as appropriate. All measures will be incorporated into a fugitive-dust control plan, which will be submitted to and approved by EDCAQMD. The County will not issue a grading permit for any phase of construction until it has received the approved fugitive-dust control plan. Compliance with the approved plan will be documented, at the applicant's expense, through periodic monitoring and annual reporting to the County.

Mitigation Measure AQ-2e: Offset construction-generated ozone precursors.

The project applicant will offset construction-generated ozone precursors (ROG/NO_X) emissions that exceed EDCAQMD's threshold during the first year of construction to quantities below 164 pounds per day. The preferred means of undertaking such offsite mitigation will be through a partnership with EDCAQMD, or with the approval of EDCAQMD, a neighboring air quality management district that manages emissions incentive programs (e.g., SMAQMD, PCAPCD).

- The project applicant, or its designee, will pay a mitigation fee and an administrative fee in accordance with the provisions of an established mitigation fee program in the EDCAQMD or similar program managed by another air quality management district that is acceptable to EDCAQMD to reduce the project impacts from construction ozone precursors (ROG/NO_X) emissions to a less-than-significant level (i.e., below 164 pounds per day).
- The project applicant, or its designee, will pay the mitigation and administrative fees for each of the development phases or construction activities, as determined by EDCAQMD, in full prior to County approval of the tentative map, parcel map, or planned development permit.
- An alternative payment plan may be negotiated by the project applicant, or its designee, based on the timing of construction activities or other development phases that are expected to exceed EDCAQMD's threshold of significance. Any alternative payment plan must be acceptable to the EDCAQMD and agreed upon in writing prior to County approval of the tentative map, parcel map, or planned development permit. The alternative payment

plan must cover the full quantity of required offsets, and full payment must be provided prior to the completion of construction.

- In coordination with EDCAQMD, the project applicant, or its designee, may reanalyze construction ozone precursors (ROG/NO_X) from the project prior to starting construction to update the required mitigation and administrative fees.
    - The analysis must be conducted using air district approved emissions model(s) and the fee rates published at the time of reanalysis.
    - The analysis must use the latest available engineering data for the project. Consistent with the methodology used in this EIR, emission factors may account for enacted regulations that will influence future year emissions intensities (e.g., fuel efficiency standards for on-road vehicles).
    - The analysis must include all required mitigation measures as specified in this EIR. The analysis may include additional measures to reduce construction emissions if deemed feasible and equally effective or superior by the lead agency and project applicant. All onsite measures assumed in the analysis must be included in the construction contracts and be enforceable by the lead agency.

Mitigation Measure GHG-1: Implement BMPs to reduce construction-generated GHG emissions.

Impact AQ-2b: Result in a cumulatively considerable net increase of any criteria pollutant during operation for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (significant and unavoidable)

Occupancy of the proposed project has the potential to create air quality impacts primarily associated with mobile and area sources. Motor-vehicle traffic would include daily resident access, visitor trips, waste-management trucks, and employee trips. Area sources would include landscaping equipment, off-gassing during the reapplication of architectural coatings, consumer products (e.g., solvents, cleaning supplies, cosmetics, toiletries). Energy sources would include onsite natural-gas combustion for space and water heating. Each of these sources was taken into account when calculating the plan's long-term operational emissions (Ascent 2024).

Table 3.2-6 summarizes estimated operational emissions at full buildout. The analysis accounts for legislative requirements that were default in CalEEMod at the time of analysis and emissions benefits achieved by mandatory VMVSP policies that prohibit wood-burning fireplaces and stoves (Policies 9.50 and 9.51). Additional reductions may be achieved by implementing voluntary VMVSP policies that reduce energy consumption, particularly natural-gas usage, and encourage alternative transportation (e.g., bicycling and walking); however, these policies were neither quantified nor included as part of the emissions benefits because the exact number of features is currently unknown given that the proposed project is only at the specific-plan approval stage (i.e., no immediate development activity is proposed). Accordingly, the emissions presented in Table 3.2-6 likely represent a conservative estimate of operational impacts.

Table 3.2-6. Estimated Unmitigated Operational Emissions (pounds per day)[a]

Source	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Area	194	50	230	4	4
Energy	1	25	13	2	2
Mobile	97	44	550	131	34
Total combined emissions[b]	293	120	792	137	40
EDCAQMD threshold	82	82	CAAQS[c]	CAAQS	CAAQS

Source: Ascent 2024.

[a] Exceedances of the EDCAQMD's mass emission thresholds are underlined. Emissions account for reductions achieved by VMVSP Policies 9.50 and 9.51.

[b] Values may not add due to rounding.

[c] Refer to Impact AQ-3c for significance determination.

CAAQS = California ambient air quality standards; CO = carbon monoxide; EDCAQMD = El Dorado County Air Quality Management District; NO_X = nitrogen oxides; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns; PM_{10} = particulate matter less than or equal to 10 microns; ROG = reactive organic compounds.

As shown in Table 3.2-6, the VMVSP would result ROG and NO_X emissions that would exceed EDCAQMD's pollutant threshold of 82 pounds per day. PM emissions may also exceed EDCAQMD's CAAQS significance criterion. These emissions could contribute to ozone formation and other air pollution in the MCAB, which, at certain concentrations, can contribute to short- and long-term human-health effects.

The VMVSP Sustainability Element includes several policies that would reduce operational criteria pollutant emissions. Emissions benefits achieved by VMVSP Policies 9.50 and 9.51 have been incorporated into the emissions modeling presented in Table 3.2-6. Based on CalEEMod modeling, these policies reduced criteria pollutant emissions by 29–95%, depending on the pollutant (see Appendix C-2) relative to emissions levels without implementation of the policies. Additional reductions may be achieved by policies that reduce natural-gas usage and vehicle trips, including Policy 9.1 (Minimize off-street parking), Policy 9.2 (Provide bicycle parking), Policy 9.3 (Provide parking for low-emitting vehicles), Policy 9.4 (Install plug-in electric vehicle charging stations), Policy 9.5 (Pre-wire residential parking areas for future electric vehicles), Policy 9.10 (Create a transportation management association), Policy 4.6 (Develop a pedestrian network), Policy 3.10 (Construct multiuse paths), Policy 9.12 (Promote sustainable building orientation), Policy 9.15 (Include programmable thermostats), Policy 9.17 (Encourage natural air drying), and Policy 9.19 (Obtain third-party commission and verification).

While the VMVSP would reduce the severity of growth-oriented criteria pollutants by fostering bicycle and pedestrian infrastructure, and supporting sustainable land use patterns, including mixed-use design, individual projects may still generate ROG and NO_X emissions in excess of EDCAQMD's pollutant threshold of 82 pounds per day. ROG emissions would be primarily the result of personal consumer products and architectural coatings on private residences. Accordingly, Mitigation Measure AQ-2f is required, which promotes the use of green consumer products, including low-VOC paints. Reductions achieved by this measure cannot currently be quantified because project developers do not have authority to require such products, although they can be encouraged.

NO_X emissions would be primarily the result of private vehicle trips, which are addressed through numerous VMVSP policies. VMT and associated NO_X emissions would also be reduced by the VMVSP design guidelines, which promote an internally linked pedestrian and bicycle network and traffic-

calming measures to encourage people to walk and bike instead of using a vehicle. For example, the project includes the following features.

- Development of a network of Class I bike paths along the public collector streets.
- Creation of a bikeway system south of US 50, between Bass Lake Road and Cambridge Road, providing connectivity to the planned schools and joint-use parks in the northern portion of the plan area, and into the valley along Marble Lake Boulevard.
- Creation of a trail network for passive enjoyment, including walking, jogging, and cycling.
- Inclusion of sidewalks on at least one side of most public and private streets, with the exception of cul-de-sac streets, alleys, and emergency vehicle access roads.
- Use of traffic circles and all other traffic-calming techniques within the private streets where appropriate.
- Use of intersection and midblock controls, such as street intersection neckdowns, midblock bulb-outs, and center islands along roadways with high pedestrian activity.
- Use of special pavement markings and textured paving to serve as a visual reference for motorists of the likely presence of pedestrians and cyclists in the area.

According to CAPCOA (2021), pedestrian sidewalk enhancements can reduce VMT by up to 6.4%, relative to conditions without these improvements. Mitigation Measures TRA-2 in Chapter 3.14, *Transportation and Circulation*, and potential strategies (e.g., all electric design) pursued under Mitigation Measures GHG-2 in Chapter 3.6, *Greenhouse Gases*, will also reduce operational ROG, NO_X, and PM emissions. Table 3.2-7 presents operational emissions with implementation of Mitigation TRA-2. Emissions benefits achieved by Mitigation Measure GHG-2 cannot be currently quantified because the precise mix of strategies has not yet been identified. Table 3.2-7 also does not reflect emissions reductions achieved through Mitigation Measure AQ-2f (as discussed above).

Table 3.2-7. Estimated Operational Emissions with Mitigation Measure TRA-2 (pounds per day)[a]

Source	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Area	194	50	230	4	4
Energy	1	25	13	2	2
Mobile	97	44	536	127	32
Total combined emissions[b]	<u>292</u>	<u>119</u>	779	133	38
EDCAQMD threshold	82	82	CAAQS[c]	CAAQS	CAAQS

Source: Ascent 2024.

[a] Exceedances of the EDCAQMD's mass emission thresholds are <u>underlined</u>. Emissions account for reductions achieved by VMVSP Policies 9.50 and 9.51 and Mitigation Measure TRA-2.

[b] Values may not add due to rounding.

[c] Refer to Impact AQ-3c for significance determination.

CAAQS = California ambient air quality standards; CO = carbon monoxide; EDCAQMD = El Dorado County Air Quality Management District; NO_X = nitrogen oxides; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns; PM_{10} = particulate matter less than or equal to 10 microns; ROG = reactive organic compounds.

As shown in Table 3.2-7, ROG, NOx, and PM emissions could still contribute to cumulative air quality with implementation of mitigation. The VMVSP policies and Mitigation Measures AQ-2f, TRA-2, and GHG-2 collectively represent best-available control strategies to reduce operational emissions resulting from buildout of a long-term specific plan. There is no feasible mitigation beyond these

measures and the VMVSP policies to reduce operational emissions below EDCAQMD's thresholds. As discussed under Impact AQ-2a, Mitigation Measure AQ-2e is required to offset ozone-precursor (ROG and NOx) emissions generated during construction year 1. While this measure is accepted to address the single year of construction emissions, it is not considered feasible to mitigate the operational ozone precursor impact identified in Table 3.2-7 for the following reasons.

1 EDCAQMD does not currently have a grant incentive program to administer voluntary criteria pollutant offsets. While such a program may be developed, Mitigation Measrue AQ-2e recognizes that offsite mitigation for construction year 1 may need to be achieved through an agreement with a neighboring air quality management district that has an established incentive program (e.g., SMAQMD, PCAPCD). While feasible for one year, managing an agreement with a non-county agency over a 30-year operational contract carries an unknown administrative risk that could preclude successful acquisition of necessary emission reduction credits.

2 CARB publishes annual cost effectiveness limits for emission reduction projects funded through the Carl Moyer Memorial Air Quality Standards Attainment Program (Carl Moyer Program). While not all local air district incentive programs are administered through the Carl Moyer Program, the published cost effectiveness limit provides a reasonable measure to estimate potential mitigation cost. Over a 30-year operational analysis period, purchasing operational offsets for ROG and NOx emissions over EDCAQMD thresholds would result in approximately $43 million in fees. This estimate is based on the current (2017) limit of $30,000 per ton and a 5% administrative fee (CARB 2021). The Carl Moyer Program cost effectiveness limit reflects the cost of regulations and technology and has historically increased year-over-year. For example, the cost effectiveness limit in 1998 was $12,000 per ton. In 2010 and 2015, the limits were $16,640 per ton and $18,262 per ton, respectively (CARB 2021). Thus, not only the cost, but the rate of annual increase, is accelerating. Full buildout of the VMVSP is expected no sooner than 2045. Based on the pattern of cost escalation between 1998 and 2017, it is reasonable that operational mitigation fees would likely be double or triple the $43 million estimate based on the 2017 cost effectiveness limit. The potential for significant cost escalation creates economic uncertainty that could place an undue financial burden on the project.

3 Emission reduction projects funded through CEQA mitigation must exceed reductions that would otherwise occur through law, regulation, or legally binding mandate. Federal, state, and local air quality regulations have expanded considerably over the past 30 years. While this has improved air quality management and protections, it constrains the voluntary emission reduction market. In other words, with regulations already achieving relatively low emissions rates through mandated technologies or performance standards, there are fewer opportunities for additional reductions. More stringent compliance obligations for many state regulations, such as the Advanced Clean Truck and Innovative Clean Transit, are set to phase-in over the next ten to 20 years. Thus, the availability of voluntary criteria pollutant offsets is likely to become more limited overtime. Because ROG and NOx are regional pollutants, they must be mitigated within the same air basin (or neighboring air basin with equal or worse ambient air quality designation) to address project-level impacts. This geographic restriction further constrains offset availability. It is unknown, and impossible to predict, if regional ROG and NOx offsets will be available in the quantities required to successfully mitigate operational emissions over a 30-year period beginning in 2045.

Consequently, the impact on air quality from ROG and NO_X emissions during project operation would be significant and unavoidable, as shown in Table 3.2-6. The impact of PM emissions would also be significant and unavoidable.

Mitigation Measure AQ-2f: Promote green consumer products

For all projects developed within the VMVSP, the project applicant will provide education for residential and commercial tenants concerning green consumer products. Prior to receipt of any certificate of final occupancy, the applicant will work with EDCAQMD to develop electronic correspondence to be distributed by email to new residential and commercial tenants that encourages the purchase of consumer products that generate lower than typical VOC emissions. Examples of green products may include low-VOC architectural coatings, cleaning supplies, and consumer products, as well as alternatively fueled landscaping equipment.

Mitigation Measure TRA-2: Shift 25,000 square feet of commercial office land use to commercial retail land use

Mitigation Measure GHG-2: Develop and implement a GHG reduction plan to reduce construction and operational area, mobile, and building natural-gas GHG emissions

Impact AQ-2c: Result in a cumulatively considerable net increase of any criteria pollutant during combined construction and operation for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (significant and unavoidable)

Construction of several residential units would start in Year 1 and be completed by the end of Year 2, with operational emissions beginning immediately thereafter in Year 3. Accordingly, concurrent construction and operational activities would occur from Years 3–18, resulting in higher maximum daily emissions than either component when analyzed separately.

Combined construction and operational emissions are presented in Table 3.2-8 and compared with the EDCAQMD's thresholds. Estimated construction emissions assume implementation of Mitigation Measures AQ-2a through AQ-2d, and operational emissions include emissions benefits from applicable and quantifiable VMVSP policies (Policies 9.50 and 9.51) (Mitigation Measures GHG-1, GHG-2, AQ-2f, and TRA-2 are not quantified). The analysis conservatively assumes that all structures would be fully occupied immediately following construction.

Table 3.2-8. Estimated Mitigated Combined Construction and Operational Emissions (pounds per day)[a]

				PM_{10}			$PM_{2.5}$		
Year[b]	ROG	NO_X	CO	Dust	Exhaust	Total	Dust	Exhaust	Total
Year 3	67	34	211	23	1	24	8	1	9
Year 4	78	35	206	27	1	29	8	1	10
Year 5	94	41	243	33	2	34	10	2	11
Year 6	106	47	278	38	2	40	11	2	13
Year 7	132	53	319	44	2	47	13	2	15
Year 8	152	63	382	55	3	58	16	3	19
Year 9	161	76	461	62	3	65	17	3	20
Year 10	188	75	461	68	4	71	19	4	22
Year 11	206	89	553	77	4	81	21	4	25
Year 12	237	93	590	88	5	93	24	5	29
Year 13	250	107	679	98	5	103	27	5	32
Year 14	261	109	716	113	6	119	30	5	36
Year 15	273	118	776	117	6	123	31	6	37
Year 16	282	115	761	121	6	127	32	6	38
Year 17	295	124	822	125	6	132	33	6	39
Year 18	312	125	839	135	7	141	36	6	43
EDCAQMD threshold	82	82	CAAQS[c]	–	–	CAAQS	–	–	CAAQS

Source: Ascent 2024.

[a] Exceedances of the EDCAQMD's mass emission thresholds are underlined. Emissions assume implementation of Mitigation Measures AQ-2a through 2d and VMVSP Policies 9.50 and 9.51.

[b] Emissions were quantified assuming that construction would begin in Year 1, and the first buildings could become operational in Year 3.

[c] Refer to Impact AQ-3c for significance determination.

CAAQS = California ambient air quality standards; CO = carbon monoxide; EDCAQMD = El Dorado County Air Quality Management District; NO_X = nitrogen oxides; PM2.5 = particulate matter less than or equal to 2.5 microns; PM10 = particulate matter less than or equal to 10 microns; ROG = reactive organic compounds.

As shown in Table 3.2-8, combined construction and operational emissions would exceed EDCAQMD's threshold for ROG between Years 5 through 18 and EDCAQMD's threshold for NO_X between Years 11 and 18, even with implementation of quantified mitigation and VMVSP policies. The VMVSP policies and mitigation collectively represent best-available control strategies to reduce construction and operational emissions resulting from buildout of a long-term specific plan. Accordingly, there is no feasible mitigation to reduce ROG and NO_X emissions below EDCAQMD's thresholds beyond Mitigation Measures AQ-1 through AQ-2f, TRA-2, GHG-1, and GHG-2 and VMVSP policies.[14] Accordingly, the impact on air quality resulting from ROG and NO_X emissions during combined project construction and operation would be significant and unavoidable. The impact of PM emissions would also be significant and unavoidable.

[14] Mitigation Measure AQ-2e (or a similar criteria pollutant offset measure) is not considered feasible for the same reasons discussed under Impact AQ-2b.

Mitigation Measure AQ-2a: Use low-VOC coatings during construction.

Mitigation Measure AQ-2b: Implement BMPs to reduce construction-related exhaust emissions during early construction.

Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks.

Mitigation Measure AQ-2d: Implement an EDCAQMD-approved fugitive-dust control plan during construction.

Mitigation Measure AQ-2e: Offset construction-generated ozone precursors.

Mitigation Measure AQ-2f: Promote green consumer products.

Mitigation Measure GHG-1: Implement BMPs to reduce construction-generated GHG emissions.

Mitigation Measure GHG-2: Develop and implement a GHG reduction plan to reduce construction and operational area, mobile, and building natural-gas GHG emissions.

Mitigation Measure TRA-2: Shift 25,000 square feet of commercial office land use to commercial retail land use.

Impact AQ-3a: Expose sensitive receptors to substantial toxic air contaminant concentrations and health risks during construction (significant and unavoidable)

Equipment and vehicles used during construction would generate DPM, potentially resulting in the exposure of nearby existing sensitive receptors (e.g., residences) to increased pollutant concentrations. Similarly, new residents that occupy the project area prior to completion of the entire proposed project may be exposed to a portion of construction-generated DPM. The primary driver of health risk from DPM and all TACs is the concentration of a substance (i.e., the pollutant) and the duration of exposure. Cancer health risks associated with exposure to DPM are typically associated with chronic (i.e., long-term) exposure, in which a 30-year exposure period is assumed. In addition, DPM concentrations, and, thus, cancer health, risks typically dissipate as a function of distance from the emissions source (SMAQMD 2018).

As described above, several residential land uses are within 1,000 feet of the project area, with the nearest receptors 25 feet from the northern and eastern boundaries of the project area. Air quality management agencies recognize that many variables, such as duration of the construction period, types of construction equipment, and the amount of onsite diesel-generated PM exhaust, can influence DPM concentrations and the potential for a project to result in increased health risks. Accurately quantifying DPM concentrations and predicting associated health risks requires detailed, site-specific information about these and other parameters that are currently unavailable, given the preliminary level of design at this time. Based on the mass emission results, the greatest potential for DPM emissions would occur from years 1 through 3 (see Table 3.2-5). Construction activities during this time would be spread among the project area and offsite locations, as opposed to at a single location. Similar geographic dispersion would occur throughout construction. However, depending on the size and scale of an individual development project, along with its construction

schedule and proximity to receptors, there may also be instances where DPM emissions could result in cancer or noncancer health risks that exceed EDCAQMD's thresholds, resulting in a potentially significant impact.

Implementation of VMVSP policies would reduce receptor exposure to TAC emissions from construction activities. VMVSP Policy 9.59 requires installation of minimum efficiency reporting value (MERV) 6 air filters on all residential central-air or ventilation systems. Filters more effective than MERV 8 would be required in nonresidential central-air or ventilation systems. According to USEPA (2009), MERV 6 filters remove 35% to 50% of PM10, and MERV 8 filters remove more than 70% of PM10. Best-available control technologies implemented pursuant to Mitigation Measure AQ-2b would also reduce construction-generated DPM emissions during early construction. Mitigation Measure AQ-2b outlines a performance standard for heavy-duty off-road equipment for achieving a project-wide fleet-average NO_X reduction of 10%, compared with the most recent CARB fleet average at the time of construction. This performance standard may be met through a variety of CARB-approved best-available control technologies that achieve DPM benefits and NO_X reductions. For example, use of alternatively fueled equipment (as required by Mitigation Measure GHG-1) or engines that meet Tier 3 or Tier 4 emission standards reduces emissions. Use of a performance standard, as required by Mitigation Measure AQ-2b, as opposed to a single equipment-specific control (e.g., all electric-powered equipment), provides construction contractors with flexibility to select technologies that are the most cost effective and appropriate at the time of construction. Because reduction technologies and air quality regulations are constantly changing, and it is highly likely that additional control strategies will be developed throughout the course of construction, this type of mitigation also provides for continued protection of public health without precluding new control measures or existing technologies that may become economically feasible with changing market conditions. Recognizing this, Mitigation Measure AQ-2c requires the use of advanced off-road engines and newer onsite on-road trucks beginning in 2028, following the sunsetting of Mitigation Measure AQ-2b.

Despite these considerations and the implementation of Mitigation Measures AQ-2b, AQ-2c, and GHG-1, there may be instances where project-specific conditions preclude the reduction of health risks below adopted thresholds. For example, construction may require multiple concurrent phases where DPM is generated by various pieces of heavy equipment near receptors. Depending on the magnitude and duration, DPM generated under these circumstances may lead to increased health risks at specific receptor locations. Therefore, health impacts from TAC exposure during construction are considered significant and unavoidable.

Mitigation Measure AQ-2b: Implement BMPs to reduce construction-related exhaust emissions during early construction.

Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks.

Mitigation Measure GHG-1: Implement BMPs to reduce construction-generated GHG emissions.

Impact AQ-3b: Expose sensitive receptors to substantial toxic air contaminant concentrations and health risks during operation (less than significant)

Because the VMVSP would ultimately result in the net new development of up to 475,000 square feet of nonresidential uses and 87 acres of public facilities/recreational use, implementation of the VMVSP may include emissions of operational TACs (including DPM). Specifically, heavy-duty diesel trucks may be used for commercial deliveries. New commercial development may also install or operate stationary sources of TACs (e.g., diesel-fired emergency generators).

As discussed in the *Environmental Setting*, US 50 runs east–west to the south of the plan area. As the primary highway proximate to the plan area, delivery vehicles associated with future project land uses may increase diesel truck traffic on US 50. The segment of US 50 north of the plan area currently has annual average daily traffic volumes of 61,000 to 62,000, of which about 6% are classified as heavy trucks (CDOT 2023a, 2023b). Buildout of the VMVSP would generate 37,927 average daily vehicle trips. Based on the countywide average fleet mix from CalEEMod, it is estimated that about 890 of these trips may be made by medium or heavy-duty trucks. When added to existing truck volumes on US 50, implementation of the VMVSP would only increase the percentage of truck traffic on US 50 in the plan area by less than 1.5%. This increase would not result in a material change in ambient DPM concentrations or associated health risks from highway traffic. Moreover, the fraction of diesel-powered heavy trucks operating on California roadways, including those associated with the project, is expected to decline overtime due to federal and state regulations, as discussed in the *Regulatory Setting*.

Commercial development under the proposed project may result in the installation or operation of new stationary sources of TACs (e.g., generators). Although it is unknown what specific sources would be installed or where they would operate, all new stationary sources would be subject to EDCAQMD Rule 233, *Stationary Internal Combustion Engines*. Consequently, regulatory mechanisms exist to reduce emissions and associated health risks from stationary sources.

The VMVSP includes policies that would help reduce exposure of sensitive receptors to operational TAC. As discussed in Impact AQ-3a, VMVSP Policy 9.59 requires MERV 6 air filters on all residential central-air or ventilation systems and MERV 8 are required in nonresidential central-air or ventilation systems. Implementation of these policies would further reduce operational exposure to TAC, and this impact would be less than significant.

Impact AQ-3c: Expose sensitive receptors to substantial criteria pollutant concentrations during construction and operation (significant and unavoidable)

Regional Criteria Pollutants

As discussed under Impact AQ-2b, operation of new VMVSP uses would result in ROG and NO_X emissions that would exceed EDCAQMD's pollutant threshold of 82 pounds per day. PM emissions may also exceed EDCAQMD's CAAQS significance criterion. During concurrent construction and partial operation, ROG, NO_X, and PM emissions would likewise be significant. Emissions generated during construction and operation could contribute to ozone formation and other air pollution in the MCAB, which, at certain concentrations, can contribute to short- and long-term human-health effects. This is a potentially significant impact.

VMVSP policies and Mitigation Measures AQ-2a through AQ-2f, GHG-1, GHG-2, and TRA-2 would minimize air quality impacts, although emissions would still exceed thresholds. These features

represent all best-available onsite controls to reduce construction and operational emissions. EDCAQMD's thresholds are derived from regionally specific modeling that demonstrates that the air basin can accommodate emissions below the threshold levels without attainment of the NAAQS or CAAQS being affected, as required by the local air quality plans. As noted above, the NAAQS and CAAQS are set to protect public health and the environment within an adequate margin of safety. Accordingly, projects that do not exceed EDCAQMD's thresholds would not adversely affect air quality or exceed the NAAQS or CAAQS. The analysis presented in Impacts AQ-2a through AQ-2c demonstrates that with mitigation, while construction emissions would not exceed EDCAQMD's thresholds, long-term operation of the project and concurrent construction and operational emissions would exceed EDCAQMD's thresholds (see Table 3.2-5 through Table 3.2-8). Accordingly, implementation of the VMVSP would contribute a significant level of air pollution that could degrade air quality within the MCAB. This impact is significant and unavoidable.

Consistent with the Friant Ranch Decision, Table 3.2-9 provides a conservative estimate of the maximum potential health effects associated with regional criteria pollutants generated by buildout of the VMVSP. Construction emissions of ROG, NO_X, and PM2.5 generated during most years would be well below 82 pounds per day with implementation of Mitigation Measures AQ-2a through AQ-2d. However, long-term operation of the VMVSP and combined construction and operational emissions would generate ROG and NO_X emissions in excess of 82 pounds per day (see Table 3.2-6 thorough Table 3.2-8). Because buildout of the VMVSP would result in emissions in excess of 82 pounds per day, the analysis of potential health consequences associated with increased regional air pollution was conducted using SMAQMD's Strategic Area Project Health Screening Tool (version 2).

As discussed above, SMAQMD's Strategic Area Project Health Screening Tool estimates health effects that may result from projects emitting NO_X, ROG, and PM2.5 at levels between 164 and 656 pounds per day and located within one of five strategic growth areas. The nearest strategic growth areas to the VMVSP plan area are Rancho Cordova and Downtown Sacramento. While modeling specific to El Dorado County was not included in the tool, as is explained below, the results for the Downtown Sacramento strategic growth area can be used a conservative illustration of potential health consequences associated with pollution generated in El Dorado County. While local meteorology, emissions sources, and other variables can influence pollutant concentrations and resultant health effects, "premature death and other health effects are greatest for those sources located near high population areas" (Ramboll 2020). This is evidenced by SMAQMD's Friant Ranch Guidance, which shows modeled sources in western El Dorado County resulting in half the number of premature deaths compared to those same sources in the city of Sacramento (Ramboll 2020).

Based on the analysis presented in SMAQMD's Friant Ranch Guidance, the Downtown Sacramento strategic growth area was used to develop an order-of-magnitude and conservative characterization of potential health consequences associated with project-generated ROG, NO_X, and PM2.5. The combination of project-generated emissions yielding the worst-case health outcomes were input into SMAQMD's Strategic Area Project Health Screening Tool for the Downtown Sacramento strategic growth area. Table 3.2-9 presents the result of the analysis.

Table 3.2-9. Conservative Estimate of Increased Regional Health Effect Incidence Resulting from Buildout of the VMVSP (cases per year)

Health Endpoint	Age Range[a]	Annual Mean Incidences - Model Domain (SFNA)[b]	% of Background Incidence (SFNA)[c]	Total # of Health Incidence (SFNA)[d]
PM2.5 Emissions, Respiratory				
Emergency Room Visits, Asthma	0–99	2 (2)	<1%	18,419
Hospital Admissions, Asthma	0–64	<1 (<1)	<1%	1,846
Hospital Admissions, All Respiratory	65–99	1 (1)	<1%	19,644
PM2.5 Emissions, Cardiovascular				
Hospital Admissions, All Cardiovascular[e]	65–99	<1 (<1)	<1%	24,037
Acute Myocardial Infarction, Nonfatal	18–24	<1 (<1)	<1%	4
Acute Myocardial Infarction, Nonfatal	25–44	<1 (<1)	<1%	308
Acute Myocardial Infarction, Nonfatal	45–54	<1 (<1)	<1%	741
Acute Myocardial Infarction, Nonfatal	55–64	<1 (<1)	<1%	1,239
Acute Myocardial Infarction, Nonfatal	65–99	<1 (<1)	<1%	5,052
PM2.5 Emissions, Mortality				
Mortality, All Cause	30–99	5 (5)	<1%	44,766
ROG and NO_X Emissions, Respiratory				
Hospital Admissions, All Respiratory	65–99	<1 (<1)	<1%	19,644
Emergency Room Visits, Asthma	0–17	1 (1)	<1%	5,859
Emergency Room Visits, Asthma	18–99	1 (1)	<1%	12,560
ROG and NO_X Emissions, Mortality				
Mortality, Non-Accidental	0–99	<1 (<1)	<1%	30,386

Source: SMAQMD Minor Project Health Screening Tool, version 2, published September 2020.

Note: NO_X emissions set to 125 pounds per day, ROG emissions set to 312 pounds per day, and PM2.5 emissions set to 43 pounds per day. Because NOx and PM2.5 emissions are below the minimum input threshold of 164 pounds per day, the model automatically uses 164 pounds per day. Emissions modeled in the Sacramento strategic growth area.

[a] Affected age ranges are shown. Other age ranges are available, but the endpoints and age ranges shown here are the ones used by USEPA in its health assessments. The age ranges are consistent with the epidemiological study that is the basis of the health function.

[b] Health effects are shown in terms of incidences of each health endpoint and how it compares to the base (2035 base year health effect incidences, or "background health incidence") values. Health effects are across the Northern California model domain and 5-air-district SFNA (rounded values are equivalent).

[c] The percent of background health incidence uses the mean incidence. The background health incidence is an estimate of the average number of people that are affected by the health endpoint in a given population over a given period of time. In this case, these background incidence rates cover the 5-air-district SFNA (estimated 2035 population of 3,271,451 persons). Health incidence rates and other health data are typically collected by the government as well as the World Health Organization. The background incidence rates used here are obtained from BenMAP, as reported in SMAQMD's Strategic Area Health Screening Tool, version 2.

[d] The total number of health incidences across the 5-air-district SFNA is calculated based on modeling data, as reported in SMAQMD's Strategic Area Health Screening Tool, version 2. The information is presented to assist in providing overall health context.

[e] Less myocardial infarctions.

The results presented in Table 3.2-9 are conservative for three reasons.

1. Project-specific emissions were input into SMAQMD's Strategic Area Project Health Screening Tool, but they were modeled in the Downtown Sacramento growth area. As noted above, health

effects are greatest from emissions generated in high population areas (Ramboll 2020). Based on the last U.S. Census, the city of Sacramento had a 2020 population of 524,943 compared to 50,547 residents in El Dorado Hills (U.S. Census Bureau 2023). Modeling VMVSP-generated emissions in the city of Sacramento, which has more than 10 times the population of El Dorado Hills, will therefore overestimate resultant health effects for the project area.

2. SMAQMD's Strategic Area Project Health Screening Tool estimates health effects that may result from projects emitting NO_X, ROG, and PM2.5 at levels between 164 and 656 pounds per day. If emissions for a certain pollutant are less than 164 pounds per day, the tool will default to 164 pounds per day to provide a conservative estimate of health effects (Ramboll 2020). As shown in Table 3.2-5 through Table 3.2-8, the highest daily emissions of NOx and PM2.5 quantified for the VMVSP are 125 and 43 pounds per day, respectively, and would occur during concurrent construction and operations in Year 18.[15] Because these emissions are less than the minimum input threshold for the tool, the analysis assumed a default NOx and PM2.5 emissions rate of 164 pounds per day.
3. The results are based on a source generating 125 pounds per day of NO_X, 312 pounds per day of ROG, and 43 pounds per day of PM2.5 (corresponding to the worst-case combination of project-generated ROG, NO_X, and PM2.5 emissions, per Table 3.2-8). The tool assumes these daily emissions rates would occur each day of the year. As shown in Table 3.2-5 through Table 3.2-8, maximum daily emissions during most years of construction and during long-term operation are well below these rates.

The analysis presented in Table 3.2-9 is given for informational purposes, consistent with the Friant Ranch Decision, and has no bearing on the impact determination, which is based on a comparison of mass emissions to EDCAQMD thresholds. Although implementation of the VMVSP would contribute to existing and future air pollution, it is important to consider the magnitude of project-generated emissions and potential health risks relative to ambient conditions. The increased health effects potentially associated with the VMVSP (see Table 3.2-9) are minute relative to the background regional-incident health effect. Specific to only the County, the CDPH (2023) reported an annual average of 1,769 deaths from all causes between 2019 and 2021. The estimated 5 deaths shown in Table 3.2-9 are less than 0.29% of this total.

Although the estimated health effects shown in Table 3.2-9 and the proportion of those effects relative to the regional and county background incidence are low, it is important to acknowledge that the model does not take into account population subgroups with greater vulnerabilities to air pollution, except in the analysis of age ranges for certain endpoints. As noted in SMAQMD's guidance, "the health effects of increased air pollution emissions may occur disproportionately in areas where the population is more susceptible to health effects from air pollution" (Ramboll 2020). The five determinates for increased susceptibility, as reported by the Centers for Disease Control and Prevention (2019), are genetics, behavior, environmental and physical influences, medical care, and social factors. The Public Health Alliance of Southern California has developed a Healthy Places Index to characterize local community conditions, including several of these determinates (Public Health Alliance of Southern California 2023). This data can be used to compare the overall relative health vulnerability of geographic areas. Based on the Healthy Places Index, the VMVSP and surrounding areas have relatively high levels of health-promoting community conditions (i.e.,

[15] Construction NOx emissions in year 1 are estimated to be 137 pounds per day (see Table 3.2-5). However, per Mitigation Measures AQ-2e, these emissions will be offset to a less-than-significant level (82 pounds per day individually or 164 pounds per day when combined with ROG).

healthier conditions than 50 to 80% of other California census tracts) (Public Health Alliance of Southern California 2023).

Ultimately, the County does not currently attain the ozone NAAQS or CAAQS, PM2.5 NAAQS, or the PM10 CAAQS (Table 3.2-3). Certain individuals residing in areas that do not meet the ambient air quality standards could be exposed to pollutant concentrations that cause or aggravate acute and/or chronic health conditions (e.g., asthma, lost workdays, premature mortality), regardless of implementation of the project.

Localized Particulate Matter

Earthmoving activities required for construction would result in the generation of localized fugitive dust. The amount of dust generated by a project during construction is highly variable and dependent on the size of the disturbed area at any given time, the amount of activity, soil conditions, and meteorological conditions. Fugitive-dust emissions from construction activities would be spread throughout the entire 2,341-acre VMVSP area, as opposed to being concentrated at a single location. Despite the variability in emissions, numerous control measures can be reasonably implemented to significantly reduce construction fugitive-dust emissions. EDCAQMD CEQA Guidelines consider construction-dust impacts to be less than significant with implementation of BMPs. Mitigation Measure AQ-2d outlines these BMPs, which are required to reduce construction-related fugitive dust to a less-than-significant level

The primary source of operational PM would be vehicles driving on paved and unpaved roads. These emissions would be spread over numerous roads throughout the County and region. Implementation of numerous VMVSP policies will reduce operational vehicle trips, and, thus, road dust; these include Policy 9.1 (Minimize off-street parking), Policy 9.2 (Provide bicycle parking), and Policy 9.10 (Create a transportation management association). VMVSP design guidelines also promote an internally linked pedestrian and bicycle network and traffic-calming measures to encourage people to walk and bicycle instead of using a motorized vehicle. Finally, Mitigation Measure TRA-2 will reduce VMT and associated road dust. VMVSP policies and mitigation collectively represent best-available control strategies for reducing operational VMT and associated road dust that could result from buildout of a long-term specific plan. While these strategies will achieve substantial PM reductions and emissions would be spread throughout the plan area and among roads throughout the county and region, exposure of sensitive receptors to localized PM is conservatively found to be significant and unavoidable.

Localized Carbon Monoxide

Development resulting from implementation of the proposed project could also potentially create new localized CO hot spots from changes in vehicle activity. As shown in Table 3.2-7, about 29% of operational CO emissions would be generated by area sources. Landscaping equipment, which would contribute most of the CO emissions from area sources, would be spread among new development throughout the plan area and would not be concentrated at a single location. VMVSP Policy 9.51 prohibits open-hearth wood-burning fireplaces.

New vehicle trips from VMVSP buildout would add to existing intersection volumes and congestion. While CO emissions from vehicles have declined significantly in the past thirty years due to improvements in engine technology and strengthening of emissions standards, CO can concentrate locally when vehicles idle or move slowing. Potential impacts related to localized CO from mobile sources are typically determined by estimating CO concentrations from the most project-affected

intersections, where the concentrations would be the greatest. Traffic generated by the proposed project would have the potential to create CO hot spots at nearby roadways and intersections. Buildout traffic conditions were modeled to evaluate CO concentrations relative to the federal and state air quality standards (see Table 3.2-1). CO concentrations were modeled at the following study area intersections, as identified in the transportation impact assessment for the proposed project (Appendix K). These intersections generally represent the intersections with the highest peak-hour evening traffic volumes or intersection delay under existing, near-term, and cumulative conditions.

- Bass Lake/US 50 eastbound ramps
- Cambridge Road/Merrychase Drive/US 50 westbound ramps
- Crazy Horse Road/Flying C Court
- Town Center Boulevard/Latrobe Road

Table 3.2-10, which presents the results of the CO hot-spot modeling, indicates that CO concentrations are not expected to contribute to any new localized violations of the 1-hour or 8-hour ambient air quality standards. Consequently, implementation of project would not result in CO concentrations in excess of the health-protective NAAQS or CAAQS, and, therefore, would not expose sensitive receptors to significant pollutant concentrations that could result in adverse health effects. This impact would be less than significant.

Table 3.2-10. Modeled Carbon Monoxide Concentrations at Study Area Intersections

		No Project		Project	
Intersection	RE [a]	1-hr [b, c]	8- hr [b, d]	1-hr [b, c]	8- hr [b, d]
Bass Lake Road/ US 50 eastbound ramps	1	3.3	0.2	3.4	0.3
	2	3.3	0.2	3.4	0.3
	3	3.3	0.2	3.4	0.3
	4	3.3	0.2	3.3	0.2
Cambridge Road/ Merrychase Drive/US 50 westbound ramps	5	3.4	0.3	3.5	0.4
	6	3.4	0.3	3.5	0.4
	7	3.4	0.3	3.5	0.4
	8	3.3	0.2	3.4	0.3
Crazy Horse Road/Flying C Court	9	3.2	0.1	3.3	0.2
	10	3.1	0.1	3.3	0.2
	11	3.2	0.1	3.3	0.2
	12	3.2	0.1	3.3	0.2
Town Center Boulevard/ Latrobe Road	13	3.3	0.2	3.3	0.2
	14	3.5	0.4	3.5	0.4
	15	3.4	0.3	3.4	0.3
	16	3.4	0.3	3.4	0.3

ppm = parts per million
RE = receptor
[a] Receptors 1 through 16 were placed 3 meters from the traveled way at each intersection corner.
[b] Background concentrations of 3 and 0 ppm were added to the modeling 1- and 8-hour results, respectively.
[d] The federal and state 1-hour standards are 35 and 20 ppm, respectively.
[e] The federal and state 8-hour standards are 9 and 9.0 ppm, respectively.

Conclusion

Even with VMVSP policies and Mitigation Measures AQ-2a through AQ-2f, GHG-1, GHG-2, and TRA-2, criteria pollutant emissions during long-term operation and concurrent construction and partial operations would exceed EDCAQMD's ROG, NO_X, and PM thresholds. Accordingly, implementation of the VMVSP could contribute a significant level of ROG, NO_X, and PM emissions within the MCAB, which could increase receptor exposure to air pollution and resultant health effects. Therefore, this impact would be significant and unavoidable.

Mitigation Measure AQ-2a: Use low-VOC coatings during construction.

Mitigation Measure AQ-2b: Implement BMPs to reduce construction-related exhaust emissions during early construction.

Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks.

Mitigation Measure AQ-2d Implement an EDCAQMD-approved fugitive-dust control plan during construction.

Mitigation Measure AQ-2e: Offset construction-generated ozone precursors.

Mitigation Measure AQ-2f: Promote green consumer products.

Mitigation Measure GHG-1: Implement BMPs to reduce construction-generated GHG emissions.

Mitigation Measure GHG-2: Develop and implement a GHG reduction plan to reduce construction and operational area, mobile, and building natural-gas GHG emissions.

Mitigation Measure TRA-2: Shift 25,000 square feet of commercial office land use to commercial retail land use.

Impact AQ-3d: Expose sensitive receptors to naturally occurring asbestos and associated health risks during construction (less than significant with mitigation)

Disturbance of rock and soil that contains NOA can result in consequent exposure of the public to health risks from inhalation of NOA-containing dust. As shown in Figure 3.2-1, portions of the proposed project lie within areas known to contain asbestos. The Youngdahl Consulting Group completed an assessment of NOA for the proposed development. Traces (less than 0.25%) of NOA were found in 4 of 48 samples of rock and soil collected from test pits in the project area (Youngdahl Consulting Group 2012). Geological conditions were identified for some areas of the VMVSP that

could indicate a higher likelihood for NOA, even though shallower samples may have had only traces or no NOA. This may occur in areas that may have deep excavation cuts into less-weathered rock.

The analysis conducted by the Youngdahl Consulting Group was based on the information currently available in the VMVSP, which shows land use designations and basic infrastructure. Until a tentative map and improvement plan is approved by the County for each project under the specific plan, the exact locations where construction activities that could encounter NOA or generate dust are unknown. Because NOA becomes a health hazard when it is disturbed and becomes airborne, additional testing in association with an asbestos dust mitigation plan is best conducted when construction specifics are known.

School facilities are proposed as part of the VMVSP. The California Department of Toxic Substances Control (DTSC) requires assessments for NOA for publicly funded school sites that are within 10 miles of an area known to have or likely to have NOA. If NOA is detected in concentrations greater than 0.001%, mitigation is required. This mitigation includes capping and periodic inspection of the site. The DTSC oversees the mitigation process. Though the study did not identify concentrations of NOA that would require capping (as required by the EDAQMD), it is likely that some areas would contain NOA at concentrations that would trigger capping. The presence of soil that contains NOA does not guarantee construction activities would result in increased incidence of illness. Nevertheless, earthmoving activities during construction could expose NOA and increase the potential for individuals to become exposed to dust containing NOA. This is a potentially significant impact. Mitigation Measure AQ-3a would require compliance with EDCAQMD's Rule 223-2, which at the discretion of the APCO, requires monitoring of earthwork activities for NOA and implementation of BMPs to control dust during construction to minimize the public's exposure to NOA (Youngdahl Consulting Group 2012). With implementation of Mitigation Measure AQ-3, the impact of NOA exposure would be less than significant.

Mitigation Measure AQ-3: Submit and implement an asbestos dust mitigation plan in accordance with EDCAQMD Rule 223-2

For portions of the project within an NOA area, the project applicant will prepare and submit an asbestos dust mitigation plan to EDCAQMD that is consistent with EDCAQMD Rule 223-2. The final Asbestos Dust Mitigation Plan will address specific construction activities, locations, and timing information that are not yet available and will be submitted to and approved by EDCAQMD prior to the start of any construction activity. The County will not issue a grading permit for any phase of construction until it has received the approved Asbestos Dust Mitigation Plan. Compliance with the approved plan will be documented, at the applicant's expense, through periodic monitoring and annual reporting to the County. The Asbestos Dust Mitigation Plan will contain all of the following information.

- Contact information for the party responsible for plan preparation and application of dust-control measures
- Plot plan showing project type, location, acres, and area to be disturbed
- Expected start and completion dates of dust-generating and soil-disturbing activities to be performed on site
- Actual and potential sources of fugitive-dust emissions on site and the location of bulk material-handling and storage areas, paved and unpaved roads, entrances and exits where carryout/trackout may occur, and traffic areas

- BMP (Rule 223-2, Table 1 through 4) or other effective measures for:
  - Construction
  - Bulk material handling
  - Carryout and trackout management
  - Blasting activities
- Dust-control measures if operations are large in scale (Rule 223-2, Table 5 and 6)
- List of specific control measures for chemical dust suppressants
- Surface treatments and/or control measures for material carryout, trackout, and sedimentation where unpaved and/or access points join paved roads
- A statement indicating how often the items specified in Section 223-2.9 (Recordkeeping and Reporting Requirements), and any other items identified in the plan, will be reported to EDCAQMD.

The Asbestos Dust Mitigation Plan will include contingency plans for the discovery of previously unidentified asbestos in concentrations triggering special capping requirements for school sites (as required by DTSC) that EDCAQMD will approve before construction. A geologist experienced in the visual assessment for NOA, or for conditions likely to contain NOA, will periodically observe all earthwork. To allow for the determination of possible final capping requirements, a certified engineering geologist will perform additional NOA evaluation during grading. Results of the evaluation will be reported to and approved by EDCAQMD.

If capping becomes required, clean capping material will be needed. Up to 600,000 cubic yards of overburden material remaining from the development of the Northern Marble Valley Quarry is reported to be on the east side of the quarry. Laboratory analysis of three samples of this material did not detect asbestos. If the overburden soil has engineering properties that make it suitable for capping material (or can be engineered to make it suitable), additional testing will be performed on this material to verify its suitability as a source of clean capping material.

Impact AQ-4: Result in other emissions (such as those leading to odors) that adversely affect a substantial number of people (less than significant)

Potential odor sources during construction activities may include diesel exhaust from heavy-duty equipment and architectural-coating emissions. Construction-related operations near existing receptors would be temporary in nature, and construction activities would not be likely to result in nuisance odors that would violate EDCAQMD Rule 205.

Potential odor sources from project operations could include diesel exhaust from ongoing trash pick-up and the use of architectural coatings during routine maintenance; limited odors may also result from residential cooking appliances (e.g., range hood vents). These odors are expected to be minor and are not likely to dominate ambient odors that the surrounding environment generates, which includes adjacent residential and commercial land uses, as well as traffic on US 50. Moreover, EDCAQMD does not consider the land uses associated with the proposed project to contain facilities with the potential to result in nuisance odors.

Based on the above analysis, neither construction nor operation of the project would result in new or worsened odors that would affect a substantial number of people, and impacts would be less than significant.

Impact AQ-5: Result in a cumulatively considerable net increase of any criteria pollutant, expose sensitive receptors to substantial pollutant concentrations, or generate odors as a result of construction and operations of offsite improvements (less than significant with mitigation)

Construction

Construction criteria pollutant emissions for the roadway improvements and water/wastewater infrastructure upgrades are included in the emissions reported in Impact AQ-2a (Table 3.2-4 and Table 3.2-5). On an individual basis, with implementation of Mitigation Measures AQ-2b through AQ-2d and GHG-1, none of the offsite improvements would result in emissions that would exceed thresholds. As such, criteria pollutant emissions would not be expected to contribute a significant level of air pollution such that regional air quality within the MCAB would be degraded. Accordingly, with implementation of Mitigation Measures AQ-2b through AQ-2d and GHG-1, construction-generated criteria pollutant emissions would result in a less-than-significant impact.

Construction activities have the potential to exposure receptors to TACs and disturb rock and soil that could contain NOA (if the offsite improvements are in areas known to contain asbestos). Although DPM would be generated during construction, most improvements would be completed within a few months, and no more than 2 years. Mitigation Measures AQ-2b and AQ-2c and GHG-1 would also reduce DPM emissions from off-road equipment. Compliance with EDCAQMD Rule 223-2 and implementation of Mitigation Measures AQ-2d and AQ-3 would reduce the impact of NOA exposure to a less-than-significant level by requiring soil testing before the onset of soil-disturbing activities, as would implementation of NOA control measures (i.e., BMPs) and periodic monitoring if NOA were present.

Mitigation Measure AQ-2b: Implement BMPs to reduce construction-related exhaust emissions during early construction.

Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks.

Mitigation Measure AQ-2d: Implement EDCAQMD fugitive-dust control measures and submit a fugitive-dust control plan.

Mitigation Measure AQ-3: Submit and implement an Asbestos Dust Mitigation Plan in accordance with EDCAQMD Rule 223-2.

Mitigation Measure GHG-1: Implement BMPs to reduce construction-generated GHG emissions.

Operation

It is anticipated that operation of the water transmission line and wastewater system upgrades would not result in a significant impact related to TACs or criteria pollutant emissions because operation of the facilities and infrastructure are not anticipated to generate substantial TAC sources

or materially affect regional VMT. Criteria pollutant emissions associated with the use of offsite utility and roadway improvements were included in the analysis of project emissions, because the activities that generate emissions, such as consuming water or driving, are associated with the land uses in the specific plan and were included in the project analysis. Additional minor emissions would be associated with operations and maintenance (O&M) activities for the water lines and roadways that are not included in the analysis of project operational emissions. However, O&M vehicle trips to service the water lines and roadways would amount to a limited number of trips and would not contribute an appreciable amount of emissions. The offsite improvements are not anticipated to generate significant levels of odors. Accordingly, impacts would be less than significant.

Impact AQ-6: Result in a cumulatively considerable net increase of any criteria pollutant, expose sensitive receptors to substantial pollutant concentrations, or generate odors as a result of implementation of General Plan Policy TC-Xf improvements (less than significant with mitigation)

Construction

Construction of the intersection and roadway improvements would generate minor amounts of criteria pollutant emissions, such as the offsite roadway improvements discussed under Impact AQ-2a. On an individual basis, it is unlikely any of the improvement projects would result in emissions that would exceed thresholds. However, if activities overlap with construction of onsite elements, thresholds may be exceeded. Mitigation Measures AQ-2b through AQ-2d and GHG-1 would be available to address this impact.

Construction activities have the potential to exposure receptors to DPM and disturb rock and soil that contains NOA (if the offsite improvements are in areas known to contain asbestos). While DPM would be generated during construction, most improvements would be completed within a few months, and no more than 2 years. Compliance with EDCAQMD Rule 223-2 and implementation of Mitigation Measure AQ-3 would reduce the impact of NOA exposure to a less-than-significant level by requiring soils testing before soil-disturbing activities begin, and implementation of NOA control measures (BMPs) and periodic monitoring if NOA is present.

Mitigation Measure AQ-2b: Implement BMPs to reduce construction-related exhaust emissions during early construction.

Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks.

Mitigation Measure AQ-2d: Implement EDCAQMD fugitive-dust control measures and submit a fugitive-dust control plan.

Mitigation Measure AQ-3: Submit and implement an asbestos dust mitigation plan in accordance with EDCAQMD Rule 223-2.

Mitigation Measure GHG-1: Implement BMPs to reduce construction-generated GHG emissions.

Operation

General Plan Policy TC-Xf projects would improve traffic and intersection operations, thereby reducing congestion and vehicle delay. Accordingly, the projects would likely reduce mobile-source emissions and associated odors and health risks because vehicle movement would be more efficient compared with existing conditions. This impact would be less than significant.

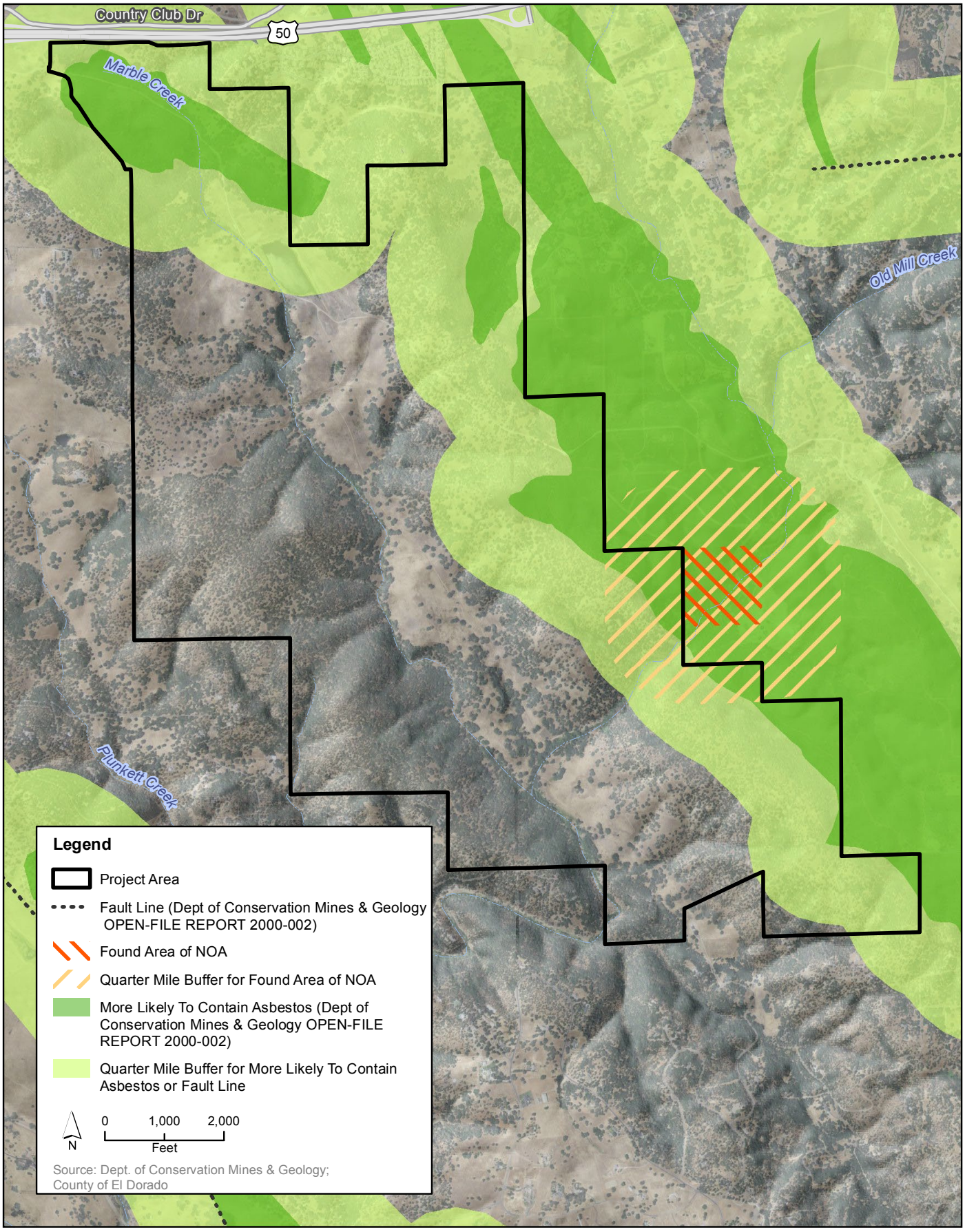


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Figure 3.2-1
Naturally Occurring Asbestos in the Planning Area

3.3 Biological Resources

3.3.1 Existing Conditions

This section describes the regulatory setting and environmental setting for biological resources and analyzes potential impacts that could result from build-out of the Village of Marble Valley Specific Plan (VMVSP) (proposed project).

Regulatory Setting

Federal

Endangered Species Act

The federal Endangered Species Act (ESA) of 1973 and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems on which they depend. The U.S. Fish and Wildlife Service (USFWS) (with jurisdiction over plants, wildlife, and resident fish) and the National Marine Fisheries Service (NMFS) (with jurisdiction over anadromous fish and marine fish and mammals) oversee the ESA. Section 7 of the ESA mandates all federal agencies to consult with USFWS and NMFS if they determine that a proposed project may affect a listed species or its habitat. Section 7 requirements do not apply to non-federal actions. At present, a federal permit is expected to be required for the proposed project and would involve consultation with USFWS under Section 7 for effects on federally listed species. Potential habitat for the federally listed California red-legged frog (*Rana draytonii*) occurs within the VMVSP area.

Section 9 of the ESA prohibits the take of any fish or wildlife species listed as endangered, including the destruction of habitat that prevents the species' recovery. Take is defined as the action of or attempt to hunt, harm, harass pursue, shoot, wound, capture, kill, trap, or collect a species. Section 9 prohibitions also apply to threatened species unless a special rule has been defined with respect to take at the time of listing.

Clean Water Act

The federal Clean Water Act (CWA) was enacted as an amendment to the federal Water Pollution Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to waters of the United States. CWA serves as the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands.

CWA empowers the U.S. Environmental Protection Agency (USEPA) to set national water quality standards and effluent limitations and includes programs addressing both point-source and nonpoint-source pollution. Point-source pollution is pollution that originates or enters surface waters at a single, discrete location, such as an outfall structure or an excavation or construction site. Nonpoint-source pollution originates over a broader area and includes urban contaminants in stormwater runoff and sediment loading from upstream areas. CWA operates on the principle that all discharges into the nation's waters are unlawful unless specifically authorized by a permit; permit review is the CWA's primary regulatory tool. The following discussion provides additional details on specific CWA sections.

Permits for Fill Placement in Waters and Wetlands (Section 404)

CWA Section 404 regulates the discharge of dredged and fill materials into waters of the United States. Waters of the United States refer to oceans, bays, rivers, streams, lakes, ponds, and wetlands.

On January 9, 2001, the U.S. Supreme Court made a decision in *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers* (SWANCC) [121 S.CT. 675, 2001] that affected U.S. Army Corps of Engineers (USACE) jurisdiction in isolated waters. Based on SWANCC, USACE no longer has jurisdiction over or regulates isolated wetlands (i.e., wetlands that have no hydrologic connection with waters of the United States).

A June 19, 2006, ruling on two consolidated cases (*Rapanos v. United States* and *Carabell v. U.S. Army Corps of Engineers*), referred to as the Rapanos decision, affects whether some waters or wetlands are considered jurisdictional under CWA. In these cases, the U.S. Supreme Court reviewed the USACE definition of waters of the United States and whether it extended to tributaries of traditional navigable waters (TNW) or wetlands adjacent to those tributaries. The decision provided two standards for determining jurisdiction of waterbodies that are not TNWs: (1) if the non-TNW is a relatively permanent water or is a wetland directly connected to a relatively permanent water, or (2) if the waterbody has "significant nexus" to a TNW. The significant nexus definition is based on the purpose of the CWA ("restore and maintain the chemical, physical, and biological integrity of the nation's waters"). Guidance issued by USEPA and USACE on the Rapanos decision requires application of the two standards to support a jurisdictional determination for a waterbody.

In January 2020, USEPA and USACE signed an agreement on a new definition of waters of the United States, known as the new Navigable Waters Protection Rule (NWPR). The NWPR revised the definition of waters that are federally regulated under the CWA and replaced the October 2019 rule. The new NWPR narrows the definition of waters of the United States, focusing on TNW and whether there is a surface water connection between them. The NWPR was published in the *Federal Register* (Fed. Reg.) on April 21, 2020 (85 Fed. Reg. 22250) and became effective June 22, 2020.

In January 2023, the Revised Definition of "Waters of the United States" replaced the 2020 Navigable Waters Protection Rule and took effect on March 20, 2023. On May 25, 2023, the United States Supreme Court's decision in the case of Sackett v. Environmental Protection Agency was issued. Based on this case, the United States Environmental Protection Agency (EPA) and the USACE announced a final rule on September 8, 2023, the "Revised Definition of 'Waters of the United States'; Conforming" (Conforming Rule). California is among the states that have adopted this rule. Significant changes in the definitions include the revised definition of adjacent wetlands – "adjacent" now means having a continuous surface connection. The Conforming Rule also removes the significant nexus test from consideration when identifying tributaries and other waters as federally protected.

Under the Conforming Rule [88 FR 3142, Jan. 18, 2023, as amended at 88 FR 61968, Sept. 8, 2023], Waters of the United States includes the following waters (§ 328.3 Definitions).

(a) Waters of the United States are defined as follows:

(1) Waters which are:

(i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(ii) The territorial seas; or

(iii) Interstate waters;

(2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;

(3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;

(4) Wetlands adjacent to the following waters:

(i) Waters identified in paragraph (a)(1) of this section; or

(ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;

(5) Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section.

(b) The following are not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(2) through (5) of this section:

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;

(2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;

(3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;

(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;

(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;

(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and

(8) Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

For ***Non-tidal waters of the United States****, i.e., rivers, streams, lakes, ponds, the* limits of jurisdiction are:

(1) In the absence of adjacent wetlands, the jurisdiction extends to the ordinary high-water mark, or

(2) When adjacent wetlands are present, the jurisdiction extends beyond the ordinary high-water mark to the limit of the adjacent wetlands.

(3) When the water of the United States consists only of wetlands the jurisdiction extends to the limit of the wetland.

Applicants must obtain a permit from USACE for all discharges of dredged or fill material into waters of the United States, including adjacent wetlands, before proceeding with a proposed activity. USACE may issue either an individual permit evaluated on a case-by-case basis or a general permit evaluated at a program level for a series of related activities. General permits are preauthorized and issued to cover multiple instances of similar activities that are expected to cause only minimal adverse environmental effects. A nationwide permit (NWP) is a type of general permit that is issued to cover particular fill activities. Each NWP specifies particular conditions that must be met for the NWP to apply to a particular project.

Compliance with CWA Section 404 requires compliance with several other environmental laws and regulations. USACE cannot issue an individual permit or verify the use of a general permit until the requirements of the National Environmental Policy Act (NEPA), ESA, and the National Historic Preservation Act have been met. In addition, USACE cannot issue or verify any permit until water quality certification or a waiver of certification has been issued pursuant to CWA Section 401. Because the proposed project would discharge fill into waters of the United States in the project area, a Section 404 permit would be required. The applicant applied for a Section 404 permit in September 2013.

Permits for Stormwater Discharge (Section 402)

CWA Section 402 regulates construction-related stormwater discharges to surface waters through the National Pollutant Discharge Elimination System (NPDES) program, which is administered by USEPA. In California, the State Water Resources Control Board (State Water Board) is authorized by USEPA to oversee the NPDES program through the Regional Water Quality Control Boards (Regional Water Boards) (see the related discussion under *Porter-Cologne Water Quality Control Act*). The project area is under the jurisdiction of the Central Valley Regional Water Quality Control Board (Central Valley Water Board).

NPDES permits are required for projects that disturb more than 1 acre of land. The NPDES permitting process requires the applicant to file a public notice of intent to discharge stormwater and prepare and implement a stormwater pollution prevention plan (SWPPP). The SWPPP includes a site map and a description of proposed construction activities. In addition, it describes the best management practices (BMPs) that would be implemented to prevent soil erosion and discharge of other construction-related pollutants (e.g., petroleum products, solvents, paints, cement) that could contaminate nearby water resources. Permittees are required to conduct annual monitoring and reporting to ensure that BMPs are correctly implemented and effective in controlling the discharge of stormwater-related pollutants. Because the proposed project would disturb more than 1 acre of land, an NPDES permit and SWPPP would be required for construction activities.

Additionally, El Dorado County (County) is in the process of implementing requirements of the State Water Board's NPDES General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems, Order No. 2013-0001-DWQ (Order). The proposed project qualifies as a "regulated project," as defined in Section E.12 of the Order and, therefore, will be required to comply with the standards provided in the Order.

Water Quality Certification (Section 401)

Under CWA Section 401, applicants for a federal license or permit to conduct activities that may result in the discharge of a pollutant into waters of the United States must obtain certification from the state in which the discharge would originate or, if appropriate, from the interstate water pollution control agency with jurisdiction over affected waters at the point where the discharge would originate. Therefore, all projects that have a federal component and may affect state water quality (including projects that require federal agency approval, such as issuance of a Section 404 permit) must also comply with CWA Section 401. Section 401 water quality certification from the Central Valley Water Board would be required for waters of the United States identified in the project area.

For each of the relevant CWA sections, the project applicant would obtain and comply with the applicable federal and state permits, and all conditions that are attached to those permits would be implemented as part of the proposed project. The permit conditions would be clearly identified in the construction plans and specifications and monitored during and after construction to ensure compliance. Because the proposed project would require a Section 404 permit and would have the potential to discharge pollutant into waters of the United States, a Section 401 certification or waiver would be required. The project applicant will apply for a Section 401 certification.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) domestically implements a series of international treaties that provide for migratory bird protection. The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds. The act further provides that it is unlawful, except as permitted by regulations "to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird …" (16 United States Code [USC] 703). This prohibition includes both direct and indirect acts, although harassment and habitat modification are not included unless they result in direct loss of birds, nests, or eggs. The current list of species protected by the MBTA can be found in the November 1, 2013, Fed. Reg. (50 Code of Federal Regulations [CFR] 10.13). This list comprises several hundred species, including essentially all native birds. Permits for take of nongame migratory birds can be issued only for specific activities, such as scientific collecting, rehabilitation, propagation, education, taxidermy, and protection of human health and safety and personal property. USFWS publishes a list of birds of conservation concern to identify migratory nongame birds that are likely to become candidates for listing under ESA without additional conservation actions. The birds of conservation concern list is intended to stimulate coordinated and collaborative conservation efforts among federal, state, tribal, and private parties.

The Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) (16 USC 668) prohibits take and disturbance of individuals and nests. Take permits for birds or body parts are limited to religious, scientific, or falconry pursuits. However, the BGEPA was amended in 1978 to allow mining developers to apply to USFWS for permits to remove inactive golden eagle (*Aquila chrysaetos*) nests in the course of

"resource development or recovery" operations. With the 2007 removal of bald eagle from the ESA list of threatened and endangered species, USFWS issued new regulations to authorize the limited take of bald eagles (*Haliaeetus leucocephalus*) and golden eagles under the BGEPA where the take to be authorized is associated with otherwise lawful activities. A final Eagle Permit Rule was published on September 11, 2009 (74 Fed. Reg. 46836–46879; 50 CFR 22.26). The final rule was revised on February 12, 2024 and takes effect on April 12, 2024 (89 Fed. Reg. 9920).

Executive Order 13112: Prevention and Control of Invasive Species

Executive Order (EO) 13112, signed February 3, 1999, directs all federal agencies to prevent and control the introduction of invasive species in a cost-effective and environmentally sound manner. The EO established the National Invasive Species Council, which is composed of federal agencies and departments, and a supporting Invasive Species Advisory Committee composed of state, local, and private entities. In 2016, the National Invasive Species Council released an updated national invasive species management plan (National Invasive Species Council 2016) that recommends objectives and measures to implement the EO and prevent the introduction and spread of invasive species. The EO requires consideration of invasive species in NEPA analyses, including their identification and distribution, their potential impacts, and measures to prevent or eradicate them. Because proposed project construction would require federal permits and have the potential to spread invasive plant species, measures are included in this EIR to prevent the introduction and spread of invasive plants.

State

California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code 2050 et seq.) establishes state policy to conserve, protect, restore, and enhance threatened or endangered species and their habitats. CESA mandates that state agencies should not approve projects that jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. There are no state agency consultation procedures under CESA. For projects that would affect a species that is federally and state listed, compliance with ESA satisfies CESA requirements if the California Department of Fish and Wildlife (CDFW) determines that the federal incidental take authorization is consistent with CESA under California Fish and Game Code Section 2080.1. For projects that would result in take of a species that is only state listed or if CDFW does not issue a Section 2080.1 consistency determination, project proponents must apply for a take permit under Section 2081(b).

California Fish and Game Code

Several sections of the California Fish and Game Code apply to the proposed project—1602, 3503, 3503.5, 3511, 3513, 5515, 4700, and 5050— and are described below.

Section 1602: Streambed Alteration Agreements

Under California Fish and Game Code Section 1602, public agencies are required to notify CDFW before undertaking any project that would divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. Preliminary notification and project review generally occur during the environmental review process. When an existing fish or wildlife resource may be substantially adversely affected, CDFW is required to propose reasonable project changes to protect the resources. These modifications are formalized in a streambed alteration agreement that

becomes part of the plans, specifications, and bid documents for the project. Because the proposed project would alter the natural flow, bed, and bank of streams in the project area, a streambed alteration agreement would be required.

Sections 3503 and 3503.5: Birds and Raptors

Section 3503 of the California Fish and Game Code prohibits the killing of birds and the destruction of bird nests. Section 3503.5 prohibits the killing of raptor species and the destruction of raptor nests. Raptors are birds of prey and include eagles, hawks, falcons, kites, and owls. Trees and shrubs in and adjacent to the project area provide suitable nesting habitat for birds and raptors.

Sections 3511, 4700, 5515, and 5050: Fully Protected Species

The California Fish and Game Code provides protection from take for a variety of species, referred to as fully protected species. Section 5050 lists fully protected amphibians and reptiles; Section 5515 lists fully protected fish; Section 3511 lists protected birds, including the white-tailed kite (*Elanus leucurus*), for which there is potential nesting and foraging habitat in the study area; and Section 4700 lists protected mammals, including the ringtail (*Bassariscus astutus*), for which there is suitable denning habitat in the study area. The California Fish and Game Code defines take as "hunt, pursue, catch, capture, or kill" or "an attempt to hunt, pursue, catch, capture, or kill." Senate Bill (SB) 147, that took effect on July 10, 2023, amends Sections 395, 3511, 4700, 5050, and 5515, and adds Section 2081.15 to the Fish and Game Code. Unless a project is eligible for a take authorization permit pursuant to section 2081.35, all take of fully protected species is prohibited, except for take related to scientific research, Recent take provisions added under SB 147 do not apply to the Project as the Project does not fall within the project categories eligible for a take authorization permit.

Section 3513: Migratory Birds

California Fish and Game Code Section 3513 prohibits the take or possession of any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

California Native Plant Protection Act

The California Native Plant Protection Act (CNPPA) of 1977 prohibits importation of rare and endangered plants into California, take of rare and endangered plants, and sale of rare and endangered plants. CESA defers to CNPPA, which ensures that state-listed plant species are protected when state agencies are involved in projects subject to CEQA. In this case, plants listed as rare under CNPPA are protected under CEQA, not under CESA. Because the proposed project has potential to adversely affect rare and endangered plants, surveys for these plants and mitigation for any effects are required and are discussed in this document.

Porter-Cologne Water Quality Control Act

California Water Code Section 13260 requires "any person discharging waste, or proposing to discharge waste, in any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements)." Under the recent Wetland Riparian Area Protection Policy (May 28, 2020), Regional Water Boards will maintain jurisdiction over features excluded in the NWPR. The newly adopted regulations create a new statewide wetland definition that expands to features not previously covered under federal law and creates a new permitting

program for activities that result in the discharge of dredge or fill materials to any waters of the state. The new rules are adopted under the federal CWA and the state Porter-Cologne Water Quality Control Act. Under the latter act, waters of the state are broadly defined as "[a]ny surface water or groundwater, including saline waters within state boundaries," including both natural and certain artificial or constructed facilities. Waters of the state includes both waters of the United States and non-federal waters of the state (State Water Resources Control Board 2019). Therefore, California retains authority to regulate discharges of waste into any waters of the state, regardless of whether USACE has concurrent jurisdiction under CWA Section 404. If USACE determines that a wetland or other waterbody is not subject to regulation under Section 404, CWA Section 401 water quality certification by the Regional Water Board is not required. However, the Regional Water Board may impose waste discharge requirements if fill material is placed into waters of the state. Because the project would place fill material into wetlands and drainages, which are waters of the United States and waters of the state, an application for water quality certification from the Central Valley Water Board would be needed.

Oak Woodlands Conservation Act

Senate Bill 1334, the Oak Woodlands Conservation Act, was enacted by the Legislature in 2004 to add Section 21083.4 to the Public Resources Code (PRC) regarding oak woodlands conservation. Section 21083.4(b) requires that a County make a determination whether a project within its jurisdiction may result in conversion of oak woodlands that will have a significant effect on the environment. If a County determines that there may be a significant effect on oak woodlands, the County must require one or more of four oak woodlands mitigation alternatives to mitigate the significant effect of the conversion of woodlands. These alternatives are: conserving oak woodlands through conservation easements; planting an appropriate number of trees and maintaining them; contributing funds to the Oak Woodlands Conservation Fund; or other mitigation measures developed by the County. El Dorado County implements the requirements of this act through the Oak Resources Management Plan (ORMP), described below, which defines mitigation requirements for impacts on oak woodlands, individual native oak trees, and Heritage Oaks and outlines the County's strategy for oak resource management and conservation (El Dorado County 2017). The Oak Resources Conservation Ordinance implements the ORMP.

Local

El Dorado County General Plan

The relevant biological resource goals, objectives, and policies from the 2004 County General Plan (El Dorado County 2004) are discussed below. The full text of these goals, objectives, and policies can be found in Appendix B, *Consistency with El Dorado County General Plan Policies*, which provides analysis of the project's consistency with County General Plan policies, as required under State CEQA Guidelines Section 15125.

Conservation and Open Space Element

GOAL 7.3, Water Quality and Quantity, addresses conservation, enhancement, and management of water resources and includes Objective 7.3.3, Wetlands, and Policies 7.3.3.1, 7.3.3.4, and 7.3.3.5, and Objective 7.3.4, Drainage, and Policies 7.3.4.1 and 7.3.4.2.

GOAL 7.4, Wildlife and Vegetation Resources, addresses the identification, conservation, and management of wildlife, wildlife habitat, fisheries, and vegetation resources of significant biological,

ecological, and recreational value, and includes Objective 7.4.1, Rare, Threatened, and Endangered Species, and Policy 7.4.1.6; Objective 7.4.2, Identify and Protect Resources, and Policies 7.4.2.2, 7.4.2.3, and, 7.4.2.8; and Objective 7.4.4, Forest and Oak Woodland Resources, and Policies, 7.4.4.2, 7.4.4.3, 7.4.4.4, and 7.4.4.5; and Objective 7.4.5, Native Vegetation and Landmark Trees, and Policy 7.4.5.1.

In 2014, after litigation and through a series of public workshops, the County determined that a mitigation and conservation approach to biological resource policies would most effectively meet the County's objectives. This approach is reflected in revisions to General Plan Policy 7.4.2.8, which retains the OWMP, renamed the Oak Resources Management Plan (ORMP), but omits the requirements for an Integrated Natural Resources Management Plan. The revised Policy 7.4.2.8 establishes a comprehensive Biological Resources Mitigation Program to govern evaluation, impact assessment, and mitigation for biological resources within the county. Under this policy, development projects within the county that require discretionary approval would be required to submit a biological resources study that meets the requirements of Policy 7.4.2.8, which include identifying impacts on each habitat type, and meeting mitigation and mitigation monitoring requirements.

Oak Resources Management Plan and Oak Resources Conservation Ordinance

The ORMP defines mitigation requirements for impacts on oak woodlands, individual native oak trees, and Heritage Oaks and outlines the County's strategy for oak resource management and conservation. The Oak Resources Conservation Ordinance implements the ORMP. Per the requirements of the ORMP, a tree removal permit is required for projects to authorize removal of any trees that are a component of an oak woodland and any individual native oak tree not located within an oak woodland.

Mitigation for impacts on oak resources can be achieved through a combination of onsite retention, replacement planting onsite and offsite, and in-lieu fees that will be used to acquire land and/or conservation easements to conserve oak woodlands, and to plant and maintain native oak trees. Per the requirements of the ORMP, all of a project's oak woodland impacts must be mitigated at a 1:1 ratio where 50% or less of onsite oak woodlands are affected; removing up to 75% requires a 1.5:1 ratio of mitigation and removing up to 100% requires a 2:1 ratio of mitigation. In addition, PRC Section 21083.4 requires that replacement planting not account for more than 50% of the total oak woodland mitigation requirement. Therefore, the remaining half of a project's oak woodland impact mitigation requirement would be implemented in the form of an in-lieu fee payment to the County. The current in-lieu fee for oak woodlands is $8,285 per acre of affected woodland. For individual trees, replacement requirements are based on an inch-for-inch replacement of the combined diameters of the trees removed. Currently, the in-lieu fee program requires a payment of $153 per inch of impact for individual non-Heritage oak trees and $459 per inch for Heritage Trees. The in-lieu fees collected are deposited in the County's Oak Woodland Conservation Fund. That fund is used to acquire land and/or conservation easements to conserve oak woodlands, provide for native oak tree planting, and for ongoing conservation area monitoring and management activities.

Environmental Setting

Study Area

For the purposes of this section, the project area encompasses the VMVSP area, which comprises 2,341 acres (based on geographic information systems [GIS] mapping of habitats in the project area from aerial photography) south of U.S. Highway (US) 50, east of Bass Lake Road, and west of Cambridge Road. The proposed project site is primarily hilly terrain vegetated with oak savannah, with lowland riparian oak woodland along Marble and Deer Creeks, and chaparral on several southern aspect hill slopes. The elevation of the site ranges from approximately 680 to 1,300 feet above mean sea level. Marble Creek enters the area from the northern boundary of the property, and flows in a southerly direction into Deer Creek, which flows from east to west through the southern portion of the site. The hills are drained by various intermittent drainages and seasonal wetland swales. There are two former limestone quarries in the northern portion of the project area.

In addition, offsite infrastructure and other improvements—roads and water and wastewater line extensions as well as oak woodland restoration—would be needed to support the proposed project (Figures 2-13 and 2-15 in Chapter 2, *Project Description*). These areas are referred to collectively as the offsite infrastructure improvement areas and involve the areas listed below.

- A new connection of Marble Valley Parkway to the Bass Lake Road interchange with US 50 (Marble Valley Parkway/Bass Lake Road).
- A new section of Marble Valley Parkway between the east and west sides of the northern portion of the project site (Marble Valley Parkway connection).
- Extension of the new Marble Valley Parkway access road to the Cambridge Road interchange with US 50 (Marble Valley Parkway/Cambridge Road).
- Interim improvements to the US 50/Cambridge Road interchange.
- Interim improvements to the US 50/Bass Lake Road interchange.
- Interim potable water improvements for Phase I within roadways.
- New water transmission lines along Bass Lake and Cambridge Roads.
- An area east of the project area that encompasses two infrastructure components:
    - Extensions of water and wastewater lines to connect to existing El Dorado Irrigation District (EID) infrastructure (EID water [potentially recycled water] and wastewater lines).
    - Potential extension of the new Lime Rock Valley Road to Deer Creek Road.

In addition, extensions to connect to electricity and natural gas services would be necessary to serve the project (Figure 2-13). These dry utility connections would be constructed by Pacific Gas and Electric Company (PG&E).

PG&E electricity service would be extended from a 21-kilovolt single-phase overhead line connecting to two existing substations, Clarksville to the west and Shingle Springs to the east (Marble Valley Company, LLC 2021).

PG&E may extend service to the project area to provide natural gas service in one of several ways as described in Chapter 2. The connections to the project area will follow Bass Lake Road or Cambridge Road.

Methods

Biological Studies Conducted

The data provided in this section was summarized from the following studies prepared for the project. Two additional surveys were completed in September 2019 for foothill yellow-legged frog (*Rana boylii*) and Brandegee's clarkia (*Clarkia biloba* ssp. *Brandegeeae*), which included an updated special-status plant survey. Impact conclusions and mitigation measures were based on the results of these studies and reconnaissance-level biological surveys.

- *Special-Status Plant Survey for Marble Valley, El Dorado County, California* (ECORP Consulting 2005).
- *Wetland Delineation for Marble Valley Property, El Dorado County, California* (ECORP Consulting 2006).
- *Marble Valley—Revised Wetland Delineation* (ECORP Consulting 2007).
- *Special-Status Plant Survey for the Village of Marble Valley Specific Plan (El Dorado County, California)* (ECORP Consulting 2013a).
- *Valley Elderberry Longhorn Beetle (VELB) Survey for the Village of Marble Valley Specific Plan (El Dorado County, California)* (ECORP Consulting 2013b).
- *California Red-Legged Frog (*Rana draytonii*) Habitat Assessment for the Village of Marble Valley Specific Plan (El Dorado County, California)* (ECORP Consulting 2013c).
- *Foothill Yellow-Legged Frog Survey Results and Habitat Assessment for the Village of Marble Valley Specific Plan (El Dorado County, California)* (ECORP Consulting 2013d).
- *California Tiger Salamander (*Ambystoma californiense*) Habitat Assessment for the Village of Marble Valley Specific Plan (El Dorado County, California)* (ECORP Consulting 2013e).
- *Results of Surveys for Blainville's Horned Lizard and Western Spadefoot Toad for the Village of Marble Valley Specific Plan (El Dorado County, California)* (ECORP Consulting 2013f).
- *Western Pond Turtle Survey Results for the Village of Marble Valley Specific Plan (El Dorado County, California)* (ECORP Consulting 2013g).
- *Special-Status Fish Assessment for the Village of Marble Valley Specific Plan (El Dorado County, California)* (ECORP Consulting 2013h).
- *2012 Dry Season 90-Day Report of Findings Regarding Federally-Listed Branchiopods for the Village of Marble Valley Specific Plan (El Dorado County, California)* (ECORP Consulting 2013i).
- *Special-Status Nesting Bird Survey for the Village of Marble Valley Specific Plan, El Dorado County, California* (ECORP Consulting 2013j).
- *California Rapid Assessment Method Analysis for the Village of Marble Valley Specific Plan, El Dorado County, California* (ECORP Consulting 2013k).
- *2012–2013 Wet Season 90-Day Report of Findings Regarding Federally-Listed Branchiopods for the Village of Marble Valley Specific Plan (El Dorado County, California)* (ECORP Consulting 2013l).
- *Application for Clean Water Act Section 404 Individual Permit for the Village of Marble Valley Specific Plan (El Dorado County, California)* (ECORP Consulting 2013m).

- *Bat Study Report for the Village of Marble Valley Specific Plan (El Dorado County, California)* (Wyatt 2013).
- *Biological Resources Study and Important Habitat Mitigation Plan for Oak Woodlands at the Village of Marble Valley, El Dorado County, California* (ECORP Consulting 2014a).
- *Preliminary Wetland Assessment for the Village of Marble Valley Specific Plan Off-Site Infrastructure Improvement Areas, El Dorado County, California* (ECORP Consulting 2014b).
- *Special-Status Species Assessment for the Village of Marble Valley Specific Plan Off-Site Infrastructure Improvement Areas, El Dorado County, California* (ECORP Consulting 2014c).
- *Off-Site Oak Canopy Impacts for the Villages of Marble Valley Specific Plan Area, El Dorado County, California* (ECORP Consulting 2014d).
- *Special-Status Species Assessment for the Village of Marble Valley Specific Plan Off-Site Infrastructure Improvement Areas, El Dorado County, California* (ECORP Consulting 2015).
- *Oak Resources Technical Report: Oak Woodlands and Oak Tree Individuals* (ECORP Consulting 2018).
- *Village of Marble Valley Project, El Dorado County, California: Impacts to Brandegee's Clarkia* (ECORP Consulting 2019a).
- *Foothill Yellow-Legged Frog Survey Results, The Village of Marble Valley Specific Plan, El Dorado County, California* (ECORP Consulting 2019b).
- *Arborist Report, Campobello Unit One, Off-Site Tree Removal and Tree Protection for Grading House Pads* (California Tree and Landscape Consulting, Inc. 2019).

Summary of Biological Surveys

Onsite Project Area

Biological surveys were conducted in 2005, 2007, 2012, 2013, 2014, 2015, and 2019 by ECORP Consulting biologists, and a reconnaissance survey was conducted on April 10, 2014, by ICF biologists (Table 3.3-1). Survey types, dates, location, and personnel involved in documenting waters of the United States and botanical, wildlife, and fisheries resources are summarized in Table 3.3-1. Data from these surveys were used in preparation of Section 3.3.1, *Existing Conditions*.

Table 3.3-1. Biological Resource Survey Dates

Resource	Date	Surveyor	Observations[a]
Plant communities	1990	McClelland Consultants	Identified five terrestrial plant communities.
Plant communities	May 9, June 12–14, and July 2, 2012	ECORP	Identified five terrestrial plant communities.
Blue oak woodland	January 24, 2014 April 23 and 30, May 1–3, 2018	ECORP	Evaluated oak canopy coverage and presented a mitigation plan in accordance with County General Plan policies. Oak woodland polygons field verified
Oak trees	April 23 and 30, May 1–3, 2018	ECORP	Conducted tree survey of individual oak trees outside of oak woodlands.

Resource	Date	Surveyor	Observations[a]
Delineation of waters of the United States	June 26, 1991	–	Verification letter from USACE.
Delineation of waters of the United States	November 14, 1994	Sugnet & Associates	Reverified.
Delineation of waters of the United States	February 1 and March 3–5 and 7, 2005	ECORP	Identified seasonal wetlands, seasonal wetland swales, seeps, intermittent drainages, drainage ditches, stock ponds, quarry ponds, perennial creek, and seasonal creeks.
Delineation of waters of the United States	2007–2012	ECORP	Verification site visit with USACE on January 18, 2007; revised February 13, 2007; verified on March 27, 2007; reverified July 2012; preliminary jurisdictional determination on August 16, 2012 (SPK-2012-00209).
California Rapid Assessment Method	May 25, 29–31 and June 19, 2012	ECORP	Evaluated habitat quality in 10 depressional wetlands and 13 riverine wetlands using CRAM.
Special-status species habitat assessment for offsite areas	October 21, 2013, and October 29, 2015	ECORP	Identified potential habitat for 14 plants and 14 wildlife species in the offsite infrastructure improvement areas.
Special-status plants	1990	Sugnet & Associates	No special-status plants observed.
Special-status plants	1996	EIP Associates	No special-status plants observed.
Special-status plants	April 6 and 13 and May 3, 2005	ECORP	No special-status plants observed.
Special-status plants	May 9, June 12–14, and July 2, 2012. April 25, May 15-17, May 22, and July 16–17, 2019	ECORP	Four populations of intergraded Brandegee's clarkia and two-lobed clarkia observed onsite.
Federally listed branchiopods—protocol-level dry-season surveys	October 30, 2012	ECORP	No listed vernal pool branchiopod cysts observed during soil analysis.
Federally listed branchiopods—protocol-level wet-season surveys	December 7 and 20, 2012; January 4 and 18, 2013; February 1 and 15, 2013; March 1, 15, and 29, 2013; April 5 and 19, 2013	ECORP	No listed vernal pool branchiopods observed.
Valley elderberry longhorn beetle—elderberry shrub survey[b]	June 19–21, 2012	ECORP	A total of 46 elderberry shrubs observed; no evidence of valley elderberry longhorn beetle presence (exit holes) on any shrub.
California red-legged frog—habitat assessment	May 6 and 8, 2012; June 21, 2012	ECORP	Potential foraging and dispersal habitat in Deer Creek, Marble Creek, one stock pond, and drainages throughout the property; potential breeding habitat in both quarry ponds and potentially in Deer Creek; uplands throughout the project area may provide foraging habitat and refugia; suitable breeding habitat in at least nine ponded aquatic features within 1.6 miles of the project area.

Resource	Date	Surveyor	Observations[a]
Foothill yellow-legged frog—habitat assessment	May 9 and June 9, 2012; May 14, June 14, and September 20, 2019	ECORP	No foothill yellow-legged frogs observed; habitat present for adult frogs.
California tiger salamander—habitat assessment	May 6 and 8, 2012	ECORP	Potential breeding and foraging habitat in Marble Creek, a stock pond, and a small quarry pond; marginal breeding habitat in a large quarry pond; suitable breeding habitat in at least nine ponded aquatic features within 2 kilometers (approximately 1.2 miles) of the project area.
Blainville's horned lizard and western spadefoot toad	May 29, 2012	ECORP	Suitable horned lizard habitat in chaparral and open grassland. Probable horned lizard scat observed in chaparral near the eastern edge of the property and potential horned lizard observed; no western spadefoot toads observed but several pools that may provide suitable habitat.
Western pond turtle	May 7 and 9, 2012	ECORP	Western pond turtles observed in the central quarry pond, small quarry pond, Deer Creek, and Marble Creek.
Special-status nesting birds	May 1, 4, 22, and 23, 2012; June 26 and 27, 2012	ECORP	Two red-tailed hawk nests observed; Cooper's hawk, white-tailed hawk, and lark sparrow nesting behavior observed; other special-status birds observed but nests or nesting behavior were not detected.
Bats	May 31–June 15 and October 1–12, 2012	David Wyatt	Two bat species of special concern and five additional bat species detected; three bat species were potentially detected during surveys but not confirmed.
Fisheries assessment	October 19 and 24, 2005; May 31, 2012	ECORP	Potential suitable habitat for special-status fish but no special-status fish observed; suitable holding and rearing habitat for anadromous salmonids, but extremely limited potential spawning habitat.
Reconnaissance for all resources	April 10, 2014	ICF	Did not observe additional species or identify habitat that was not previously documented.

CRAM = California Rapid Assessment Method
USACE = U.S. Army Corps of Engineers

[a] Surveys were conducted in the onsite project area, unless otherwise noted.

[b] Subsequent to survey, the project area was determined to be outside of valley elderberry longhorn beetle habitat.

Offsite Infrastructure Improvement Areas

The proposed project includes four potential offsite infrastructure improvement areas that are separate from the VMVSP project area, including three roads and areas for open space access. The proposed alignments for these improvements have been generally identified, as shown in Figures 2-13 and 2-15 in Chapter 2, *Project Description*; however, the exact locations have not been determined. Additional details of these improvement areas are provided in Section 2.3, *Project Overview*. These alignments were not included in the original vegetation community surveys or the

protocol-level wildlife species and blooming-period special-status plant surveys conducted for the onsite area of the VMVSP. However, a preliminary wetland assessment to map potential areas of wetlands and open water and a special-status species habitat assessment were conducted in the offsite areas. Table 3.3-1 also includes the dates and general results of biological surveys conducted in the offsite infrastructure improvement areas.

Vegetation Communities

The project area occurs within the northern Sierra Nevada Foothills subdivision of the California Floristic Province (Baldwin et al. 2012:39, 42–43). Eight distinct vegetation communities and five open water communities occur in the project area (Table 3.3-2). These communities are described below and shown in Figure 3.3-1. A list of the plant species observed in each community type is provided in Appendix E, *Plant Species*.

Table 3.3-2. Total Area of Vegetation Communities and Drainages in the Study Area

Community Type	VMVSP Project Area[a] (acres)	Offsite Infrastructure Improvement Areas[b] (acres)
Oak Woodland	1,827.81	–
Oak Savannah	60.11	3.5
Riparian Woodland	26.10	–
White-Leaf Manzanita Chaparral	207.73	–
Annual Grassland	166.69	–
Seasonal Wetland	1.562	0.51
Seasonal Swale	3.662	0.54
Seep	0.511	0.07
Perennial Creek	6.490	5.00
Seasonal Creek	6.150	
Intermittent Drainage	5.789	1.22
Ephemeral Drainage	0	0.05
Drainage Ditch	0.134	0.81
Quarry Pond	11.362	0
Stock Pond	0.132	0
Developed	12.93	–
Total	2,337.162[c]	11.7

[a] Acreages of waters of the United States have been verified by USACE in the VMVSP project area.

[b] Acreages of waters of the United States mapped in the offsite infrastructure improvement areas are preliminary and have not been verified by USACE. Upland community types were not mapped in the offsite areas, and no acreage estimates are available.

[c] This total does not exactly match the 2,341 acres stated in the project description due to minor deviations in GIS mapping of project area boundaries and rounding of the individual community type acreages.

The study area supports both common vegetation communities and sensitive natural communities. Common vegetation communities are habitats with low species diversity that are widespread, re-establish naturally after disturbance, or support primarily nonnative species. These communities generally are not protected by regulatory agencies unless the specific site is habitat for or supports special-status species (e.g., raptor foraging or nesting habitat, upland habitat in a wetland

watershed). Common vegetation communities in the study area are white-leaf manzanita chaparral, annual grassland, and developed areas. Sensitive natural communities are habitats considered sensitive because of their high species diversity, high productivity, unusual nature, limited distribution, or declining status. Local, state, and federal agencies consider these habitats important. The California Natural Diversity Database (CNDDB) contains a current list of rare natural communities throughout the state. USFWS considers certain habitats, such as wetlands and riparian communities, important to wildlife; and USACE and USEPA consider wetland habitats important for water quality and wildlife. The habitats in the study area that meet the criteria for sensitive natural communities are oak woodland and savannah, riparian woodland, wetlands, and open water communities.

Oak Woodland

Oak woodland is the most extensive vegetation community within the VMVSP project area. Two types of oak woodland were mapped onsite—open-canopy oak woodland, which ranges from 11% to 60% oak canopy cover, and closed-canopy oak woodland, which has greater than 60% oak canopy cover. Both of these woodlands support similar plant species and are referred to collectively as oak woodlands in this EIR. The canopy of the oak woodland is almost exclusively composed of blue oak (*Quercus douglasii*); however, interior live oak (*Quercus wislizeni*), valley oak (*Quercus lobata*), black oak (*Quercus kelloggii*), California buckeye (*Aesculus californica*), and gray pine (*Pinus sabiniana*) occasionally occur. Common understory shrubs within the oak woodland include toyon (*Heteromeles arbutifolia*) and poison oak (*Toxicodendron diversilobum*). The herbaceous understory of the oak woodland is primarily dominated by nonnative naturalized grasses, including hedgehog dog-tail grass (*Cynosurus echinatus*), ripgut brome (*Bromus diandrus*), soft brome (*Bromus hordeaceus*), false brome (*Brachypodium distachyon*), goat grass (*Aegilops triuncialis*), and slender wild oat (*Avena barbata*). Other common species in the understory of the oak woodland include spring vetch (*Vicia sativa*), California rose (*Rosa californica*), twining brodiaea (*Dichelostemma volubile*), and hedge parsley (*Torilis arvensis*). Acorns are a key resource for deer, squirrels, turkeys, jays, quail, and bears. Standing dead trees provide an important habitat resource for raptors, bats, salamanders, and lizards. Coarse woody tree material lying on the ground, particularly large logs, is a very important wildlife habitat element because the logs retain moisture in a relatively dry ecosystem. Oak woodlands near riparian resources such as creeks, rivers, or lakes support the greatest number of wildlife species.

A complete biological resources study was performed for the project area (ECORP Consulting 2014a) to evaluate the existing oak woodland and oak canopy. In 2018, the mapping of oak woodland polygons was verified, and a survey of individual oak trees was performed (ECORP Consulting 2018). The oak woodland and oak savannah accounts for 81% (1,887.92 acres) of the total project area. Proposed VMVSP Policy 6.32 would require applicants to quantify site-specific and cumulative oak tree impacts and to prepare a tree preservation and replacement plan as part of any small lot tentative subdivision map application, planned development permit, grading permit, or other similar action that would affect oak canopy.

Another type of oak woodland, interior live oak woodland, occurs in the Marble Valley Parkway connection and Marble Valley Parkway/Cambridge Road offsite improvement areas. These oak woodlands are similar in structure to the blue oak woodland, with an annual grassland understory to the interior live oak overstory; wildlife use would also be similar. Acreages of the interior live oak woodland have not been calculated because the specific road locations have not yet been determined.

Local and state agencies, including CDFW, recognize native oak woodlands as sensitive natural communities. County General Plan Policies 7.4.4.2, 7.4.4.3, 7.4.4.4, 7.4.4.5, and 7.4.5.1 protect oak woodlands.

Oak Savannah

Oak savannah was mapped onsite where oak canopy cover is between 2% and 10%. This vegetation community supports primarily annual grassland vegetation (described below) with scattered blue oaks and valley oaks.

Oak savannah also occurs in the Marble Valley/Bass Lake Road offsite improvement area.

County General Plan Policies 7.4.4.2, 7.4.4.3, 7.4.4.4, 7.4.4.5, and 7.4.5.1 protect oak trees and oak woodlands.

Riparian Woodland

Riparian woodland occurs along both Deer and Marble Creeks. Oregon ash (*Fraxinus latifolia*) and white alder (*Alnus rhombifolia*) dominate the canopy of this community. Other tree species found in the valley foothill riparian community include Fremont's cottonwood (*Populus fremontii*), interior live oak, valley oak, California buckeye, arroyo willow (*Salix lasiolepis*), and Goodding's willow (*Salix gooddingii*). Common shrubs in this community include buttonwillow (*Cephalanthus occidentalis* var. *californicus*), poison oak, and western redbud (*Cercis occidentalis*). The understory of this community is composed of a variety of annual and perennial hydrophytes, including poison hemlock (*Conium maculatum*), curly dock (*Rumex crispus*), creeping spikerush (*Eleocharis macrostachya*), hyssop loosestrife (*Lythrum hyssopifolia*), rushes, sedges, and California grape (*Vitis californica*). Riparian habitat supports a wide variety of wildlife species. Riparian trees are used for nesting, foraging, and protective cover by many bird species, including black-headed grosbeak (*Pheucticus melanocephalus*), tree swallow (*Tachycineta bicolor*), Bewick's wren (*Thryomanes bewickii*), and Cooper's hawk (*Accipiter cooperii*). Understory shrubs provide cover for mammals such as Botta's pocket gopher (*Thomomys bottae*) and for ground-nesting birds, such as spotted towhee (*Pipilo maculatus*), that forage among the vegetation and leaf litter.

Riparian woodland associated with intermittent or ephemeral drainages also occurs in the following offsite improvement areas: Marble Valley Parkway/Cambridge Road, EID water (potentially recycled water) and wastewater lines.

Local, state, and federal agencies recognize riparian habitats as sensitive natural communities. County General Plan Policy 7.4.2.2 protects riparian habitats that are critical wildlife areas and migration corridors by using open space designations and setbacks from development.

White-Leaf Manzanita Chaparral

Large stands of white-leaf manzanita chaparral are present in the northern and eastern portions of the project area, primarily in areas of the serpentine rock land soil mapping unit. This vegetation community is dominated by white-leaf manzanita (*Arctostaphylos manzanita*) and chamise (*Adenostoma fasciculatum*). Other shrubs occurring frequently in this community include buckbrush (*Ceanothus cuneatus*), toyon, coyote brush (*Baccharis pilularis*), western redbud, and yerba santa (*Eriodictyon californicum*). The shrub component of this community is dense, and as such, very few herbaceous plants are present in the understory. However, large openings in this community support plant species that are typical of the annual grassland vegetation community. One of the

large patches of chaparral on the east side of the project site is used by California Department of Forestry and Fire Protection firefighters to practice creating firebreaks, resulting in a high level of disturbance and numerous openings in this area. Typical wildlife species that use chaparral habitat include western whiptail (*Aspidoscelis tigris*), California thrasher (*Toxostoma redivivum*), and wrentit (*Chamaea fasciata*).

White-leaf manzanita chaparral also occurs in the offsite improvement areas for the EID water (potentially recycled water) and wastewater lines.

White-leaf manzanita chaparral is not considered a sensitive natural community.

Annual Grassland

Annual grasslands occur on open hills and slopes and as the understory in the oak savannah community. These grasslands are composed primarily of nonnative grasses and forbs, including false brome, soft brome, ripgut brome, wild oats, Italian ryegrass (*Festuca perennis*), red stem filaree (*Erodium cicutarium*), hedgehog dog-tail grass, and clovers (*Trifolium* spp.). Other species commonly observed in this community include bull thistle (*Cirsium vulgare*), yellow star-thistle (*Centaurea solstitialis*), brodiaeas, clarkias, sticky tarweed (*Holocarpha virgata*), and medusahead grass (*Elymus caput-medusae*). Grassland communities provide foraging, breeding, and cover habitat value for a variety of wildlife species, including gopher snake (*Pituophis catenifer*), western bluebird (*Sialia mexicana*), western meadowlark (*Sturnella neglecta*), red-tailed hawk (*Buteo jamaicensis*).

Because it is common and widespread, annual grassland is not considered a sensitive natural community.

Wetlands

All wetlands in the project area are considered waters of the United States regulated by USACE under CWA Section 404. Wetlands mapped in the project area consist of seasonal wetlands, seasonal wetland swales, and seeps. Delineation of the onsite project area has been verified by USACE. Wetlands in the proposed offsite improvement areas were preliminarily assessed but were not delineated according to the USACE delineation manual or verified by USACE. Therefore, the mapping in these areas is subject to change but most likely with only minor revisions.

Seasonal Wetland

The project area supports 32 seasonal wetland depressions. Dominant vegetation within the seasonal wetlands includes Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), Carter's buttercup (*Ranunculus bonariensis*), curly dock, annual rabbits-foot grass (*Polypogon monspeliensis*), and creeping spikerush. Seasonal wetlands support a variety of invertebrates and amphibians such as western toad (*Anaxyrus boreas*), Pacific tree frog (*Pseudacris regilla*), and western terrestrial garter snake (*Thamnophis elegans*). The wetlands may have reduced wetland functions as a result of disturbed conditions (ECORP Consulting 2013k).

The Marble Valley Parkway/Bass Lake Road and the Marble Valley Parkway connection offsite improvement areas each support one seasonal wetland with dominant vegetation similar to that found in the project area seasonal wetlands.

Seasonal Wetland Swale

A total of 152 seasonal wetland swales were mapped throughout the project area. These swales are generally linear features, most of which are vegetated sections of intermittent drainages but some convey water between seasonal wetlands during storm events. Parts of the swales remain saturated into the growing season and support wetland vegetation. Dominant vegetation in the seasonal wetland swales includes Mediterranean barley, Italian ryegrass, annual rabbits-foot grass, curly dock, and tall flatsedge (*Cyperus eragrostis*).

The Marble Valley Parkway/Bass Lake Road offsite improvement area includes three seasonal wetland swales dominated by Mediterranean barley and dock.

Seep

Seeps are perennial or nearly perennial features where groundwater comes to the surface and supports wetland plants. This wetland type can also be classified as emergent wetland. A total of 22 seeps are located on the hill slopes, primarily in the northern part of the project area. The seeps are dominated by Italian ryegrass, little quaking grass (*Briza minor*), tall flatsedge, creeping spikerush, miner's lettuce (*Claytonia perfoliata*), Carter's buttercup, and California buttercup (*Ranunculus californicus*).

Open Water

All open water features in the project area are considered waters of the United States regulated by USACE under CWA Section 404. Other waters mapped in the project area include perennial creek (Deer Creek), seasonal creek (Marble Creek), intermittent drainages, drainage ditches, stock ponds, and quarry ponds. In addition, ephemeral drainages were identified in the offsite improvement areas.

The delineation of waters of the United States within the VMVSP project area has been verified by USACE. Open water features in the proposed offsite improvement areas were preliminarily assessed but were not delineated according to the USACE standards or verified by USACE. Therefore, the mapping in these areas is subject to change but most likely with only minor revisions.

Perennial Creek (Deer Creek)

Deer Creek, which is an ephemeral or seasonal stream throughout most of its length, supports perennial or nearly perennial flow in the project area. Within the VMVSP project area, Deer Creek flows year-round as a result of discharge from the upstream Deer Creek Wastewater Treatment Plant (WWTP). East of the VMVSP and upstream of the Deer Creek WWTP, however, Deer Creek generally flows only seasonally. Deer Creek is primarily unvegetated because of the scouring effects of water, but the banks support riparian vegetation, including curly dock, white alder, red willow (*Salix laevigata*), blue elderberry (*Sambucus cerulea*), poison oak, poison hemlock, valley oak, broad-leaf cattail (*Typha latifolia*), and water primrose (*Ludwigia* spp.). The creek may have reduced functions as a result of disturbed conditions (ECORP Consulting 2013k).

Deer Creek also crosses under Deer Creek Road in the offsite improvement area for the EID water (potentially recycled water) and wastewater lines.

Seasonal Creek (Marble Creek)

Most of Marble Creek and some of its tributaries are seasonal creeks that receive surface runoff and direct rainfall during the wet season and are dry during the summer. Seasonal creeks occur on low-gradient slopes and are primarily unvegetated, but the banks support riparian vegetation, including red willow, blue elderberry, valley oak, poison oak, tall flatsedge, poison hemlock, and hyssop loosestrife. The creek may have reduced functions as a result of disturbed conditions (ECORP Consulting 2013k).

Intermittent Drainage

Intermittent drainages occur throughout the project area, typically on steep slopes, and are tributary to both Marble and Deer Creeks. Vegetation along and within these features includes species such as Italian ryegrass, Mediterranean barley, and curly dock. The drainage may have reduced functions as a result of disturbed conditions (ECORP Consulting 2013k).

One intermittent drainage that is tributary to Deer Creek crosses the Marble Valley Parkway/ Cambridge Road offsite improvement area.

Ephemeral Drainage

One ephemeral drainage that is tributary to Deer Creek was identified within the Marble Valley Parkway/Bass Lake Road offsite infrastructure improvement area. Ephemeral drainages are similar to intermittent drainages but receive water only from storm events and are not influenced by groundwater levels.

Drainage Ditch

Eleven sections of drainage ditches are located throughout the northern part of the project area. These ditches were historically used in mining operations. Some of the ditches have a berm on one or both sides, still convey water, and are completely vegetated. Dominant plant species in the ditches include California buttercup, hairy geranium (*Geranium molle*), Mediterranean barley, Italian ryegrass, and lupine (*Lupinus* spp.).

Unvegetated ditches were also identified in the Marble Valley Parkway/Bass Lake Road and Marble Valley Parkway connection offsite infrastructure improvement areas.

Stock Pond

Two stock ponds were mapped in the project area. These ponds were constructed by installing berms in natural drainages that connect to other drainages through seasonal wetland swales and intermittent drainages. The stock ponds receive rainfall and seasonal runoff. Vegetation in the stock ponds includes Carter's buttercup, Mediterranean barley, Italian ryegrass, tall flatsedge, hairy geranium, and creeping spikerush. The stock ponds may have reduced functions as a result of disturbed conditions (ECORP Consulting 2013k).

Quarry Pond

Two quarry ponds are in the project area. Each of these ponds is a historic quarry that has since been inundated. The larger of these two quarry ponds (QP-1, the North Quarry pond, sometimes called Marble Lake) is a deep, perennial pond that is fed by a diversion of Marble Creek. Vegetation along the banks of QP-1 consists primarily of arroyo willow and sandbar willow (*Salix exigua*). The

smaller of the two quarry ponds (QP-2, the South Quarry pond) is shallower and seasonal, receiving only rainfall and natural runoff. QP-2 supports a variety of seasonal wetland species, such as creeping spikerush, least spikerush (*Eleocharis acicularis*), Carter's buttercup, slender popcorn flower (*Plagiobothrys stipitatus*), and curly dock. The quarry ponds may have reduced functions as a result of disturbed conditions (ECORP Consulting 2013k).

Disturbed/Developed

The disturbed/developed areas mapped onsite are primarily dirt roads and a pad for a mobile home. These areas are unvegetated because of frequent maintenance.

Soils

The project area includes five soil map units, as shown in Figure 3.5-3 in Section 3.5, *Geology, Soils, Minerals, and Paleontological Resources*: Auburn silt loam (AwD), 2–30% slopes; Auburn very rocky silt loam (AxD), 2–30% slopes; Auburn very rocky silt loam (AxE), 30–50% slopes; and Serpentine rock land (SaF) and Sobrante silt loam (SuC), 3–15% slopes.

Wetlands and Waters of the United States

As described above, the project area contains waters of the United States, consisting of seasonal wetlands, seasonal wetland swales, seeps, intermittent drainages, seasonal creeks, perennial creeks, drainage ditches, stock ponds, and quarry ponds. A preliminary delineation of the project area was conducted in February and March 2006 and submitted to USACE to determine the agency's jurisdiction. A verification site visit was conducted on January 18, 2007, and the delineation was verified on March 27, 2007. The delineation was later reverified, and a preliminary jurisdictional determination was provided on August 16, 2012 (SPK-2012-00209).

Preliminary assessments of waters of the United States in the proposed offsite improvement areas were conducted. These areas were not delineated according to the USACE delineation manual or verified by USACE. Therefore, the mapping in these areas is subject to change but most likely with only minor revisions.

Special-Status Species

Special-status species are plants and animals that are legally protected under CESA, ESA, or other regulations as well as species that are considered sufficiently rare by the scientific community to qualify for such listing. For the purposes of this EIR, special-status species include the following species.

- Species listed or proposed for listing as threatened or endangered under ESA (50 CFR 17.12 [listed plants], 50 CFR 17.11 [listed animals], and various notices in the Fed. Reg. [proposed species]).
- Species that are candidates for possible future listing as threatened or endangered under ESA (88 Federal Register 41560 [June 27, 2023]).
- Species listed or proposed for listing by the State of California as threatened or endangered under CESA (14, California Code of Regulations 670.5).
- Species that meet the definitions of rare or endangered under the State CEQA Guidelines Section 15380.

- Animals fully protected in California (California Fish and Game Code 3511 [birds], 4700 [mammals], and 5050 [amphibians and reptiles]).
- Animal species of special concern to CDFW.
- Taxa (i.e., taxonomic categories or groups) that meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the State CEQA Guidelines (e.g., species that appear on the CDFW special animals list).
- Plants listed as rare under the CNPPA (California Fish and Game Code 1900 et seq.).
- Plants considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California" (Rare Plant Rank 1B and 2, California Native Plant Society 2024).
- Plants listed by CNPS as plants about which more information is needed to determine their status, and plants of limited distribution (Rare Plant Rank 3 and 4, California Native Plant Society 2024), which may be included as special-status species on the basis of local significance or recent biological information.

Special-Status Plants

Based on results of database searches of the CNDDB and CNPS *Inventory of Rare and Endangered Plants* (California Department of Fish and Wildlife 2024a; California Native Plant Society 2024), vegetation communities in the project area, conditions present in the project area, and data on known species' distribution, a total of 40 special-status plant species were identified as having potential to occur in the project area or vicinity (Table 3.3-3, provided at the end of this resource section). No suitable habitat (Ione formation soils, gabbro soils, coniferous forest, or vernal pools; range is higher in elevation) is present in the project area for 7 of the 40 species. Gabbro soils known to support special-status plants in El Dorado County are included in Rescue mapping units, which do not occur in the project area (see Section 3.5 for further details on soils in the project area). Suitable habitat is present in the project area for the remaining 33 species, 14 of which occur on serpentine soils, which are present in parts of the project area.

There are no previously documented occurrences of special-status plants in the project area (California Department of Fish and Wildlife 2024a). Surveys previously conducted in the project area (ECORP Consulting 2005) did not identify any special-status plants. However, special-status plant surveys conducted for the entire project area on May 9, June 7, June 12–14, and July 2, 2012 (ECORP Consulting 2013a) and April 25, May 15–17, May 22, and July 16–17, 2019, identified a plant that is most likely a special-status species, Brandegee's clarkia. Additional details regarding this species are provided below. A complete list of plant species encountered during these surveys is included as Appendix E.

Blooming-period surveys for special-status plants were not conducted in the proposed offsite infrastructure improvement areas, but these areas have potential habitat for 34 special-status plant species.

Brandegee's Clarkia

Brandegee's clarkia is currently designated as a CNPS Rare Plant Rank 4 plant but is not listed pursuant to either ESA or CESA. At the time of the May and June 2012 field surveys, this species was listed as CNPS Rare Plant Rank 1B and was, therefore, of higher concern than at present. However, Rank 4 plants may be of concern under CEQA if they are locally significant.

Brandegee's clarkia is an herbaceous annual that occurs in chaparral and cismontane woodlands, often along roadcuts, at elevations ranging from 240 to 3,000 feet above mean sea level. This species blooms from May through July and is endemic to California. The current range of this species includes Amador, Butte, El Dorado, Nevada, Placer, Sacramento, Sierra, and Yuba Counties (California Native Plant Society 2024). Two occurrences of Brandegee's clarkia have been reported within 5 miles of the project area, and the closest recorded occurrence is approximately 0.25 mile southeast of the project area (California Department of Fish and Wildlife 2024a).

The CNDDB occurrence of Brandegee's clarkia near the project area was surveyed as part of the project surveys. Most of the plants at this location appeared to be intergrades (or cross-breeds) of two-lobed clarkia (*Clarkia biloba* ssp. *biloba*) and Brandegee's clarkia.

In the project area, four populations of *Clarkia biloba* were observed in blue oak woodlands in the southern part of the VMVSP project area, within areas proposed for open space and low-density residential land uses. Plants with the petal lobe characteristics of Brandegee's clarkia were found in these populations, but the majority of the plants appear to be crosses of the two subspecies, similar to those observed in the nearby CNDDB population. Approximately 10% of the plants in the project area had petal lobe lengths similar to Brandegee's clarkia, and these plants are most likely the special-status subspecies. The other 90% of clarkia plants are most likely crosses between the Brandegee's clarkia and two-lobed clarkia, which would not be considered special-status plants.

According to the September 2019 *Village of Marble Valley Project, El Dorado County, California: Impacts to Brandegee's Clarkia* memorandum (ECORP Consulting 2019a), the occurrences of Brandegee's clarkia were remapped during the 2019 special-status plant survey. The extent for the species expanded from 5.30 acres in 2012 to 13.97 acres in 2019 with the largest increase occurring in the large western population east of Deer Creek. Most populations are entirely within project open space, but a portion of the largest population is within the planned development footprint.

Special-Status Wildlife

Based on results of database searches of the CNDDB (California Department of Fish and Wildlife 2024a), USFWS species list (U.S. Fish and Wildlife Service 2024) for the project region, professional judgement based on vegetation communities in the project vicinity, and existing conditions in the VMVSP project area and offsite infrastructure improvement areas, a total of 33 special-status wildlife species were identified as having potential to occur in the project area or vicinity (Table 3.3-4, provided at the end of this resource section). After a review of species distribution and habitat requirements data and the results of wildlife surveys conducted within the project area by ECORP Consulting from 2005 to 2019 (Table 3.3-1), it was determined that 10 of these species would not occur in either the VMVSP project area or offsite infrastructure improvement areas because these areas lack suitable habitat for the species or are outside the species' known range (Table 3.3-4). Potential suitable habitat is present in the overall study area for the remaining 23 species, which are discussed below.

Of the remaining species, nine special-status wildlife species: Blainville's horned lizard (*Phrynosoma blainvillii*) [potential scat and sighting], northwestern pond turtle (*Actinemys marmorata*), loggerhead shrike (*Lanius ludovicianus*), white-tailed kite, yellow warbler (*Setophaga petechia*), hoary bat (*Lasiurus cinereus*), pallid bat (*Antrozous pallidus*), western red bat (*Lasiurus blossevillii*), and western small-footed myotis (*Myotis ciliolabrum*) were detected in the VMVSP project area during the wildlife surveys. Yellow warbler is not addressed in this analysis because the species does not nest in the region (ECORP Consulting 2013j). No previous special-status species

occurrences have been documented by CNDDB within the project area (California Department of Fish and Wildlife 2024a).

Monarch Butterfly

Monarch butterfly is a candidate for listing under the Endangered Species Act. The number of overwintering monarchs in California is believed to have declined as much as 74% since the late 1990s (Western Association of Fish and Wildlife Agencies 2019). The geographic range for monarch butterfly in California is throughout the state and includes spring and summer breeding areas and overwintering areas; the overwintering areas are almost entirely along the coast. Coastal California is considered critical for overwintering populations, and the Central Valley is considered a critical breeding area for this species (Western Association of Fish and Wildlife Agencies 2019).

Generally, the migratory and breeding habitat for this species consists of all areas with the required habitat, including milkweeds (*Asclepias* spp.), nectar sources, and roosting structures. Overwintering habitat consists of groves of trees that produce the necessary microclimate for survival. Most overwintering sites in California are within 1.5 miles of the Pacific Ocean or San Francisco Bay (Western Association of Fish and Wildlife Agencies 2019). Monarch butterfly requires milkweed for breeding, as it lays eggs on the milkweed plant, and milkweed is an obligate species for the monarch caterpillar (Western Association of Fish and Wildlife Agencies 2019, U.S. Fish and Wildlife Service 2020).

Monarch butterfly requires nectar-producing plants for foraging and roosting sites (particularly during fall migration) (Western Association of Fish and Wildlife Agencies 2019; U.S. Fish and Wildlife Service 2020). Roosting sites during migration consist of native and nonnative deciduous and evergreen trees, and narrow-leaved trees such as Monterey cypress (*Hesperocyparis macrocarpa*), Monterey pines (*Pinus radiata*), and blue gum eucalyptus (*Eucalyptus globulus*) (U.S. Fish and Wildlife Service 2020).

Monarch butterfly goes through four life stages, including egg, larva (caterpillar), pupa (chrysalis), and adult, which are typically completed within a month during the breeding and migration season. During the spring and summer up to seven cycles of mating and breeding are completed as the butterflies migrate, then they typically reach overwintering areas in September or October. Most overwintering individuals are in reproductive diapause, and these individuals may live up to 9 months, but in some warmer areas such as southern coastal California, overwintering may not be needed (Western Association of Fish and Wildlife Agencies 2019).

Three adult monarch butterfly occurrences have been recorded within 5 miles of the project area and breeding has been documented within one mile of the project area (Western Monarch Milkweed Occurrence Database 2024). Potentially suitable monarch butterfly habitat is present in the project area, and the offsite infrastructure improvement areas and consists of oak woodland, riparian woodland, annual grassland, seasonal wetland, seasonal wetland swale, seep, marsh, creek, intermittent drainage, ephemeral drainage, drainage/roadside ditch, and pond land cover types. Milkweed (caterpillar host plants) were observed in the project area during plant surveys in 2005 (ECORP Consulting 2013a) and may be present in annual grassland in the offsite infrastructure improvement areas. The project area and offsite infrastructure improvement areas are not located within the overwintering range of monarch butterfly.

Vernal Pool Fairy Shrimp and Vernal Pool Tadpole Shrimp

Vernal pool fairy shrimp (*Branchinecta lynchi*) is a federally listed threatened species. The species is found from Shasta County in the north throughout the Central Valley and west to the central Coast Ranges, at elevations of 30 to 4,000 feet. Additional populations have been reported from the Agate Desert region of Oregon near Medford, and disjunct populations occur in San Luis Obispo, Santa Barbara, and Riverside Counties. However, most known locations are in the Sacramento and San Joaquin Valleys and along the eastern margin of the central Coast Ranges (Eng et al. 1990:255–258).

Vernal pool fairy shrimp inhabit vernal pools that form in depressions, usually in grassland habitats (Eng et al. 1990:255–258). Pools must remain inundated long enough for the species to complete its life cycle. Vernal pool fairy shrimp also occur in other wetlands that provide habitat similar to vernal pools, such as alkaline rain pools, ephemeral drainages, rock outcrop pools, ditches, stream oxbows, stock ponds, vernal swales, and some seasonal wetlands (Helm 1998:137). Occupied wetlands range in size from as small as several square feet to more than 10 acres.

Vernal pool fairy shrimp and other fairy shrimp have been observed in artificial depressions and drainages where water ponds for a sufficient duration (Helm 1998:134–138). Examples of such areas include roadside ditches and ruts left behind by off-road vehicles or heavy equipment. Soil compaction from construction activity can sometimes create an artificial hardpan, or restrictive layer, which allows water to pond and form suitable habitat for vernal pool fairy shrimp.

Vernal pool tadpole shrimp (*Lepidurus packardi*) is a federally listed endangered species. The species is distributed across the Central Valley of California and in the San Francisco Bay Area and has a patchy distribution across the Central Valley of California from Shasta County southward to northwestern Tulare County (U.S. Fish and Wildlife Service 2007). The largest concentration of vernal pool tadpole shrimp occurrences is found in the Southeastern Sacramento Vernal Pool Region where the species occurs on a number of public and private lands in Sacramento County (U.S. Fish and Wildlife Service 2005, 2007).

Vernal pool tadpole shrimp occur in a wide variety of seasonal habitats, including vernal pools, ponded clay flats, alkaline pools, ephemeral stock tanks, and roadside ditches. Habitats where vernal pool tadpole shrimp have been observed range in size from small (less than 25 square feet), clear, vegetated vernal pools to highly turbid alkali scald pools to large (more than 100 acres) winter lakes (Helm 1998:134–138; Rogers 2001:1002–1005). These pools and other ephemeral wetlands must dry out and be inundated again for the vernal pool tadpole shrimp cysts to hatch. This species has not been reported in pools that contain high concentrations of sodium salts but may occur in pools with high concentrations of calcium salts (Helm 1998:134–138; Rogers 2001:1,002–1,005).

The VMVSP project area contains seasonal wetland, seasonal wetland swale, seep, intermittent drainage, creek, pond (stock ponds and quarry ponds), and drainage ditch aquatic features. These features were evaluated for their potential to support vernal pool fairy shrimp and vernal pool tadpole shrimp. Potential habitat characteristics of these federally listed branchiopods are based on the life history of Central Valley endemics (Eriksen and Belk 1999; Helm 1998; Helm and Vollmar 2002). Thirteen seasonal wetlands in the northern half of the project area, the small quarry pond, and a stock pond in the southwest corner of the project area were considered to be potential habitat for federally listed branchiopods.

To determine occupancy within these habitats, protocol-level surveys were conducted for federally listed branchiopods. The ponds were sampled using dry-season and wet-season techniques, as

described in the 90-day Report of Findings (ECORP Consulting 2013i, 2013l). In summary, no cysts of any federally listed branchiopod species (e.g., *Branchinecta* sp. or *Lepidurus* sp.) were observed within any of the soil samples, and no federally listed branchiopods were observed during dip-net surveys. Therefore, federally listed branchiopods are not expected to occur within the VMVSP project area.

The offsite infrastructure improvement areas were also evaluated for potential federally listed branchiopod habitat; however, protocol-level surveys have not been conducted within these offsite project areas. Potential seasonal wetlands identified within the offsite infrastructure improvement areas (Figure 3.3-1) represent potential habitat for federally listed branchiopods (ECORP Consulting 2014c).

California Red-Legged Frog

California red-legged frog is a California species of special concern and is federally listed as threatened. The current range of California red-legged frog consists of isolated locations in the Sierra Nevada, throughout the northern Coast Ranges, and in the northern Transverse Ranges.

California red-legged frogs use a variety of habitats, including various aquatic systems and riparian and upland habitats. The species inhabits marshes, streams, lakes, ponds, and other usually permanent sources of water (Stebbins 2003). Juvenile frogs seem to favor open, shallow aquatic habitats with dense submergent vegetation. As adults, California red-legged frogs are highly aquatic when active but depend less on permanent waterbodies than other frog species, such as bullfrogs (*Lithobates catesbeianus*). Adults may take refuge during dry periods in rodent burrows or leaf litter in riparian habitats. Although California red-legged frogs typically remain near streams or ponds, marked and radio-tagged frogs have been observed moving more than 2 miles through upland habitat with no apparent regard to topography. These movements are typically made during wet weather and at night (U.S. Fish and Wildlife Service 2002).

California red-legged frogs typically breed from late November to late April. Female frogs lay between 2,000 and 6,000 eggs around aquatic vegetation; these hatch in 6–14 days (Jennings and Hayes 1994). Larvae require 11–20 weeks to metamorphose into adult frogs (U.S. Fish and Wildlife Service 2002). Juvenile frogs are active diurnally and nocturnally, whereas adult frogs are largely nocturnal. Feeding activity most commonly occurs along the shoreline and on the surface of the water (U.S. Fish and Wildlife Service 2002).

Two creeks (Marble Creek and Deer Creek), seasonal wetlands, two quarry ponds, and a stock pond were assessed for their suitability as habitat for the California red-legged frog (ECORP Consulting 2013c). Potential breeding habitat onsite is limited to the two quarry ponds and potentially sections of Deer Creek. Nonnative bullfrogs and crayfish, which prey upon and compete with California red-legged frogs of all life stages, were found in most longer-duration waters and some of the more ephemeral ones as well. The presence of these species cannot be taken as evidence for the absence of California red-legged frogs; however, their presence reduces the quality of the breeding habitat. Upland habitat in the project area, consisting of grassland and oak woodland, is relatively intact and supports native vegetation and small mammal burrows, including pocket gophers, California voles (*Microtus californicus*), and California ground squirrels (*Otospermophilus beecheyi*). These species excavate extensive burrow systems that can be used by California red-legged frogs as cover during dispersal movements or as temporary refuge if aquatic habitats dry out late in the summer. Thus, uplands in the project area would provide refuge, dispersal, and foraging habitat if California red-legged frogs are present. Similarly, intermittent drainages and other waters (seasonal wetlands,

seasonal wetland swales, and seeps), which could function as dispersal routes and foraging habitat for California red-legged frogs, are scattered throughout the project area.

California red-legged frogs were not observed during the May/June 2012 habitat assessment or during other species-focused and reconnaissance-level surveys conducted throughout the project area; however, protocol-level surveys have not been conducted within the project area or within 1 mile of the project area. There is one recorded occurrence of California red-legged frog approximately 6.4 miles northwest of the project area; however, this record is considered suspect, and no individuals have been observed in the vicinity before or after this 2005 record (ECORP Consulting 2013c; California Department of Fish and Wildlife 2024a). The closest confirmed population of California red-legged frogs is at Spivey Pond, approximately 24 miles east of the project area (California Department of Fish and Wildlife 2024a). Potentially suitable habitat is present for California red-legged frog in both the project area and the offsite improvement areas. However, due to the lack of known occurrences in the area, there is a low probability that the species is present.

Foothill Yellow-Legged Frog

Foothill yellow-legged frog is a state-listed endangered species. Foothill yellow-legged frogs are a highly aquatic amphibian, spending most or all of their life in or near streams, though frogs have been documented underground and beneath surface objects more than 164 feet from water (Nussbaum et al. 1983). Foothill yellow-legged frogs require shallow, flowing water in small to moderate-sized streams with at least some cobble-sized substrate (Hayes and Jennings 1988; Jennings 1988). This habitat is believed to favor oviposition (Storer 1925; Fitch 1936; Zweifel 1955) and refuge habitat for larvae and postmetamorphs (Hayes and Jennings 1988; Jennings 1988). This species has been found in streams without cobble (Fitch 1938; Zweifel 1955), but it is not clear whether these habitats are regularly used (Hayes and Jennings 1988; Jennings and Hayes 1994). Foothill yellow-legged frogs are usually absent from habitats where introduced aquatic predators, such as various fishes and bullfrogs, are present (Hayes and Jennings 1986, 1988; Kupferberg 1994). The species deposits its egg masses on the downstream side of cobbles and boulders, over which a relatively thin, gentle flow of water exists (Storer 1925; Fitch 1936; Zweifel 1955). The timing of oviposition typically follows the period of high-flow discharge from winter rainfall and snowmelt (Jennings and Hayes 1994).

Habitat is present for adult frogs in Deer and Marble Creek but essential breeding microhabitats such as cobble point bars are lacking (ECORP Consulting 2019b). The nearest presumed extant record (CNDDB Occurrence #273) is just over 5 miles north of the project area (California Department of Fish and Wildlife 2024a).

No foothill yellow-legged frogs were observed during focused surveys in May or June 2012 or in May, June, or September 2019 (ECORP Consulting 2013d; ECORP Consulting 2019b). All ranid (or true) frogs observed in the Marble Valley project area were identified as American bullfrogs, a nonnative species that has spread throughout most of California. Given the distance to known populations, abundance of introduced predators, and lack of breeding habitat, it is highly unlikely that foothill yellow-legged frogs occur in the Marble Valley project area. Suitable yellow-legged frog habitat may be present within areas of Deer Creek and although there is considered to be a low likelihood of their presence, individual yellow-legged frogs may occur in the offsite infrastructure improvement areas.

Blainville's Horned Lizard

Blainville's (Coast) horned lizard is a California species of special concern. Although fragmented, the range of Blainville's horned lizard generally extends along the Pacific coast from the Baja California border west of the deserts and the Sierra Nevada north to the Bay Area (CaliforniaHerps.com 2013). The species occurs between sea level and an elevation of 8,000 feet (Stebbins 2003:301).

Blainville's horned lizard occupies a variety of habitats, including areas with an exposed gravelly sandy substrate supporting scattered shrubs, chamise chaparral, annual grassland (Jennings and Hayes 1994:132), broadleaf woodland, and conifer forest (Stebbins 2003:300). It is most common in lowlands along sandy washes with scattered shrubs for cover. Habitat requirements include open areas for basking; patches of fine, loose soil where it can bury itself; and ants and other insect prey (Stebbins 2003:300–301). For extended periods of inactivity or hibernation, these lizards occupy small mammal burrows or burrow into loose soils under surface objects (Zeiner et al. 1988:148). Blainville's horned lizards have been observed to be active from April to October, and hatchlings first appear in July and August (Jennings and Hayes 1994:130).

Chaparral in the project area provides habitat for Blainville's horned lizard. Probable scat was observed on Marble Valley Road in the northwest corner of the project area and in the chaparral north of Marble Valley Road on the eastern edge of the project area during focused 2012 surveys (ECORP Consulting 2013f). In addition, a horned lizard was observed incidentally in the project area on a road southwest of the small quarry pond. Four CNDDB occurrences have been recorded within 5 miles of the VMVSP project area (California Department of Fish and Wildlife 2024a).

Northwestern Pond Turtle

Northwestern pond turtle is proposed for listing as Threatened under ESA (88 FR 68370) and is a California species of special concern. The species occurs in a wide range of both permanent and intermittent aquatic environments (Jennings et al. 1992), inhabiting the quiet waters of ponds, reservoirs, marshes, or streams with rocky or muddy bottoms and vegetative cover (Stebbins 2003). Northwestern pond turtles occasionally leave the water to bask, and females leave the water from May through July to lay eggs. These turtles can often be found sunning on emergent logs or rocks near the water's edge but quickly retreat to the water when disturbed (Stebbins 2003). They move up to 1,300 feet or more to upland areas adjacent to watercourses to deposit eggs and, in cold climates, to overwinter (Jennings and Hayes 1994).

Northwestern pond turtles were observed in the large quarry pond, small quarry pond, and Deer Creek during the May 2012 focused pond turtle surveys (Figure 3.3-1). Six adult pond turtles were observed in the water of the large quarry pond, and three adult pond turtles were observed in the small quarry pond. Eleven pond turtles were observed in Deer Creek, and one pond turtle was observed in Marble Creek (although observations of Marble Creek are difficult because of heavy vegetation). There are also five recorded occurrences within 5 miles of the project area (California Department of Fish and Wildlife 2024a). Upland habitat surrounding the ponds and both Marble and Deer Creeks is generally intact and provides suitable areas for egg-laying. Nonnative invasive species, such as red-eared sliders (*Trachemys scripta elegans*), are a threat to northwestern pond turtles because they may compete for prey and habitat and may transmit disease (Holland 1994). No red-eared sliders were observed during surveys of the VMVSP project area.

Golden Eagle

Golden eagle is fully protected under the California Fish and Game Code. It is also protected by the MBTA and the BGEPA.

Golden eagle is a year-round resident throughout much of California. The species does not breed in the center of the Central Valley but breeds in much of the rest of the state. Golden eagles typically occur in rolling foothills, mountain areas, sage-juniper flats, and deserts (Zeiner et al. 1990a:142–143). In California, golden eagles nest primarily in open grasslands and oak (*Quercus* spp.) savanna but will also nest in oak woodland and open shrublands. Golden eagles forage in open grassland habitats (Kochert et al. 2002:6). Preferred territory sites include those that have a favorable nest site, a dependable food supply (medium to large mammals and birds), and broad expanses of open country for foraging. Hilly or mountainous country where takeoff and soaring are supported by updrafts is generally preferred to flat habitats (Johnsgard 1990:262). A few pairs of eagles nest on electrical transmission towers that traverse the grasslands (Hunt et al. 1999:13).

Oak woodlands in the project area provide suitable nesting habitat for golden eagle, and foraging habitat is present in the annual grasslands. There are no CNDDB records of golden eagle nests within the project area. However, an active nest was recorded in 2014 (CNDDB Occurrence #321) and in 2015 (CNDDB Occurrence #322), approximately 4 miles northwest of the VMVSP project area (California Department of Fish and Wildlife 2024a).

Grasshopper Sparrow

The grasshopper sparrow (*Ammodramus savannarum*) is a California species of special concern. The species breeding range in California is fragmented throughout the state west of the Cascade-Sierra Nevada Crest (Dobkin and Granholm 2008; Vickery 1996). The species nests in shorter, moderately grazed open grasslands but has also been recorded in grassland-like cultivated lands such as alfalfa (Unitt 2008; Grinnell and Miller 1944).

There are no CNDDB records of grasshopper sparrow nesting within 5 miles of the VMVSP project area (California Department of Fish and Wildlife 2024a) and grasshopper sparrows were not observed during 2012 breeding bird surveys (ECORP Consulting 2013j). However, the project area and the offsite infrastructure improvement areas are within the range of this species and contain suitable grassland habitat for nesting and foraging (ECORP Consulting 2014c).

Loggerhead Shrike

The loggerhead shrike is a California species of special concern and a USFWS bird of conservation concern. Loggerhead shrikes use a variety of open grasslands across their range, including grasslands, desert scrub, shrub-steppe, and open savannah (Yosef 1996). Nests are built in trees or shrubs with dense foliage surrounded by open habitat and are usually hidden well. Loggerhead shrikes search for prey from perches and frequently impale their prey on thorns, sharp twigs, or barbed wire. The nesting period for loggerhead shrikes is March through June (Zeiner et al. 1990a:546).

There are no CNDDB records of loggerhead shrike nesting within 5 miles of the VMVSP project area (California Department of Fish and Wildlife 2024a). The species was observed foraging during 2012 breeding bird surveys, but there was no sign of nesting (ECORP Consulting 2013j). The project area and the offsite infrastructure improvement areas are within the range of this species and contain suitable grassland habitat for nesting and foraging (ECORP Consulting 2014c).

Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is a state-listed threatened species. Swainson's hawks forage in grasslands, grazed pastures, alfalfa and other hay crops, and certain grain and row croplands. Vineyards, orchards, rice, and cotton crops are generally unsuitable for foraging because of the density of the vegetation (Estep 1989; Babcock 1995; Woodbridge 1998). The majority of Swainson's hawks winter in South America, although some winter in the United States. Swainson's hawks arrive in California in early March to establish nesting territories and breed (California Department of Fish and Game 1994). They usually nest in large, mature trees. Most nest sites (87%) in the Central Valley are found in riparian habitats, primarily because trees are more available there. Swainson's hawks also nest in mature roadside trees and in isolated trees in agricultural fields or pastures. The breeding season is from March through August (Estep 1989:12, 35).

Although suitable nesting and foraging habitat for Swainson's hawks is present in the VMVSP project area, Swainson's hawks typically occur in flat terrain and more rarely in the foothills. There is one record of a Swainson's hawk nest (CNDDB Occurrence #200) within 5 miles of the project area (California Department of Fish and Wildlife 2024a). Swainson's hawk was not observed during breeding bird surveys in 2012 (ECORP Consulting 2013j). There is a low potential for the species to occur in the project area or offsite improvement areas. However, suitable nesting and foraging habitat is present both in the project area and in the areas proposed for offsite improvements.

Tricolored Blackbird

Tricolored blackbird (*Agelaius tricolor*) is a state-listed threatened species. Tricolored blackbird is a highly colonial species that is largely endemic to California. Tricolored blackbird breeding colony sites require open, accessible water; a protected nesting substrate, including either flooded, thorny, or spiny vegetation; and a suitable foraging space that provides adequate insect prey within a few miles of the nesting colony. Tricolored blackbird breeding colonies occur in freshwater marshes that are dominated by tules and cattails, in Himalayan blackberries (*Rubus armeniacus*), and in silage and grain fields (Beedy and Hamilton 1997:3–4). The breeding season is from late February to early August (Beedy and Hamilton 1999). In all seasons, tricolored blackbird foraging habitats include annual grasslands, dry seasonal pools, agricultural fields (such as large tracts of alfalfa with continuous mowing schedules and recently tilled fields), cattle feedlots, and dairies. Tricolored blackbirds also forage occasionally in riparian scrub habitats and along marsh borders. Weed-free row crops and intensively managed vineyards and orchards do not serve as regular foraging sites. Most tricolored blackbirds forage within 3 miles of their colony sites, but commute distances of up to 8 miles have been reported (Beedy and Hamilton 1997:5).

There are seven presumed extant CNDDB records of tricolored blackbird occurring within 5 miles of the VMVSP project area including one colony (CNDDB Occurrence #452) of approximately 1,000 individuals that was documented in 2016 (California Department of Fish and Wildlife 2024a). No breeding colonies were observed during the 2012 breeding bird surveys within the project area (ECORP Consulting 2013j). However, there is suitable habitat in the riparian scrub adjacent to Marble and Deer Creeks. In addition, there is potential for suitable habitat to exist in the offsite infrastructure improvement areas that were not accessible to be surveyed (ECORP Consulting 2014c).

Western Burrowing Owl

Western burrowing owl (*Athene cunicularia*) is a California species of special concern. Western burrowing owl is a year-round resident in the Central Valley, San Francisco Bay region, Carrizo

Plain, and Imperial Valley. They occur primarily in grassland habitats but may also occur in landscapes that are highly altered by human activity. Suitable habitat must contain burrows with relatively short vegetation and minimal amounts of shrubs or taller vegetation. Western burrowing owl may also occur in agricultural areas along roads, canals, ditches, and drains. They most commonly nest and roost in California ground squirrel burrows but may also use burrows dug by other species as well as culverts, piles of concrete rubble, and pipes. The breeding season is March through August but can begin as early as February. During the breeding season, owls forage near their burrows but have been recorded hunting up to 1.7 miles away. Rodent populations, particularly California vole populations, may greatly influence survival and reproductive success of California burrowing owls (Shuford and Gardali 2008:219, 221).

There are three records of burrowing owl occurrences within 5 miles of the VMVSP project area; the closest documented occurrence is approximately 3 miles to the west (California Department of Fish and Wildlife 2024a). Annual grassland in the project area provides potential habitat, although no owls were observed during the 2012 breeding bird surveys (ECORP Consulting 2013j). There is also suitable breeding and wintering habitat in the annual grassland in the offsite infrastructure improvement areas.

White-Tailed Kite

White-tailed kite is fully protected under the California Fish and Game Code. White-tailed kites generally inhabit low-elevation grassland, savannah, oak woodland, wetlands, agricultural, and riparian habitats. Some large shrubs or trees are required for nesting and communal roosting sites. Nest trees range from small, isolated trees and shrubs to trees in relatively large stands (Dunk 1995). White-tailed kites make nests from loosely piled sticks and twigs, which are lined with grass and straw, near the tops of dense oaks, willows, and other tree stands. The breeding season lasts from February through October and peaks from May to August. They forage in undisturbed, open grassland, meadows, farmland, and emergent wetlands (Zeiner et al. 1990a:120).

There are two CNDDB occurrences within 5 miles of the project area with the closest documented nest is 4 miles to the northwest (California Department of Fish and Wildlife 2024a). Suitable nesting and foraging habitat occurs in the project area and in the areas proposed for offsite improvements. The species was observed foraging and exhibiting territorial behavior during 2012 breeding bird surveys, but no nests were detected (ECORP Consulting 2013j).

Bats

Pallid bat is a California species of special concern, and the Western Bat Working Group (2007) considers it to be a high-priority species in the state. Pallid bat is found throughout most of California at low to middle elevations (6,000 feet). Pallid bats are found in a variety of habitats, including desert, brushy terrain, coniferous forest, and non-coniferous woodlands. Daytime roosts include rock outcrops, mines, caves, hollow trees, buildings, and bridges. Night roosts are commonly under bridges but also in caves and mines (Brown and Pierson 1996). Hibernation may occur during late November through March. Pallid bats breed from late October through February (Zeiner et al. 1990b:70), and one or two young are born in May or June (Brown and Pierson 1996).

The Western Bat Working Group (2007) considers silver-haired bat (*Lasionycteris noctivagans*) to be a moderate-priority species in California. Silver-haired bats occur primarily in the northern portion of California and at higher elevations in the southern and coastal mountain ranges (Brown and Pierson 1996) but may occur anywhere in California during their spring and fall migrations.

Silver-haired bats are associated with coastal and montane coniferous forests, valley foothill woodlands, pinyon-juniper woodlands, and valley foothill and montane riparian habitats (Zeiner et al. 1990b:54). Silver-haired bats roost almost exclusively in trees during the summer. Maternity roosts are typically located in woodpecker hollows or in gaps under bark. Maternal colonies range from several to about 75 individuals (Brown and Pierson 1996).

Townsend's big-eared bat (Corynorhinus townsendii) is a California species of special concern, and a high-priority species under the Western Bat Working Group's conservation priority matrix (Western Bat Working Group 2007). Townsend's big-eared bat occurs throughout California, but distribution appears to be limited by the availability of cavern-like roost structures. Townsend's big-eared bats have been found in a wide variety of habitats, from desert to riparian and coastal woodland. They are found in greatest numbers in areas with cavern-forming rocks or abandoned mines (Western Bat Working Group 2005). Townsend's big-eared bats roost in dome-like spaces in caves or mines where they hang in the open from the ceiling while they roost. They have also been known to use cavern-like spaces in abandoned buildings or bridges as well as the basal hollows of large coast redwood trees (Mazurek 2004:60). Mating occurs in fall and spring, and pups are born in late spring to early summer (Pierson and Rainey 1998:2). The maternity roost size varies and may contain only a few or up to several hundred individuals. The species is believed to be relatively sedentary, hibernating in caves and mines near summer maternity roosts, though seasonal movements are not well understood. Townsend's big-eared bats may have hibernated historically in aggregations of thousands of individuals (Pierson and Rainey 1998:1). They are highly sensitive to roost disturbance.

Western red bat is a California species of special concern and considered a high-priority species in California by the Western Bat Working Group (2007). It occurs throughout much of California at lower elevations. It is found primarily in riparian and wooded habitats but also occurs seasonally in urban areas (Brown and Pierson 1996). Western red bats roost in the foliage of trees that are often on the edge of habitats adjacent to streams, fields, or urban areas. This species breeds in August and September, and young are born in May through July (Zeiner et al. 1990b:60).

Hoary bat (*Lasurius cinerius*) is considered a moderate-priority species in California by the Western Bat Working Group (2007). Hoary bats occur throughout California but are thought to have a patchy distribution in the southeastern deserts (Zeiner et al. 1990b:62). Hoary bats are found primarily in forested habitats, including riparian forests, and may occur in park and garden settings in urban areas. Day roost sites are in the foliage of coniferous and deciduous trees (Brown and Pierson 1996). Woodlands with medium to large trees with dense foliage provide suitable maternity roost sites (Zeiner et al. 1990b:62). Mating occurs in the fall, and after delayed fertilization, young are born May through June (Zeiner et al. 1990b:62; Brown and Pierson 1996).

Western small-footed myotis is considered a high-priority species in California by the Western Bat Working Group (2007). It occurs throughout much of California, except for the northwest and coastal areas of the state. Western small-footed myotis are particularly associated with coniferous forests and rocky xeric habitats and forage over a wide variety of habitats. They typically roost in rock crevices in mines, caves, and occasionally buildings, bridges, and other human-made structures.

Acoustic surveys for bats were conducted in the spring and fall of 2012 in the VMVSP project area (Wyatt 2013). Two California species of concern were detected during the surveys: pallid bat and western red bat. Both of these species are also identified as high-priority species by the Western Bat Working Group. Five other bat species were also confirmed within the project area: California

myotis (*Myotis californicus*), hoary bat, western small-footed myotis, canyon bat (*Parastrellus hesperus*), and Mexican free-tailed bat (*Tadarida brasiliensis*). Three additional species (big brown bat [*Eptesicus fuscus*], Yuma myotis [*Myotis yumanensis*], and silver-haired bat) were identified as "potentially detected" in the planning areas because inadequate data were available to identify these species conclusively. Silver-haired bat is more commonly found in higher elevations and therefore would be expected only infrequently in lower elevations, such as the VMVSP project area.

American Badger

American badger (*Taxidea taxus*) is a California species of special concern. In California, American badgers occur throughout the state, except in the humid coastal forests of northwestern California in Del Norte and Humboldt Counties. American badgers occur in a wide variety of open, arid habitats but most commonly are associated with grasslands, savannas, and mountain meadows. They require sufficient food (burrowing rodents), friable soils, and relatively open, uncultivated ground (Williams 1986:66–67). Badgers dig burrows, which are used for cover and reproduction. The species mates in summer and early autumn, and young are born in March and early April (Zeiner et al. 1990b:312).

Suitable denning and foraging habitat for American badger is present in the project area. There are no CNDDB records for occurrences of American badger within 5 miles of the project area, but there is potential for them to occur in annual grasslands.

Ringtail

Ringtails are found throughout most of California, except for the San Joaquin Valley and portions of the southern deserts (California Department of Fish and Wildlife 2014). Ringtails occur in various riparian habitats as well as the brush stands of most forest and shrub habitats, usually within 0.5 mile of water, including such habitat in deserts. They use hollow trees, logs, snags, cavities in talus, and other rocky areas for daytime shelter. Denning habitat is similar to sheltering habitat but can include abandoned burrows of other mammals, woodrat nests, and human-made structures (California Department of Fish and Wildlife 2014; NatureServe 2024). Ringtails change dens often (NatureServe 2024). Breeding occurs from February to May but mainly in March and April; litters of one to four are usually born in May and June (California Department of Fish and Wildlife 2014; NatureServe 2024). Young are weaned by the end of summer (NatureServe 2024). Ringtails are nocturnal and feed primarily on arthropods, small mammals, and fruits (NatureServe 2024).

Ringtails are not tracked in the CNDDB and are not listed under the ESA or CESA. However, the species is fully protected under the California Fish and Game Code. There is suitable habitat for the species in the riparian habitat adjacent to Deer Creek, and ringtails have been reported to occur in the area (ECORP Consulting 2014c).

Special-Status Fish

Deer Creek provides potential habitat for a large number of fish species, including special-status fish. However, the VMVSP project area is outside of the known range of special-status anadromous fish species. Anadromous salmonids were not documented in Deer Creek during any of the sampling efforts over the past 12 years, and there are no historical records to indicate that special-status fish have ever been present in Deer Creek (ECORP Consulting 2013h). Therefore, special-status fish would not be affected by the proposed project and are not discussed further.

Invasive Plant Species

The identification of invasive plants in the project area was based on the California Department of Food and Agriculture *Pest Ratings of Noxious Weed Species and Noxious Weed Seed* (California Department of Food and Agriculture 2010) and the California Invasive Plant Council's *California Invasive Plant Inventory* (California Invasive Plant Council 2018, 20924). The list of plant species observed, provided in Appendix E, identifies which species are included on either of these lists.

3.3.2 Environmental Impacts

Methods of Analysis

The impact analysis for biological resources was conducted by evaluating potential changes to existing biological resources. Such changes were established through various studies and database searches and based on anticipated project construction and operational activities, listed below, which could have direct and indirect effects, of varying degrees, on sensitive biological resources present in the project area.

- Vegetation removal.
- Grading and fill placement during construction.
- Blasting (rocks).
- Channel dewatering or the installation of temporary water-diversion structures. Temporary stockpiling and sidecasting of soil, construction materials, or other construction wastes.
- Soil compaction, dust, and water runoff from the construction site into adjacent areas.
- Introduction or spread of invasive plant species into adjacent open space areas.
- Runoff of herbicides, fertilizers, diesel fuel, gasoline, oil, raw concrete, or other toxic materials that would be used for project construction, operation, and maintenance into sensitive biological resource areas (e.g., riparian habitat, wetlands).

Construction and future operations-related activities associated with the proposed project could result in temporary or permanent impacts on biological resources. In assessing the magnitude of possible effects, the assumptions below were used in the impact analysis for biological resources for onsite features. Assumptions for offsite improvements are described in the *Impacts on Biological Resources in the Offsite Infrastructure Improvement Areas* subsection.

- All construction, staging (including vehicle parking), and access areas would be restricted to the direct impact areas depicted in Figure 3.3-2.
- Oak mitigation planting activities within the designated open space portion of the project area could result in short-term temporary impacts associated with installation of oak saplings and irrigation lines. However, planting activities would avoid all sensitive habitats, including waters of the United States.
- One special-status plant, Brandegee's clarkia (CNPS Rare Plant Rank 4), was observed during the blooming-period surveys of the VMVSP project area in 2013 and 2019. The Brandegee's clarkia populations were remapped in 2019 and the extent of one population was larger in 2019 than in 2013. No other special-status plants were found; therefore, project implementation within the VMVSP project area is not anticipated to have potential impacts on any special-status plants, other than Brandegee's clarkia.

- No federally listed vernal pool branchiopods were documented during the 2012/2013 protocol-level dry- and wet-season surveys conducted in the VMVSP area; therefore, the proposed project within the VMVSP project area is not anticipated to result in impacts on federally listed branchiopods. During the Section 404 permitting process, USACE will make a final determination regarding whether measures must be implemented to address these species. VMVSP Policy 6.25 specifically requires that any special-status vernal pool invertebrates be protected as required by federal and state agencies, and where protection is not feasible, impacts on vernal pool invertebrates will be mitigated per the wetland mitigation and monitoring plan, which is described in Impact BIO-3.
- Focused special-status plant and wildlife surveys have not yet been conducted in the offsite infrastructure improvement areas, which were added to the project after the 2012 and 2013 surveys. Therefore, this impact analysis assumes that these areas could support special-status species and sensitive habitats, including regulated wetlands and drainages.
- Loss of annual grassland vegetation community would not be considered a significant impact from a botanical standpoint and therefore does not require further evaluation, because this habitat is common in the project region and beyond, is dominated by nonnative species at the project site, and is not considered a sensitive community type by local, state, or federal agencies. Annual grassland vegetation also reestablishes more easily after disturbance than riparian or wetland communities. However, the loss of annual grassland habitat could be significant for some special-status wildlife species, and these impacts are discussed below.
- Habitats, including oak woodland, riparian woodland, chaparral, annual grassland, and wetlands and other waters, that are within the open space land use designation would generally not be directly affected by project construction. One exception would be the minimal amount of grading for trail construction and transitional grading between development and open space areas, which could affect individual oak trees and increase the percentage of total oak woodland acreage affected by the project. Under the 2017 ORMP, oak woodland/savannah impact acreage would be quantified based on mapping of woodland habitat and required mitigation ratios would vary depending on the percent of oak woodlands affected.

Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the proposed project would be considered to have a significant effect if it would result in any of the conditions listed below.

- 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 CDFW or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS.
- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.), through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

- Conflict with any local policies or ordinances protecting biological resources, such as the County ORMP.
- Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

Impacts and Mitigation Measures

Summary of Impacts within the Village of Marble Valley Specific Plan Project Area

Figure 3.3-2 illustrates the impact areas in relation to biological resources in the VMVSP project area. For ease of reference, Table 3.3-5 summarizes effects on biological resources. Effect findings, including significance and available mitigation, are discussed below.

Table 3.3-5. Permanent Direct Impacts on Biological Resources within the VMVSP Project Area

Biological Resource	Permanent Impacts (acres [% of total in project area])[a]
Oak Woodland/Savannah[b]	689.6 [b] (36.5%)
Native Oak Trees	11,369 inches
Heritage Oak Trees	6,627.5 inches
Riparian Woodland	4.8
White-Leaf Manzanita Chaparral	138.1
Annual Grassland (upland wildlife habitat)	153.4
Wetlands	
Seasonal Wetland	0.540
Seasonal Wetland Swale	1.274
Seep	0.072
Total Wetlands Impacts	1.886[c]
Other Waters	
Perennial Creek	0.640
Seasonal Creek	0.846
Intermittent Drainage	1.588
Ephemeral Drainage	0
Drainage Ditch	0.134
Quarry Pond	0.935
Stock Pond	0
Total Other Waters Impacts	4.143[c]

[a] Acreages of onsite impacts on wetlands and other waters of the United States are based on a verified delineation of waters of the United States.

[b] Oak impacts are based on the conceptual layout. In accordance with the ORMP, oak woodland/savannah impact acreage would be quantified based on mapping of woodland habitat. Per the requirements of the ORMP, all of a project's oak woodland impacts must be mitigated at a 1:1 ratio where 50% or less of onsite oak woodlands are affected, at a 1.5:1 ratio where 51–75% are affected, and at a 2:1 ratio where 76–100% are affected.

[c] Within the 1,875 acres of proposed development area as shown in the application for Clean Water Act Section 404 Individual Permit.

Impact BIO-1: Loss of oak woodland (less than significant with mitigation)

Oak woodland is the dominant natural community in the VMVSP project area. Based on calculations using LIDAR to map oak woodlands, the proposed project would retain a total of approximately 757.3 acres (67.1%) of the oak woodland in open space. The project as a whole would meet the retention, replacement, in-lieu fees, or conservation easement requirements under the ORMP. Based on calculations of impacts on oak woodlands and field verification of oak woodland polygons in 2018, the proposed project would remove 689.6 acres (36.5%) of the 1,887.9 acres of existing oak woodlands within the proposed development footprint, and 9,224 inches of individual oak trees and 5,692.5 inches of Heritage Oak trees not growing in oak woodland habitat. Impacts on oak woodlands and individual oaks are discussed below, as assessed under the ORMP. Mitigation strategies based on the criteria from the ORMP have been prepared (Appendix F, *Oak Resources Technical Report*), and the results are summarized below. Implementation of this approach would reduce impacts to less than significant and would be consistent with County requirements. Impacts on oak woodland in the proposed offsite infrastructure improvement areas are discussed under Impact BIO-17.

Prior to submittal of the first small tentative subdivision map to the County, as directed by VMVSP Policy 6.46, the project applicant has committed to preparing an OSMP to guide the conservation and protection of oak woodland and wildlife uses within designated open space in the project area in perpetuity (described in Section 6 of the VMVSP). The OSMP would include installation and maintenance of interpretive signs designating these areas as open space for the protection of sensitive natural resources with restricted uses defined (i.e., off-road vehicles prohibited, pet/wildlife interaction education).

Permanent Impacts

Using the criteria in the ORMP, the overall project area has a total of 1,887.9 acres of oak woodland, 689.6 acres (36.5%) of which are within the impact area of the project footprint. A total of 9,244 inches of individual native oak trees and a total of 5,692.5 inches of Heritage Trees not growing in oak woodland habitat would also be affected by the project.

Under the ORMP, the project would be required to mitigate all oak woodland impacts at a 1:1 ratio where 50% or less of onsite oak woodlands are affected. Mitigation for oak woodlands can be accomplished using one or more of the following options.

1. Offsite deed restriction or conservation easement acquisition and/or acquisition in fee title by a land conservation organization for purposes of offsite oak woodland conservation
2. In-lieu fee payment
3. Replacement planting onsite within an area subject to deed restriction or conservation easement
4. Replacement planting offsite within an area subject to a conservation easement
5. A combination of options 1 through 4, above.

Mitigation for removal of individual native oak trees is based on an inch-for-inch replacement standard. Mitigation for Heritage Trees is based on a replacement standard of 3:1 (inches) ratio. Impact mitigation requirements for individual native oak trees and Heritage Tree include several options.

1. Replacement planting onsite within an area subject to a deed restriction or conservation easement
2. Replacement planting offsite within an area subject to a conservation easement or acquisition in fee title by a land conservation organization
3. In-lieu fee payment
4. A combination of options 1 through 3 above.

Implementation of Mitigation Measure BIO-1d would comply with the ORMP requirements. This measure would reduce impacts on oak woodland, individual trees, and Heritage Trees to a less-than-significant level.

Temporary and Indirect Impacts

Temporary impacts on oak woodland could result from construction activities adjacent to the retained areas of woodland as well as from activities to plant replacement trees as required under the ORMP. Movement of construction equipment could affect trees that are to be retained by encroaching on the root zones or causing damage to the tree trunks and limbs. VMVSP Policy 6.30 requires implementation of the mitigation, conservation, and preservation strategies described in the ORMP during construction. VMVSP Policies 6.32 and 6.33 would require protection of preserved oak trees in subdivisions or individual lots, respectively. Under VMVSP Policy 6.35, as part of any small lot tentative subdivision map application, planned development permit, grading permit, or other similar action that may affect the oak woodlands, applicants are required to quantify site-specific and cumulative impacts and prepare and submit a tree preservation and replacement plan to the County. Oak mitigation planting activities would occur within the designated open space portion of the project area and could result in short-term temporary impacts on oak woodland habitat from installation of oak saplings and irrigation lines. VMVSP Policies 6.30, 6.32, 6.33, and 6.35 would address the temporary effects of development on retained oaks and would ensure that temporary impacts would be less than significant.

Potential indirect effects on the retained oaks could occur in open space areas that would be downslope of the proposed development area. Altered drainage patterns in the open space area could adversely affect the retained oaks. In particular, runoff from residential landscape irrigation during the dry summer months could promote the growth of fungal root diseases in oaks and increase tree mortality. VMVSP Policies 6.30, 6.32, 6.33, and 6.35 would address the potential indirect effects of development on retained oaks and would ensure indirect impacts would be less than significant.

Summary

Oak woodland is protected by policies in the County General Plan and County Code of Ordinance. CDFW considers oak woodland to be important wildlife habitat. Because the project would have a substantial adverse effect on oak woodland, which is a sensitive natural community, the permanent loss of, potential temporary impacts on, and potential indirect impacts on oak woodland and individual oak trees as a result of the proposed project would be significant without mitigation.

Under the ORMP, the project avoids 1,198.41 acres (63.5%) of oak woodland within the open space/avoided areas and would incorporate measures to retain additional oak woodland within the development footprint. As previously noted, 689.4 acres (36.5%) of oak woodland is within the development footprint. The project would be required to mitigate all oak woodland impacts at a 1:1

ratio, because 50% or less of onsite oak woodlands would be affected. Since the replacement plantings cannot account for more than 50% of the oak woodland mitigation requirement, half of the project's mitigation requirement would consist of replacement plantings onsite. The remaining half of the project's oak woodland impact mitigation would be implemented in the form of an in-lieu fee payment to the County.

The project would also be required to replace individual native oak trees based on an inch-to-inch replacement standard and Heritage Trees based on a 3:1 ratio standard.

VMVSP policies would reduce potential temporary and indirect impacts on oak trees. Implementation of Mitigation Measures BIO-1a, BIO-1b, BIO-1c, and BIO-1d would further reduce temporary construction impacts on oak woodland by requiring barriers to protect sensitive areas, environmental awareness training for construction employees, periodic site visits during construction, and avoidance or minimization of construction disturbances on retained oak woodland. Mitigation Measure BIO-1d would reduce indirect impacts on oak woodland resulting from drainage alteration to a less-than-significant level by ensuring that runoff would not be directed from constructed areas into the oak woodland. Mitigation Measure BIO-1e would ensure continued viability and/or replacement of retained oaks. Because the proposed project would avoid, minimize, and compensate for impacts on oak woodland through implementation of the important habitat mitigation plan (IHMP), it would not threaten to eliminate a plant community.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

The project construction contractor will install orange construction barriers or other similar barriers, as discussed in the Biological Resources Study and IHMP, to protect environmentally sensitive areas, prior to the start of construction activities. These sensitive areas will be protected by the barrier to avoid disturbances during construction. The protected areas will be designated as environmentally sensitive areas and clearly identified on the construction plans. The barriers will be installed before construction activities are initiated, maintained throughout the construction period, and removed when construction is completed. Sensitive biological resources that occur adjacent to construction areas include special-status wildlife habitats, oak woodland and riparian woodland areas that are to be retained as open space, and wetlands and other waters of the United States that are to be retained. Plastic construction barrier fencing used onsite will be removed within 72 hours of the completion of work to reduce entrapment and injury to reptiles and other wildlife.

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Prior to beginning construction activities, the project applicant will employ a qualified biologist to develop and conduct environmental awareness training for construction employees. The training will describe the importance of onsite biological resources, including the oak woodland, riparian woodland, and mature trees that are to be retained; special-status wildlife habitats; potential nests of special-status birds; and roosting habitat for special-status bats. In addition, construction employees will be educated about invasive plant identification and the importance of controlling and preventing the spread of invasive plant infestations. The biologist will also explain the importance of other responsibilities related to the protection of wildlife during construction, such as inspecting open trenches and looking under vehicles and machinery prior

to moving them to ensure there are no lizards, snakes, small mammals, or other wildlife that could become trapped, injured, or killed in construction areas or under equipment.

The environmental awareness program will be provided to all construction personnel to brief them on the life history of special-status species in or adjacent to the project area, the need to avoid impacts on sensitive biological resources, any terms and conditions required by state and federal agencies, and the penalties for not complying with biological mitigation requirements. If new construction personnel are added to the project, the contractor's superintendent will ensure that the personnel receive the mandatory training before starting work. An environmental awareness handout that describes and illustrates sensitive resources to be avoided during project construction and identifies all relevant permit conditions will be provided to each person.

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

The project applicant will employ a qualified biologist to conduct periodic site visits during construction as necessary in and adjacent to all sensitive biological resources in the construction area. The frequency of site visits will range from weekly to monthly, depending on the biological resource, and may be done concurrently with other monitoring that may be occurring onsite (e.g., California red-legged frog, SWPPP compliance). The biological monitor will assist the construction crew as needed to comply with all project implementation restrictions and guidelines. The biological monitor also will be responsible for ensuring that the contractor maintains the staked and flagged perimeters of the construction area and staging areas adjacent to sensitive biological resources and will inspect the barriers to ensure that the barriers are intact. The monitor will assess any adverse effects on sensitive biological resources resulting from violations of the barrier mitigation requirements and, if resources are adversely affected, will notify the County and the regulatory agency with jurisdiction over the affected sensitive resource. Work will stop until the barriers are reestablished. The monitor will provide the County with a monitoring log for each site visit, which will be provided to interested agencies upon request.

Mitigation Measure BIO-1d: Avoid and minimize potential disturbance of oak woodland habitat and compensate for loss of oak woodland and individual trees

Demonstration of compliance with the ORMP and tree preservation and replacement plan and measures below will be required in all grading and improvement plans for the project. Compliance with these construction measures will be monitored by a qualified biologist and reported as indicated in Mitigation Measure BIO-1c.

- The potential for long-term loss of woody vegetation will be minimized by pruning vegetation rather than removing entire trees or shrubs in areas where complete removal is not required. Any trees or shrubs that need to be trimmed will be cut at least 1 foot above ground level to leave the root systems intact and allow for more rapid regeneration. Cutting will be limited to the minimum area necessary within the construction zone. To protect nesting birds, no pruning or removal of woody vegetation will be performed between February 1 and August 31 without preconstruction bird surveys conducted in accordance with CDFW and/or USFWS requirements.

- Operation or parking of vehicles, digging, trenching, slope cuts, soil compaction, grading, paving, or placement of fill will be prohibited within at least 6 feet outside the driplines of retained trees.
- All construction, staging (including vehicle parking), and access areas will be restricted to the direct impact areas depicted in Figure 3.3-2.
- Runoff from the development area will be directed in such a way as to prevent drainage into the open space area. Drainage systems will be designed to prevent runoff from flowing into oak woodlands and direct it into the storm drainage system, which will discharge runoff into existing onsite drainages. Retaining walls will be installed at the edge of development areas where fill is placed to avoid ponding of water around adjacent retained oak trees.

In accordance with the ORMP, in-lieu fees will be paid at the time of approval of the VMVSP and any deed restrictions or conservation easements will occur at the time applications for permits that would result in tree removal are submitted. The project applicant will implement the following measures, and will adhere to VMVSP Policy 6.30, during construction of each project phase to protect and minimize effects on preserved trees that are adjacent to construction activities.

Mitigation for oak woodlands can be accomplished using one or more of the following options.

1. Offsite deed restriction or conservation easement acquisition and/or acquisition in fee title by a land conservation organization for purposes of offsite oak woodland conservation
2. In-lieu fee payment;
3. Replacement planting onsite within an area subject to deed restriction or conservation easement
4. Replacement planting offsite within an area subject to a conservation easement
5. A combination of options 1 through 4, above.

In accordance with requirements of California PRC Section 21083.4, replacement planting shall not account for more than 50% of the oak woodland mitigation requirement. Therefore, up to half of the project's oak woodland impact mitigation requirement may consist of replacement planting onsite. The replacement planting area must be suitable for tree planting, will not conflict with current or planned land uses, and will be large enough to accommodate replacement plantings at a density equal to the density of oak woodlands impacted, up to a maximum density of 200 trees per acre. The remaining portion of the project's oak woodland impact mitigation requirement would be implemented in the form of an in-lieu fee payment to the County. Assuming the project will mitigate 50% of the affected 689.6 acres with replanting, under the in-lieu fee for the remaining mitigation requirement would equate to $2,871,581 for 346.6 acres of woodland impact (50% of 693.1 acres) at $8,285 per acre, as required in the ORMP.

Mitigation for removal of individual native oak trees is based on an inch-for-inch replacement standard. Up to 11,369 inches of individual oak trees could be affected. Mitigation for Heritage Trees is based on a replacement standard of 3:1 (inches) ratio. Up to 6,627.5 inches of Heritage Trees could be affected. This equates to the requirement of replanting 31,251.5 inches of oak trees. Replacement trees are required to be monitored and maintained for a period of 7 years, calculated from the day of planting.

Impact mitigation requirements for individual native oak trees and Heritage Trees include the following options.

1. Replacement planting onsite within an area subject to a deed restriction or conservation easement
2. Replacement planting offsite within an area subject to a conservation easement or acquisition in fee title by a land conservation organization
3. In-lieu fee payment
4. A combination of options 1 through 3 above.

The total replacement trees must have a combined diameter equal to that of the removed non-Heritage Trees, and a combined diameter equal to 3:1 of the removed Heritage Trees. Replacement tree species must be in the same proportion as those removed. Replacement plantings must be inspected, maintained and documented consistent with requirements for mitigation maintenance, monitoring, and reporting per the ORMP. Currently, the in-lieu fee program requires a payment of $153 per inch of impact for individual oak trees and $459 per inch for Heritage Trees. Using the per-inch mitigation fee option would result in a fee of $1,739,457 for individual oaks and $2,612,857.50 for Heritage Trees. The total fee would be $4,352,314.50.

Mitigation Measure BIO-1e: Maintain retained oaks in development areas

For trees conserved in residential lots, maintenance, care, and replacement of dead trees will be enforced through the covenants, conditions, and restrictions of a homeowners association that will be reviewed and approved by the County at the tentative map stage, and an architectural control committee at the home construction stage. The homeowners association will enforce compliance.

Impact BIO-2: Loss of riparian woodland (less than significant with mitigation)

Riparian woodland habitat occurs throughout the project area along Marble Creek. Patches of riparian habitat in the low-density residential, commercial, office park, agritourism, park, road, and detention basin land use designations would be permanently removed for project development. Some areas of riparian habitat in the open space land use designation would be directly affected for construction of trails. Up to 4.8 acres of riparian woodland would be permanently removed for construction in the VMVSP project area. Riparian habitat adjacent to construction areas could also be temporarily damaged during construction as a result of movement of equipment. Impacts on riparian habitat in the proposed offsite infrastructure improvement areas are discussed under Impact BIO-17.

The riparian woodland retained in the designated open space areas could be subject to indirect effects during and after construction. Construction activity adjacent to retained riparian woodland could alter the topography and indirectly affect surface and groundwater flow that supports the riparian habitat. The County has no specific buffer requirement to protect Marble Creek riparian habitat outside of the proposed development area. However, the current County standards for development require a minimum setback of 50 feet from the OHWM for Deer Creek south of US 50, unless there is a discretionary approval by the County for a larger or smaller setback. Actual setbacks for the VMVSP project area would be determined during the permitting process in

consultation with resource agencies, including CDFW for the streambed alteration agreement and USACE for the CWA Section 404 Individual Permit.

Local, state, and federal agencies recognize riparian habitats as sensitive natural communities. Impacts on riparian woodland in the project area would be a significant impact. Implementation of Mitigation Measures BIO-1a, BIO-1b, and BIO-1c would avoid temporary construction impacts on riparian woodland by requiring barriers to protect sensitive areas, environmental awareness training for construction employees, and periodic site visits during construction. Implementation of the required construction setbacks would avoid the potential indirect impacts on riparian woodland. Mitigation Measure BIO-2 would compensate for the unavoidable permanent loss of riparian woodland and reduce these impacts to a less-than-significant level. Because the proposed project would avoid, minimize, and compensate for impacts on riparian woodland, it would not have a substantial adverse effect on any riparian habitat or threaten to eliminate a plant community.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-2: Compensate for the permanent loss of riparian woodland

The project applicant will compensate for the loss of up to 4.8 acres of riparian woodland that cannot be avoided to ensure no net loss of habitat functions and values. Compensation will be at a minimum of 1:1 (i.e., 1 acre restored/created/enhanced or credits purchased for every 1 acre removed). Final compensation ratios will be based on site-specific information and determined through coordination with CDFW during the permitting process. Compensation may be a combination of mitigation bank credits and/or onsite habitat restoration and will be implemented as determined by the appropriate state and federal agencies during the permitting process. Permanent loss of riparian woodland will be compensated for by implementing one or a combination of the following options.

- The project applicant will purchase offsite mitigation bank credits for riparian woodland to allow for economy of scale and higher-quality habitat due to large patch size and will provide written evidence to the resource agencies that compensation has been established through the purchase of mitigation credits.
- The project applicant will employ a qualified restoration biologist to prepare a riparian restoration and monitoring plan that involves restoring or enhancing onsite riparian woodland, potentially along the creek adjacent to the proposed pedestrian trail. The riparian restoration and monitoring plan will be reviewed by the County and incorporated into the tentative map. The project applicant and the County will ensure implementation of the riparian restoration and monitoring plan. The VMVSP restoration plan will include a site-specific plant and seed palette, planting locations, and maintenance requirements. The number of plantings will be adequate to ensure that the required mitigation ratio will be reached by the end of the monitoring period and that canopy cover and species composition requirements are met. Plantings will consist of cuttings taken from local plants or plants grown from local seed. Planted species composition will be based on those removed from

the project area and will include Fremont's cottonwood, interior live oak, valley oak, California buckeye, arroyo willow, and Goodding's willow. Native understory species, such as buttonwillow, western redbud, creeping spikerush, sedge species, California wild grape, or other suitable species, will be planted. Plantings will be monitored annually for 10 years or as required in the project permits. Project-specific performance standards and success criteria (e.g., plant survival, vegetation cover) will be developed in coordination with resource agencies. If the success criteria are not met at the end of the monitoring period, the site will be evaluated to determine the cause, remedial measures will be implemented, and the monitoring period will be extended.

The project applicant will implement the restoration plan and maintain plantings for 5 years (including weed removal, irrigation, and herbivory protection). As feasible, existing native vegetation from the affected sites should be harvested and maintained for replanting after construction. Progress reports will be provided to the County at the end of each monitoring period.

Impact BIO-3: Loss of jurisdictional wetlands, including seasonal wetlands, seasonal wetland swales, and seeps (less than significant with mitigation)

Activities in the project area that could affect several types of wetlands are regulated by USACE under CWA Section 404. Wetlands in the VMVSP project area that are proposed for development would be directly affected and filled as part of project construction. Wetlands that are within the open space land use designation would be retained but could be indirectly affected by adjacent construction. Impacts on jurisdictional wetlands in the proposed offsite infrastructure improvement areas are discussed under Impact BIO-18.

Based on the USACE-verified extent of wetlands in the project area, project construction in the VMVSP project area would have direct permanent impacts on wetlands, as detailed below.

- Up to 0.540 acre of seasonal wetland would be filled for construction of low-, medium-, and high-density residential development, an agritourism area, parks, and roads.
- Up to 1.274 acres of seasonal wetland swale would be filled for construction of low-, medium-, and high-density residential development, commercial development, parks, schools, areas for agritourism, roads, detention basins, and infrastructure/wastewater pipeline.
- Up to 0.072 acre of seep would be filled for construction of low-density residential development and roads.

Direct impacts on wetlands could occur during construction activities in wetlands that would be temporarily affected during construction but returned to pre-project conditions after construction is completed (e.g., where a wetland could be driven on during construction but would not be permanently filled as part of the project footprint). Oak mitigation planting activities associated with installation of oak saplings and irrigation lines could result in short-term temporary impacts on wetlands that occur in the potential onsite oak mitigation areas.

Earthmoving activities in the construction footprint could result in temporary and indirect impacts on wetlands that are outside of the construction footprint because of erosion and sedimentation into the nonconstruction areas. To protect wetlands outside of the proposed development area, a minimum setback from the wetland edge would be implemented. Actual setbacks for the VMVSP

project area would be determined during the CWA Section 404 permitting process in consultation with USACE.

Direct and indirect impacts on jurisdictional wetlands are considered significant because of the substantial historic losses of wetlands and the importance of wetlands for wildlife habitat, water quality, flood protection, and other functions. Wetlands are regulated by USACE and the Regional Water Board, requiring permits under CWA Sections 404 and 401, respectively. VMVSP Policy 6.10 requires that construction, maintenance, and monitoring and compensation of wetlands comply with USACE requirements pursuant to the issuance of a Section 404 permit. In addition to implementing the measures required as part of the CWA permits, the project applicant would implement Mitigation Measures BIO-1a, BIO-1b, and BIO-1c to avoid temporary construction impacts on wetlands. These mitigation measures would require barriers to protect sensitive areas, environmental awareness training for construction employees, and periodic site visits during construction. In addition, the project applicant would implement Mitigation Measure BIO-3a to avoid and minimize direct and indirect impacts on wetlands and Mitigation Measure BIO-3b to compensate for direct impacts on wetlands. Further, VMVSP Policy 6.11 requires preparation of a wetland mitigation and monitoring plan, which must include detailed information on the habitats present within conservation and mitigation areas, the long-term management and monitoring of these habitats, legal protection for the conservation and mitigation areas, and funding mechanism information. Implementation of VMVSP policies and the following mitigation measures would reduce project impacts on wetlands to a less-than-significant level. Because the proposed project would avoid, minimize, and compensate for impacts on jurisdictional wetlands, it would not have a substantial adverse effect on state or federally protected wetlands or threaten to eliminate a plant community.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands

To the extent practicable, the project applicant will avoid and minimize impacts on waters of the United States, including wetlands, by implementing the measures listed below. These measures will be incorporated into contract specifications and implemented by the construction contractor. Compliance will be monitored by a qualified biologist and reported as indicated in Mitigation Measure BIO-1c.

- The project will be designed, to the extent practicable, to avoid direct and indirect impacts on waters of the United States, including wetlands.
- All construction, staging (including vehicle parking), and access areas will be restricted to the direct impact areas depicted in Figure 3.3-2.
- A SWPPP will be prepared and implemented during construction and will include appropriate BMPs for reducing construction impacts on waters of the United States.

- Within waters of the United States, including wetlands that will be preserved as part of the proposed project, construction activities will be avoided in saturated or ponded natural wetlands and drainages during the wet season (spring and winter) to the maximum extent feasible. Where such activities are unavoidable, protective practices such as use of padding or vehicles with balloon tires will be employed.
- Exposed drainage banks and levees above drainages will be stabilized immediately following completion of construction activities. Other waters of the United States will be restored in a manner that encourages vegetation to reestablish to its pre-project condition and reduces the effects of erosion on the drainage system.
- Any trees, shrubs, debris, or soils that are inadvertently deposited below the OHWM of streams will be removed in a manner that minimizes disturbance of the drainage bed and bank.

  To the extent feasible, in-stream construction within the OHWM of natural drainages will be restricted to the low-flow period (generally April through October).

Mitigation Measure BIO-3b: Compensate for loss of jurisdictional wetlands

The project applicant will compensate for the loss of up to 0.540 acre of seasonal wetland, 1.274 acres of seasonal swale, and 0.072 acre of seep habitat to ensure no net loss of habitat functions and values. The compensation will be provided at a minimum of 1:1 ratio. Additional compensation may be required by regulatory agencies during permit processing. Compensation may be a combination of mitigation bank credits and restoration/creation of habitat and will be implemented before or immediately after completion of each phase of project construction. Permanent loss of wetland habitat will be compensated for by implementing one or a combination of the following options.

- The project applicant will purchase offsite mitigation bank credits for the affected wetland type (i.e., seasonal wetland, seasonal swale, and seep) at a USACE-approved mitigation bank to allow for economy of scale and higher quality habitat due to large patch size. The project applicant will provide written evidence to the County and the resource agencies that compensation has been established through the purchase of mitigation credits.
- The project applicant will employ a qualified restoration biologist to develop a wetland restoration plan that involves creating or enhancing the affected wetland type (i.e., seasonal wetland, seasonal swale, and seep) within open space in the project area or at an offsite location. The plan will be based on the specific development plan and the status of wetlands at the time of construction. The project applicant and the County will coordinate with USACE and the Regional Water Board for plan approval and will ensure implementation of the wetland restoration plan. Potential restoration sites will be evaluated to determine whether this is a feasible option. If it is determined that onsite restoration is feasible, a restoration plan will be developed that describes where and when restoration will occur and who will be responsible for developing, implementing, and monitoring the restoration plan. The plan will be provided to the County prior to the issuance of a grading permit. The wetland restoration plan will also include a species list and specify the number of each species, seeding locations, and maintenance requirements. The extent of seeding will be adequate to ensure that the required mitigation ratio will be reached by the end of the monitoring period and that stem density, canopy cover, and species composition requirements are met. Species seeded will be similar to those removed from the project area and will consist of

inoculum taken from the affected wetlands. The vegetative cover of wetland plantings will be monitored annually for 3 years or as required in the project permits and compared with nearby undisturbed reference wetlands. Progress reports will be provided to the County at the completion of each monitoring period. If vegetative cover of wetland plants is equivalent to reference sites at the end of the monitoring period, the revegetation will be considered successful. If the survival criterion is not met in any monitoring year or at the end of the monitoring period, seeding/planting and monitoring will be repeated after mortality causes have been identified and remedial measures have been implemented, and the monitoring period will be extended to account for the required number of monitoring years for all plantings. Mitigation sites will be protected in perpetuity in a conservation easement or through deed restriction.

Impact BIO-4: Loss of other waters of the United States, including perennial creek, seasonal creek, intermittent drainage, ephemeral drainage, drainage ditch, quarry pond, and stock pond (less than significant with mitigation)

Activities in the project area that could affect several types of other waters are regulated by USACE under CWA Section 404, the Regional Water Board under CWA Section 401, and CDFW under California Fish and Game Code Section 1602. Other waters in the VMVSP project area that are proposed for development would be directly affected and filled as part of project construction. Other waters that are within the open space land use designation would be retained but could be indirectly affected by adjacent construction. Impacts on other waters of the United States in the proposed offsite infrastructure improvement areas are discussed under Impact BIO-18.

Based on the USACE-verified extent of other waters of the United States in the project area, project construction in the VMVSP project area would have direct permanent impacts on the other waters, as detailed below.

- Up to 0.640 acre of perennial creek for infrastructure/wastewater pipeline.
- Up to 0.846 acre of seasonal creek for roads and a detention basin.
- Up to 1.588 acres of intermittent drainage for low- and high-density residential and commercial land uses, an office park, schools, an area of agritourism, a park, roads, and detention basins.
- Up to 0.134 acre of drainage ditch for high-density residential development, a park, an area of agritourism, and roads.
- Up to 0.935 acre of quarry pond for commercial development.

Temporary direct impacts on other waters of the United States could occur during construction activities in drainages that would be temporarily affected during construction but returned to pre-project conditions after construction is completed (e.g., for culvert improvements and bridge construction). Oak mitigation planting activities associated with installation of oak saplings and irrigation lines could result in short-term temporary impacts on other waters of the United States that occur in the potential onsite oak mitigation areas.

Earthmoving activities in the construction footprint could result in temporary and indirect impacts on other waters of the United States that are outside of the construction footprint due to erosion and sedimentation into areas not under construction. To protect other waters outside of the proposed development area, a minimum setback from the OHWM of intermittent streams and perennial

streams would be established. Actual setbacks to be used within the VMVSP project area would be determined in consultation with applicable regulatory agencies during the permitting process.

Direct and indirect impacts on other waters of the United States are considered significant because of the substantial historic losses of open water and the importance of other waters for wildlife habitat, water quality, flood protection, and other functions. Waters of the United States are regulated by USACE. Waters of the state are regulated by the Regional Water Board. These agencies require permits under CWA Sections 404 and 401, respectively. However, in addition to implementing measures required as part of the CWA permits, the project applicant would implement Mitigation Measures BIO-1a, BIO-1b, and BIO-1c, to avoid temporary construction impacts on other waters of the United States by requiring barriers to protect sensitive areas, environmental awareness training for construction employees, and periodic site visits during construction; Mitigation Measure BIO-3a to avoid and minimize direct and indirect impacts on other waters of the United States; and Mitigation Measure BIO-4 to compensate for direct impacts on waters of the United States. Implementation of the mitigation measures would reduce project impacts on other waters of the United States to a less-than-significant level. Because the proposed project would compensate for the loss of other waters of the United States, it would not substantially reduce the extent of state or federally protected wetlands.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands

Mitigation Measure BIO-4: Compensate for loss of other waters of the United States

The project applicant will compensate for the loss of up to 0.640 acre of perennial creek, 0.846 acre of seasonal creek, 1.588 acres of intermittent drainage, 0.134 acre of drainage ditch, and 0.935 acre of quarry pond to ensure no net loss of habitat functions and values. The compensation will be provided at a minimum ratio of 1:1 (1 acre restored or created for every 1 acre permanently affected), but final compensation ratios will be based on site-specific information and determined through coordination with state and federal agencies as part of the permitting process for the project. Compensation may be a combination of mitigation bank credits and restoration/creation of habitat and will be implemented before or immediately after completion of each phase of project construction.

Permanent loss of other waters of the United States will be compensated for by implementing one or a combination of the following options.

- Purchase appropriate mitigation credits at a locally approved mitigation bank. Out-of-kind compensation also could be used based on the vegetation type in the creek (i.e., seasonal wetland). Written evidence will be provided to the County and the resource agencies that compensation has been established through the purchase of mitigation credits.

- Compensate out-of-kind for loss of drainages, ditches, and ponds by implementing other onsite wetland mitigation or purchasing appropriate mitigation credits.

Impact BIO-5: Potential loss of Brandegee's clarkia or other special-status plants (less than significant with mitigation)

Brandegee's clarkia is known to occur in the project area. Approximately 10% of the mapped population is considered to be Brandegee's clarkia, and the other 90% is a hybrid between Brandegee's clarkia and two-lobed clarkia, which is not a special-status species. Brandegee's clarkia species is documented by 89 occurrences in seven counties (California Department of Fish and Wildlife 2024b) and is a California Rare Plant Rank 4 species, which means that it is on a watch list and is not currently considered rare.

According to the September 2019 Village of Marble Valley Project, El Dorado County, California – Impacts to Brandegee's Clarkia memorandum (ECORP Consulting 2019a), the extent for the species expanded from 5.30 acres in 2012 to 13.97 acres in 2019. Brandegee's clarkia occurs primarily in the area proposed as open space. However, a small part of the population extends into the area proposed for construction of a road and a small area of Village Residential Low Density development. Any plants in the development area or the footprint of the road would be removed by construction activities. The expansion of the population has encroached into the planned development footprint. In 2012, 0.30 acre of the population extent mapped for Brandegee's clarkia was expected to be affected by the project. It is now estimated that 1.44 acres of the extent mapped for Brandegee's clarkia would be affected by the project. By contrast, in 2012 there were 5.00 acres of Brandegee's clarkia within planned open space, which has grown to 12.54 acres in 2019. An overlay of the 2019 survey results with the development plan shows that of the 13.97 acres of Brandegee's clarkia, approximately 1.44 acres (about 10.3%) of the mapped area may be affected by project activities. With implementation of Mitigation Measures BIO-1a through 1c, which would avoid temporary construction impacts on Brandegee's clarkia by requiring barriers to protect sensitive areas, environmental awareness training for construction employees, and periodic site visits during construction, the impact would be less than significant. No compensatory mitigation is required.

Special-status plant surveys of the project area are several years old, and there is potential for additional species to be present. Additionally, CDFW and/or USFWS would likely require updated surveys prior to finalizing permits for the project. The presence of additional special-status plant species that could be affected by the project would be a potentially significant impact. Implementation of Mitigation Measure BIO-5a would provide current data for the presence or absence of special-status plant species in the project area and implementation of Mitigation Measure BIO-5b would reduce the potential additional impact on special-status plant to a less-than-significant level.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-5a: Conduct floristic surveys in the project area for special-status plants during appropriate identification periods

The project applicant will employ a qualified botanist to survey the offsite infrastructure improvement areas, after final design of the areas is complete and prior to start of any construction activities, to document the presence of special-status plants. The botanist will consult with the appropriate resource agency regarding special-status species survey methods during drought periods, if needed, but will primarily follow the CDFW botanical survey guidelines (California Department of Fish and Wildlife 2018). All plant species observed will be identified to the level necessary to determine whether they qualify as special-status plants or are plant species with unusual or significant range extensions. The guidelines also require that field surveys be conducted when special-status plants that could occur in the area are evident and identifiable, generally during the reported blooming period. The guidelines additionally recommend visiting reference populations of special-status species that may occur in the study area. Therefore, as feasible, the surveys will include site visits of reference populations of special-status plant species with potential to occur in the project area in order to ensure that they are identifiable during the survey period. This is particularly important for any annual plant species that has a long-lived seedbank and is known to not germinate when conditions are not conducive (e.g., during a drought). To account for different special status–plant identification periods, one or more series of field surveys may be required in spring and summer (April and June). A survey report documenting the methods and results of the study will be prepared and submitted to the County for review and approval.

If any special-status plants are identified during the surveys, the botanist will photograph and map locations of the plants, document the location and extent of the special-status plant. Requirements for compensatory mitigation will be based on the results of these surveys and are discussed in Mitigation Measure BIO-5b.

Mitigation Measure BIO-5b: Avoid or compensate for substantial effects on special- status plants in the project area

If one or more special-status plant(s) is identified in the project area during the preconstruction surveys (Mitigation Measure BIO-5a), the project applicant will redesign or modify proposed project components to avoid direct and indirect effects on special-status plants wherever feasible. If special-status plants can be avoided by redesigning the project, implementation of Mitigation Measures BIO-1a, BIO-1b, and BIO-1c would avoid significant impacts on special-status plants by requiring barriers to protect sensitive areas, environmental awareness training for construction employees, and periodic site visits during construction.

If complete avoidance of special-status plants is not feasible, the project applicant will compensate for the effects of the project on special-status plants by purchasing suitable habitat in a conservation area for the affected special-status plant species at a ratio to be negotiated with the resource agencies, but at a minimum ratio of 1:1 or by funding the transplanting or seeding replacements within appropriate habitats remaining in onsite open space areas. The conservation area will be preserved and managed in perpetuity by the County or its designee. Detailed information will be provided to the resource agencies on the location and quality of the plant habitat conservation area, the feasibility of protecting and managing the area in perpetuity, and the responsible parties. Other pertinent information also will be provided, to be

determined through future coordination with the resource agencies. If suitable habitat in a conservation area is used, proof of purchase will be provided to the County.

Impact BIO-6: Potential mortality or disturbance of monarch butterfly within the VMVSP project area (less than significant)

Up to 153.4 acres of annual grassland, some of which could support caterpillar host plants, would be converted to urban uses during construction of the residential housing. If monarch butterflies are present in the project area during construction, clearing and grubbing, excavation, and other construction activities could result in mortality of adults or larvae from being crushed or buried by equipment. Adult monarch butterflies could be struck by vehicles and construction equipment traveling along access roads during construction if foraging or flying through the area. Construction could also disrupt roosting or foraging activities. The project area is not located within the overwintering range of monarch butterfly and would therefore not affect any critical overwintering habitat. Although there would be a loss of potential breeding and migratory habitat in the project area, the project area would include the preservation of 1,284 acres of open space (including 466 acres of open space for a passive, day-use park or private open space), and 87 acres of public facilities/ recreational use (including 47 acres of public parkland; See Chapter 2, Project Description and Figure 3.3-3). The proposed project would not substantially reduce the number or restrict the range of the species or cause the population to drop below self-sustaining levels. Therefore, the proposed project would have a less-than-significant impact on monarch butterfly.

Impact BIO-7: Potential mortality or disturbance of California red-legged frog within the VMVSP project area (less than significant with mitigation)

No California red-legged frogs were observed during a habitat assessment conducted in 2012 within the VMVSP project area (ECORP Consulting 2013c). However, potential aquatic breeding habitat was identified in the two quarry ponds, and sections of Deer Creek. In addition, uplands throughout the project area support grasslands with small mammal burrows that could provide upland habitat for the species, and the ephemeral and intermittent drainages, seeps, and wetland swales could function as dispersal routes for the species. Overall, there is a low likelihood that California red-legged frogs are present within the project area given the lack of a nearby source population (closest confirmed population is 24 miles to the northeast), and the presence of American bullfrogs. Protocol-level surveys have not been conducted within the project area to confirm presence or absence of the species. Up to 0.94 acre of potential aquatic breeding habitat (the small quarry pond) would be filled and associated upland grassland habitat for California red-legged frog would be converted to urban and agricultural uses. Urban uses would include residential housing, commercial buildings, the village park, and roads in the center of the project area; a public school and road in the northeast corner of the project area; and commercial property south of Deer Creek. The proposed agricultural use would be a vineyard south of Deer Creek. If present in the project area, California red-legged frogs could be killed, injured, or disturbed by activities that remove suitable aquatic or upland habitat. Because California red-legged frog is a federally listed species, the species is rare, and populations within the Sierra Nevada foothills are uncommon and isolated, this impact would be significant. As described under Impact BIO-1, the project applicant would implement general protection measures for biological resources, including Mitigation Measures BIO-1a, BIO-1b, and BIO-1c to avoid temporary construction impacts on wetlands by requiring barriers to protect sensitive areas, environmental awareness training for construction employees, and periodic site visits during construction. The project applicant also would implement Mitigation Measure BIO-3a

to avoid and minimize direct and indirect impacts on wetlands. In addition to these general protection measures, the project applicant would implement Mitigation Measure BIO-6 to avoid and minimize direct and indirect impacts on California red-legged frogs and their habitat. With the implementation of these measures, the proposed project would avoid and minimize direct and indirect impacts on California red-legged frogs and their habitat, and would not substantially reduce the number or restrict the range of the species or cause the population to drop below self-sustaining levels. Therefore, the proposed project would have a less-than-significant impact on California red-legged frog.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands

Mitigation Measure BIO-7: Conduct preconstruction survey and implement California red-legged frog avoidance and minimization measures

The project applicant will employ a qualified biologist to conduct preconstruction surveys for the species. If presence of California red-legged frog is confirmed during preconstruction surveys, the project applicant will implement the following measures prior to and during ground-disturbing activities associated with construction to avoid and minimize potential effects on California red-legged frog.

- Before construction begins, a qualified biologist (in possession of a 10(a)(1)(A) permit) will locate appropriate relocation areas and prepare a relocation plan for California red-legged frogs that may need to be moved prior to or during construction. The project applicant will submit this plan to USFWS for approval a minimum of 30 days prior to the start of construction as part of Section 7 consultation during the CWA Section 404 permitting process in consultation with USACE.
- Prior to disturbance or filling of suitable aquatic breeding habitat for California red-legged frog, visual and dip-net surveys (non-protocol) will be conducted, under the discretion of USFWS, to determine if California red-legged frog adults, tadpoles, or egg masses are present. If any of these life stages are identified, they will be relocated to a USFWS-approved offsite location according to the relocation plan (described above). Relocation activities would constitute take under the ESA and must be authorized by USFWS under ESA Section 7 or Section 10.
- Immediately prior to construction, a qualified biologist will conduct a preconstruction survey for California red-legged frog within areas proposed for ground disturbance. The biologist will carefully search all obvious potential hiding spots for California red-legged frogs, such as large downed woody debris, the perimeter of pond or wetland habitat, and the riparian corridor associated with streams and drainages. Preliminary results of the preconstruction survey will be provided to the County within 48 hours of completion.

- A USFWS-approved biologist will train all project staff regarding habitat sensitivity, identification of special-status species, and required practices before the start of ground-disturbing activities. The training will include the general measures that are being implemented to conserve this species as they relate to the project, the penalties for noncompliance, and the boundaries of the approved work area. Upon completion of training, employees will sign a form stating that they attended the training and understand all the conservation and protection measures.
- A qualified biologist will monitor initial ground-disturbing activities (i.e., grading, vegetation removal). The qualified biologist will complete a daily log summarizing activities and environmental compliance.
- If a California red-legged frog is encountered during preconstruction surveys or during construction, activities will cease and USFWS will be contacted immediately for direction on how to proceed. If the individual(s) cannot or do not move offsite on their own, a USFWS-permitted biologist (in possession of a 10(a)(1)(A) permit) will trap and move the individuals in accordance with the relocation plan (described above).
- The qualified biologist will have the authority to halt construction activities if any of the project requirements or agency conditions are not being fulfilled.
- Construction disturbances and other types of project-related disturbance to California red-legged frog will be minimized to the maximum extent practicable and confined to the designated project site.
- Potential habitat outside the construction area but within the project area (i.e., open space) will be delineated with high-visibility flagging or fencing to prevent encroachment of construction personnel and equipment into these areas during project work activities. At no time will equipment or personnel be allowed to adversely affect areas outside the project site.
- Because dusk and dawn are often the times when California red-legged frogs are most actively foraging and dispersing, all construction activities adjacent to potentially occupied habitat should cease 30 minutes before sunset and should not begin prior to 30 minutes before sunrise.
- To prevent inadvertent entrapment of California red-legged frogs during construction, all excavated, steep-walled holes or trenches more than 6 inches deep will be provided with one or more escape ramps constructed of earth fill or wooden planks and will be inspected by a qualified biologist prior to being filled.
- Work crews or an onsite biological monitor will inspect open trenches, pits, and under construction equipment and material left onsite in the morning and evening to look for amphibians that may have become trapped or are seeking refuge.
- No canine or feline pets will be permitted at the construction site to avoid harassment, killing, or injuring of California red-legged frogs.
- No monofilament plastic mesh or line will be used for erosion control.
- All vehicle parking will be restricted to previously determined areas or existing roads within the designated work area.

- All workers will ensure their food scraps, paper wrappers, food containers, cans, bottles, and other trash from the project area are deposited in covered or closed trash containers to avoid attracting predators. The trash containers will be secured and covered or removed from the project area at the end of each working day.

Impact BIO-8: Potential mortality or disturbance of foothill yellow-legged frog within the VMVSP project area (less than significant with mitigation)

Foothill yellow-legged frogs were not observed during site assessments of the VMVSP project area. According to the September 2019 *Foothill Yellow-Legged Frog Survey Results* memorandum, no foothill yellow-legged frogs were observed during surveys in May or June 2012, or in May, June, or September 2019. The nearest documented occurrence of foothill yellow-legged frog (CNDDB Occurrence #273) is just over 5 miles north of the project area (California Department of Fish and Wildlife 2024). Based on results of a habitat assessment for foothill yellow-legged frogs, the VMVSP project area does not provide suitable breeding habitat for the species due to a lack of cobble point-bars and the presence of dense algae (ECORP Consulting 2013d). However, portions of Deer Creek and Marble Creek in the VMVSP project area provide potential foraging and dispersal habitat for adult frogs. If foothill yellow-legged frogs are present in work areas during construction within or adjacent to Deer Creek and Marble Creek, frogs could be directly and indirectly affected by construction activities. As described above, the project applicant would implement general protection measures for biological resources, including Mitigation Measures BIO-1a, BIO-1b, and BIO-1c, to avoid temporary construction impacts on wetlands by requiring barriers to protect sensitive areas, environmental awareness training for construction employees, and periodic site visits during construction. Mitigation Measure BIO-3a would be implemented and would require that BMPs be in place to minimize impacts on Deer and Marble Creeks and ensure that in-stream construction is restricted to the low-flow period (generally April through October). In addition, Mitigation Measure BIO-8 would document the presence of and minimize potential impacts on foothill yellow-legged frog individuals. With the implementation of these measures, the proposed project would avoid and minimize direct and indirect impacts on foothill yellow-legged frogs and their habitat and would not substantially reduce the number or restrict the range of the species or cause the population to drop below self-sustaining levels. Therefore, the proposed project would have a less-than-significant impact on foothill yellow-legged frog.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands

Mitigation Measure BIO-8: Avoid and minimize construction-related impacts on foothill yellow-legged frog

If avoidance is not feasible, prior to any construction activities within or adjacent to Deer Creek or Marble Creek, a survey for foothill yellow-legged frogs will be conducted by a qualified

biologist within 48 hours of the commencement of construction activities. If foothill yellow-legged frogs are found within the impact area, they will be relocated downstream of the construction area in consultation with CDFW. This biologist will monitor all construction activities within and immediately adjacent to Deer and Marble Creeks.

Impact BIO-9: Potential mortality or disturbance of northwestern pond turtle within the VMVSP project area (less than significant with mitigation)

Northwestern pond turtles have been documented within the VMVSP project area in the two quarry ponds, Deer Creek, and Marble Creek (Figure 3.3-1; ECORP Consulting 2013g). Suitable aquatic and upland (overwintering, nesting) habitat for pond turtles would be removed by construction of the residential housing, commercial property, vineyards, and two village parks surrounding the quarry ponds and on either side of Marble and Deer Creeks. Northwestern pond turtles may be killed, injured, or disturbed by these activities. Potential direct impacts could include mortality or injury by equipment, entrapment in open trenches or other project facilities, and removal or disturbance of aquatic or upland nesting habitat. Construction activities (such as grading and movement of heavy equipment) could result in the destruction of pond turtle nests containing eggs or young individuals if affected areas are being used for egg deposition. Loss of individual turtles, nesting sites, or eggs in the project area could diminish the local population and lower reproductive potential, which could contribute to the further decline of this species. This impact would be significant. Implementation of Mitigation Measures BIO-1a, BIO-1b, and BIO-1c to avoid temporary construction impacts on wetlands by requiring barriers to protect sensitive areas, environmental awareness training for construction employees, and periodic site visits during construction, in addition to Mitigation Measure BIO-9 would reduce this impact. With the implementation of these collective measures, the proposed project would avoid and minimize impacts on northwestern pond turtle and its habitat, and would not substantially reduce the number or restrict the range of the species or cause the population to drop below self-sustaining levels. Therefore, with implementation of the measures below, the proposed project would have a less-than-significant impact on northwestern pond turtle.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-9: Conduct preconstruction surveys for northwestern pond turtle and exclude turtles from the work area

To the greatest extent possible, suitable habitat will be completely avoided and activities will be conducted within paved roads, farm roads, road shoulders, and similarly disturbed and compacted areas. If the construction activity cannot fully avoid effects on suitable habitat, the project applicant will implement the following measures will be implemented to avoid and minimize impacts on western pond turtles.

- Initiate construction and conduct initial ground disturbance in suitable upland habitat within 300 feet of suitable aquatic habitat prior to the start of nesting season (August 1 – February 28) and avoid northwestern pond turtle upland habitat during periods of nesting

and nestling emergence (between March 1 – July 31). Suitability of aquatic and upland habitat characteristics will be determined by a USFWS -approved biologist. Once initial ground disturbance removing suitable habitat within a construction site has been conducted and exclusionary fencing is in place and maintained, work within the cleared area can occur throughout the year.

- At least 30 days prior to any ground-disturbing activities that could result in injury or mortality of northwestern pond turtle, the project proponent will prepare and submit a relocation plan for USFWS's written approval. The relocation plan will contain the name(s) of the biologist(s) to relocate northwestern pond turtles or their nests, the method of relocation, a map, and a description of the proposed release site(s) a minimum of 300 feet outside of the work area or at a distance otherwise agreed to by USFWS and written permission from the landowner to use their land as a relocation site. Possible relocation sites include perennial ponds within the open space portion of the project area or Carson Creek downstream of the project area where pond turtles have been previously documented. Any capture and handling of turtles will be done by a USFWS-approved biologist wearing clean, new disposable surgical style (nitrile, etc.) gloves.
- Within 72 hours prior to the initiation of any vegetation clearing, ground-disturbing activities, and exclusion fence installation or modification, a USFWS-approved biologist will conduct a preconstruction survey within suitable aquatic and upland habitat in the entire work site for the presence of northwestern pond turtles or nests. These surveys will consist of walking the work site limits. The biologist will investigate all potential areas that could be used by northwestern pond turtle for feeding, basking, nesting, or other essential behaviors. If there is a lapse in construction of 7 days or more for work areas surrounded by exclusion fencing, these preconstruction surveys will be repeated before activities resume.
- When there is northwestern pond turtle habitat within 300 feet of construction activities, exclusion fencing will be installed along the perimeter of construction sites to protect northwestern pond turtle habitat and minimize the potential for turtles to enter the construction work area. The perimeter of construction sites (except for work sites within areas of open water) within 300 feet of suitable northwestern pond turtle aquatic habitat will be fenced with exclusion fencing no more than 14 days prior to the start of construction activities (e.g., staging, vegetation removal, grading) in a given area. To the greatest extent feasible, exclusion fencing will be installed prior to the start of nesting season (March 1). The placement of exclusion fencing will be determined, in part, by the locations of suitable habitat for the species. A conceptual fencing plan will be submitted to USFWS prior to the start of construction and the approved exclusion fencing will be shown on the final construction plans. The project applicant will include the exclusion fence specifications including installation and maintenance criteria in the bid solicitation package special provisions. The exclusion fencing will remain in place for the duration of construction and will be regularly inspected and fully maintained. Where openings need to be maintained, such as for a road, fencing will be installed to direct turtles away from the work area to the extent practicable (e.g., fencing will flare out and turn back toward the river and adjacent riparian). Where construction access is necessary, gates will be installed in the exclusion fence and fencing will direct animals away from the work area to the extent practicable (e.g., fencing will flare out and turn back toward suitable habitat).
- The biological monitor and construction manager will be responsible for checking the exclusion fencing around the work areas each day of construction to ensure that they are

intact and upright. Repairs to the exclusion fence will be made within 24 hours of discovery of damage. If exclusionary fencing is found to be compromised, the suitable habitat inside the fencing will be surveyed in advance of any activity that may result in take of the species. Following repairs, the biologist will search all potential areas that could be used by northwestern pond turtle for feeding, basking, nesting, or other essential behaviors, including along exclusion fencing and beneath vehicles before the vehicles are moved.

- For work sites where exclusion fencing cannot be placed around the entire perimeter, the USFWS-approved biological monitor will help guide access and construction work around wetlands, ponds, and other sensitive habitats capable of supporting northwestern pond turtle to minimize habitat disturbance and risk of injuring or killing northwestern pond turtles.
- The USFWS-approved biologist will conduct clearance surveys prior to the start of construction each day and regularly throughout the workday when construction activities are occurring that may result in injury or mortality of northwestern pond turtle. Surveys will be conducted in the same manner as the preconstruction surveys.
- If a northwestern pond turtle is encountered in a construction or restoration area, all personnel on-site will be notified and activities within a minimum of 25 feet of the individual will cease immediately, the construction manager and USFWS-approved biologist will be notified, and the biologist will observe and follow within 10 feet of the individual to ensure it has safely left the area. Depending on site-specific conditions, such as the use of heavy equipment or other activities that may cause harm to the individual, as determined by the biologist, a larger protective buffer may be established. The turtle will be allowed to leave the area of its own volition out of harm's way. If the turtle does not move out of the area on its own, and it is determined by the biologist, in coordination with the construction manager that relocating the turtle is necessary to prevent harm, the turtle may be captured and relocated to suitable habitat a minimum of 300 feet outside the work area in accordance with the relocation plan, prior to resumption of construction activity.
- Store equipment in designated staging area areas at least 300 feet away from northwestern pond turtle aquatic habitat to the extent practicable.
- If a work site is to be temporarily dewatered by pumping during the northwestern pond turtle active season, intakes will be completely screened with wire mesh not larger than 5 millimeters to prevent juvenile pond turtle and other aquatic species from entering the pump system. Any turtles found in the dewatered area will be relocated according to the USFWS-approved relocation plan.

For proposed activities that will occur within suitable northwestern pond turtle aquatic habitat during the northwestern pond turtle inactive season (October 1 through February 28), the project applicant will implement the following additional avoidance and minimization measures.

- All aquatic northwestern pond turtle habitat will be dewatered prior to the start of the inactive season (October 1) to the extent that the area is no longer suitable northwestern pond turtle habitat, as defined by the USFWS-approved biologist. Dewatering is necessary because aquatic habitat provides overwintering habitat for northwestern pond turtle; dewatering serves to remove the attractant and increase the likelihood that northwestern pond turtle will move to other available habitat. Pump intakes will be completely screened with wire mesh not larger than 5 millimeters to prevent juvenile pond turtle and other

aquatic species from entering the pump system. Dewatering will be limited to the immediate construction area. The USFWS-approved biologist will be on-site during dewatering activities to salvage and relocate any turtles that cannot escape on their own according to the USFWS-approved relocation plan. Any deviation from this measure will be done in coordination with and with approval of USFWS.

- Following dewatering of aquatic habitat, all potential impact areas that provide suitable aquatic or upland northwestern pond turtle habitat will be surveyed for northwestern pond turtle by the biologist. If northwestern pond turtles are observed, they will be allowed to move of their own accord or relocated in accordance with the approved relocation plan.
- Once habitat is deemed free of northwestern pond turtles, exclusion fencing will be installed around the construction site so no turtles may reenter prior to or during construction.

Impact BIO-10: Potential mortality or disturbance of Blainville's horned lizard within the VMVSP project area (less than significant with mitigation)

Blainville's horned lizard is a California species of special concern, but it is not listed as endangered, candidate, or threatened under ESA or CESA. Potential habitat (chaparral and interspersed patches of bare ground) for Blainville's horned lizard is present within the VMVSP project area. ECORP Consulting conducted a survey and a habitat assessment in the project area in 2012 and identified possible signs of horned lizard presence (pellets/scat) during 2012 surveys (ECORP Consulting 2013f). Two probable horned lizard pellets were observed in the chaparral on the east side of the project area and one suspected pellet was observed along a dirt road surrounded by open oak woodland on the west side of the project area. In addition, a probable horned lizard was observed incidentally, during a nesting bird survey. Therefore, there is a high potential for the species to occur onsite based on the suitable chaparral habitat and extensive bare ground, presence of numerous native ant colonies (preferred prey), and probable observations of horned lizards and their scat. Approximately 138 acres of suitable chaparral habitat for horned lizard would be removed by construction of an office park, a village park, a public school, and a vineyard at the northwestern corner of the project area and by the construction of residential housing and associated roads in the eastern portion of the project area. The project would protect within open space approximately 54 acres of suitable horned lizard habitat.

If horned lizards are present within areas proposed for development, they could be killed, injured, or disturbed by construction activities. Additionally, horned lizards potentially occurring in adjacent open space areas would be exposed to increased predation by domestic animals such as cats and dogs. Existing extant populations of horned lizards in the Sierra foothills (including El Dorado County) are scattered and are becoming increasingly fragmented and threatened by encroaching development (Jennings and Hayes 1994:132). Loss of individual horned lizards could diminish the local population and lower reproductive potential, which could contribute to the further decline of this species both locally and regionally. Therefore, this impact would be significant.

Implementation of Mitigation Measures BIO-1a, BIO-1b, and BIO-1c, requiring barriers to protect sensitive horned lizard habitat, as determined by the biological monitor prior to construction, environmental awareness training for construction employees, and periodic site visits during construction, and Mitigation Measure BIO-10a would minimize impacts on Blainville's horned lizard individuals. In addition, the proposed project would protect approximately 54 acres of suitable habitat for the species.

Prior to submittal of the first small tentative subdivision map to the County, as directed by VMVSP Policy 6.46, the project applicant has committed to preparing an OSMP to guide the conservation and protection of oak woodland and wildlife uses within designated open space in the project area in perpetuity (described in Section 6 of the VMVSP). The OSMP would include installation and maintenance of interpretive signs designating these areas as open space for the protection of sensitive natural resources with restricted uses defined (i.e., off-road vehicles prohibited, pet/wildlife interaction education). Implementation of Mitigation Measure BIO-10b requires that the OSMP also include specific provisions requiring that domestic animals be on leash, pet and human food should not be left outside, and that trash containers are closed at all times. This would help reduce the potential for domestic animal predation.

With the implementation of these collective measures, the proposed project would avoid and minimize impacts on Blainville's horned lizard and would not substantially reduce the number or restrict the range of the species or cause the population to drop below self-sustaining levels. Therefore, the proposed project would have a less-than-significant impact on Blainville's horned lizard.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-10a: Avoid and minimize impacts on Blainville's horned lizard

Where suitable habitat (chaparral) for Blainville's horned lizard is identified within the designated work area, the project applicant will implement the following measures to ensure that construction activities avoid and minimize impacts on these species.

- The project applicant will retain a qualified biologist to conduct preconstruction surveys immediately prior to (within 24 hours of) ground-disturbing activities (including equipment staging, vegetation removal, grading). If Blainville's horned lizards are found during the survey, work will not begin until they are moved out of the work area to a suitable location approved by the project biologist or within the designated open space area.
- No monofilament plastic mesh or line will be used for erosion control.
- Where applicable, barrier fencing (sediment control material or similar) material will be used to exclude Blainville's horned lizard from the work area. Installation of barrier fencing will be consistent with Mitigation Measure BIO-1a.
- Work crews or an onsite biological monitor will inspect open trenches, pits, and under construction equipment and materials left onsite for horned lizards each morning and evening prior to the start and end of the construction day.
- All construction, staging (including vehicle parking), and access areas will be restricted to the direct impact areas depicted in Figure 3.3-2.

Mitigation Measure BIO-10b: Include measures in the open space management plan identifying homeowner responsibilities to help reduce potential for domestic animal predation on wildlife

The County will ensure the OSMP includes requirements to help reduce the potential for domestic pet predation on wildlife species. Specific actions should be developed by a qualified wildlife biologist. Such requirements could include, but would not be limited to, keeping pets on leash in open space and woodland areas, ensuring human and pet food and trash sources are not accessible to wildlife, and others as recommended by the wildlife biologist.

Impact BIO-11: Potential mortality or disturbance of nesting special-status and non–special-status birds within the VMVSP project area (less than significant with mitigation)

Special-status birds that may nest in the oak and riparian woodland habitats in and adjacent to the VMVSP project area include white-tailed kite, golden eagle, and Swainson's hawk. Burrowing owl and grasshopper sparrow may nest in ruderal areas or annual grassland in or adjacent to the project area. Loggerhead shrikes may nest in scattered shrubs and trees in more open portions of the project area. Tricolored blackbirds may nest in blackberry brambles or riparian vegetation along drainages in the project area. The oak woodland provides high-quality nesting habitat for many species of special-status and non-special-status birds and raptors which are likely to nest throughout this natural community. The 2012 breeding bird survey (ECORP Consulting 2013j) identified two active red-tailed hawk nests within the VMVSP project area (Figure 3.3-1). In addition, based on behavioral observations during the 2012 survey white-tailed kites are assumed to nest in the project area.

Vegetation removal and other construction activities during the breeding season (generally February 1 through August 31) could result in the mortality or disturbance of nesting raptors and other birds in and adjacent to the construction area. The removal of annual grassland and riparian and oak woodland would reduce the amount of available nesting habitat for special-status and non-special-status birds. Oak woodland mitigation would also remove suitable grassland habitat for ground-nesting birds. Planting activities during the breeding season within the areas proposed for open space protection could also disturb nesting birds. Disturbances that result in the incidental mortality of adults, loss of fertile eggs or nestlings, or other events that lead to nest abandonment would be considered a significant impact and are prohibited under the MBTA and California Fish and Game Code Sections 3503 and 3503.5. Swainson's hawk is also listed as threatened under CESA, and white-tailed kite and golden eagle are fully protected species under California Fish and Game Code Section 3511.

There is one record of a nesting Swainson's hawk approximately 5 miles west of the VMVSP project area (California Department of Fish and Wildlife 2024a); however, the current breeding range of Swainson's hawks does not extend into the project area. Based on the lack of large expanse foraging areas within the project vicinity, and the existence of larger patches of high-value foraging habitat closer to recorded nest sites than the project area provides, there is a low potential for Swainson's hawks to nest or forage in the project area. Therefore, the loss of potential foraging habitat for Swainson's hawk in the project area is not a significant impact on Swainson's hawk.

Because white-tailed kite and golden eagle are fully protected, removal of trees with active nests and activities that may result in loss of white-tailed kite or golden eagle are prohibited. Removal of nests or suitable nesting habitat (e.g., trees, shrubs, ruderal areas, grassland) and construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings

or otherwise lead to nest abandonment. Such losses could affect the local population of a special-status species and would be considered a significant effect.

Implementation of general protection measures described under Impact BIO-1—Mitigation Measures BIO-1a, BIO-1b, and BIO-1c to avoid temporary construction impacts on nesting birds by requiring barriers to protect active nests detected during preconstruction surveys, environmental awareness training for construction employees, and periodic site visits during construction—in addition to Mitigation Measures BIO-11a and BIO-11b would reduce impacts on special-status and non-special-status birds. With the implementation of these collective measures, the proposed project would avoid and minimize impacts on nesting birds and would not substantially reduce the number or restrict the range of listed avian species or cause populations to drop below self-sustaining levels. Therefore, the proposed project would have a less-than-significant impact on special-status and non-special-status birds.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-11a: Conduct vegetation removal activities outside the breeding season for birds and raptors

To the maximum extent feasible, the project applicant will conduct all necessary vegetation (trees, shrubs, grasses) removal and pruning during the nonbreeding season for most birds and raptors (generally September 1 through January 31). If vegetation removal cannot be accomplished in accordance with this timeframe, there is a high potential that birds, including raptors, will nest in the project area and require no-disturbance buffers. If vegetation removal or pruning is conducted during the nesting season (February 1 through August 31), preconstruction nesting bird surveys will be required, and additional protective measures will be implemented (see Mitigation Measure BIO-11b).

Mitigation Measure BIO-11b: Conduct preconstruction nesting surveys for special-status and non-special-status birds and implement protective measures during construction

The project applicant will retain a qualified wildlife biologist to conduct preconstruction nesting bird surveys prior to the start of construction that would take place between February 1 and August 31. The biologist conducting the surveys will have knowledge of the relevant species to be surveyed. A minimum of three separate surveys will be conducted between February 1 and June 1 to account for different species that have different survey times. In addition, one survey will be conducted no more than 48 hours prior to initiating ground-disturbing activities. Surveys will include a search of all suitable nesting habitat (i.e., trees, shrubs, annual grassland, and emergent wetland vegetation) in the construction area. In addition, a 500-foot area around the project area will be surveyed for nesting raptors, and a 50-foot buffer area will be surveyed for other nesting birds. Areas outside the construction area where access permission has not been granted will be surveyed from the edge of the construction area or from public roadways using binoculars to scan suitable nesting habitat. If no active nests are detected during these surveys,

no additional measures are required. Surveys should be repeated if there is a lapse in construction of more than 10 days or if construction begins in a new area where suitable nesting habitat is present and if the area has not been surveyed within the previous 10 days.

If active nests are found in the survey area, a minimum 50-foot no-disturbance buffer for song birds and a minimum 300-foot buffer for raptors will be established around the nest sites to avoid disturbance or destruction of the active nest until the end of the breeding season (approximately September 1) or until a qualified wildlife biologist determines that the young have fledged and moved out of the project area (date of fledging varies by species). The extent of the buffers may be reduced by the biologist in coordination with USFWS and/or CDFW (depending upon which agency has an expressed interest in the subject species) and will depend on the level of noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. Suitable buffer distances may vary by species. If construction activities must encroach upon established buffers, additional protection measures developed in coordination with USFWS and/or CDFW may be necessary to avoid take and could include periodic nest monitoring, installation of visual screens, and restrictions on construction timing to allow birds to resume normal activities during certain portions of the day.

Impact BIO-12: Potential injury, mortality, or disturbance of tree-roosting bats and removal of roosting habitat within the VMVSP project area (less than significant with mitigation)

The proposed project would result in the loss of mature trees, which provide potential roosting habitat (cavities, crevices, furrowed bark, and foliage) for special-status and non-special status bats (Wyatt 2013). The highest detections of bats in the project area were adjacent to water features (the quarry ponds, Deer Creek, and Marble Creek). Silver-haired bat was also potentially detected throughout the project area during bat acoustic surveys (Wyatt 2013). In addition, there is potential for Townsend's big-eared bat to occur within the proposed designated open space areas within the VMVSP project area, although the species was not detected during surveys. Tree removal and pruning, noise, and other construction activities could result in the injury, mortality, or disturbance of roosting bats if they are present in cavities, crevices, furrowed bark, or foliage of trees within or adjacent to construction areas. Tree removal or pruning or other disturbances during the maternity season or hibernation period that results in mortality of tree-roosting bats has the potential to affect a large number of bats either within a single large roost or as numerous individual roosts and could substantially reduce the local populations of these species. This impact would be significant. Implementation of Mitigation Measures BIO-1a, BIO-1b, and BIO-1c would avoid temporary construction impacts on bats by requiring barriers to protect roosting habitat, environmental awareness training for construction employees, and periodic site visits during construction. In addition, Mitigation Measure BIO-12 to identify bat roosts and implement avoidance and minimization measures would lessen effects on western red bat, pallid bat, and other bat species. With the implementation of these collective measures, the proposed project would avoid and minimize impacts on bats and their habitat and would not substantially reduce the number or restrict the range of these species or cause populations to drop below self-sustaining levels. Therefore, the proposed project would have a less-than-significant impact on special-status and non-special-status bats.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-12: Identify suitable roosting sites for bats and implement avoidance and minimization measures

Prior to tree removal or pruning activities associated with construction, the project applicant will retain a qualified biologist to examine trees to be removed or trimmed for suitable bat roosting sites. High-quality habitat features (large tree cavities, basal hollows, loose or peeling bark, larger snags, palm trees with intact thatch, or similar conditions) will be identified, and the area around these features will be searched for bats and bat sign (guano, culled insect parts, staining). Riparian and oak woodlands should be considered potential habitat for solitary foliage-roosting bat species. Specific survey methods for the site will be developed in coordination with CDFW. A report documenting the results of preconstruction surveys for bats, locations of suitable habitat, and recommended avoidance measures will be provided to the County and CDFW.

If potential bat roosting sites are identified within or adjacent to construction areas, including areas of tree removal or pruning, the project applicant will coordinate with CDFW to identify protective measures to avoid and minimize impacts on roosting bats based on the type of roost and timing of activities. These measures would include the following.

- If feasible, all tree removal will be conducted between September 15 and October 30, which corresponds to a time period when bats have not yet entered torpor or would be caring for nonvolant (i.e., not able to fly) young.
- Potential roost trees will be removed in pieces rather than felled all at once.
- Active maternity roosts, whether solitary or colonial, will remain undisturbed until September 15 or until after a qualified biologist has determined the roost is no longer active.
- If a non-maternity roost tree is located within the construction area and tree removal or pruning must occur between September 15 and October 30, a qualified biologist (familiar with bats) will be present during tree trimming or pruning activities. To minimize impacts on the bats, tree removal and pruning should occur in the late afternoon or evening when it is closer to the time that bats would normally arouse. Tree removal should begin with removal of limbs to create enough noise and vibration to allow bats time to arouse and leave the tree or as prescribed by CDFW biologists. The biologists should search downed vegetation for dead or injured bats. The presence of dead or injured bats that are species of special concern will be reported to CDFW. The biologist will prepare a biological monitoring report that will be provided to the County and CDFW.

Impact BIO-13: Potential mortality or disturbance of American badger within the VMVSP project area (less than significant with mitigation)

Construction activities in the VMVSP project area could result in direct effects on American badgers and their grassland habitat. Construction activities would remove potential habitat and could result in the mortality or injury of individuals from construction vehicles or heavy equipment, direct mortality or injury of individuals from den collapse and subsequent suffocation, temporary

disturbance from noise and human presence associated with construction activities, and harassment of individuals by construction personnel. American badger has experienced drastic declines, particularly in the Central Valley, and has been extirpated from many areas in southern California (Williams 1986:66). Loss of individuals in the project area could diminish the local populations of this species and reduce reproductive potential, contributing to the further decline of this species. This would be a significant impact. With the implementation of Mitigation Measures BIO-1a, BIO-1b, and BIO-1c to avoid temporary construction impacts on badgers by requiring barriers to protect active dens, environmental awareness training for construction employees, and periodic site visits during construction, and Mitigation Measure BIO-13, the proposed project would avoid and minimize impacts on American badgers and their habitat, and would not substantially reduce the number or restrict the range of the species or cause the population to drop below self-sustaining levels. Therefore, the proposed project would have a less-than-significant impact on American badger.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-13: Implement measures to avoid and minimize potential impacts on American badger

Where suitable habitat is present for American badger in and adjacent to proposed work areas, the following measures will be implemented.

- All project proponents will retain qualified approved biologists (familiar with identification of the species) to conduct a preconstruction survey for potential American badger dens.
- The preconstruction survey will be conducted no less than 14 days and no more than 30 days before the beginning of ground disturbance, or any activity likely to affect American badger. The biologists will conduct den searches by systematically walking transects through the project area and a buffer area to be determined in coordination with CDFW. If a potential or known den is found during the survey, the biologist will measure the size of the den, evaluate the shape of the den entrances, and note tracks, scat, prey remains, and recent excavations at the den site. The biologists will also determine the status of the dens and map the features.
- Any occupied or potentially occupied badger den will be avoided by establishing an exclusion zone (i.e., four or five flagged stakes will be placed 50 feet from the den entrance) until the den is no longer in use, as determined by a qualified wildlife biologist, or is relocated in consultation with CDFW.
- All construction, staging (including vehicle parking), and access areas will be restricted to the direct impact areas depicted in Figure 3.3-2.

Impact BIO-14: Potential mortality or disturbance of ringtail within the VMVSP project area (less than significant with mitigation)

The proposed project would result in the loss of 689.6 acres of oak woodland and 4.8 acres of riparian habitat, some of which may provide suitable shelter and denning habitat (hollow trees, logs, snags) for ringtails. If construction were to occur during the ringtail breeding and maternity period (February through August), the project may also disturb burrows that provide suitable denning habitat. Newborn and young ringtails are especially vulnerable during May through August, when they are unable to leave the maternal den. Removal of suitable shelter or denning habitat, noise, and other construction activities could result in the injury, mortality, or disturbance of ringtails. Mortality of ringtail could affect the local population and would be a significant effect. Because ringtail is a fully protected species, take of this species is prohibited. This impact would be significant. With the implementation of Mitigation Measures BIO-1a, BIO-1b, and BIO-1c to avoid temporary construction impacts on ringtail by requiring barriers to protect active dens, environmental awareness training for construction employees, and periodic site visits during construction, and with implementation of Mitigation Measures BIO-11a, which would avoid vegetation removal during the ringtail breeding season, and BIO-14, the proposed project would avoid and minimize impacts on ringtails and their habitat, and would not substantially reduce the number or restrict the range of the species or cause the population to drop below self-sustaining levels. Therefore, with implementation of mitigation measures the proposed project would have a less-than-significant impact on ringtail.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-10a: Conduct vegetation removal activities outside the breeding season for birds and raptors

Mitigation Measure BIO-14: Identify suitable shelter and denning habitat for ringtail and implement avoidance and protective measures

Prior to the start of construction, the project applicant will retain qualified wildlife biologists to survey the construction work areas for suitable burrows that may provide shelter or denning habitat for ringtail. If necessary, a ringtail specialist will be contracted to confirm the suitability of habitat and determine presence of species. Survey methods will be discussed with CDFW and/or a ringtail specialist prior to the start of surveys.

Measures to avoid and minimize impacts on ringtail will be determined in coordination with CDFW, and compliance with these construction measures will be monitored by a qualified biologist and reported as indicated in Mitigation Measure BIO-1c. Measures may include the following.

- Avoid or minimize the removal of suitable burrows, trees, logs, and snags that may provide shelter or denning habitat for ringtail.

- All construction, staging (including vehicle parking), and access areas will be restricted to the direct impact areas.
- Conduct ground-disturbing activities and tree removal in riparian habitat with identified potential denning habitat outside of the period when young are unable to leave the denning site (approximately May through August).
- If an active nonmaternal den is identified during the survey(s) described above, construction activities within 50 feet of the den will be avoided until the den is no longer in use, as determined by a qualified wildlife biologist, or is relocated in consultation with CDFW. If the 50-foot buffer from construction activities cannot be maintained, CDFW must be consulted to determine measures to avoid harming ringtails.
- If an active maternal den is identified (May through August), construction activities within 100 feet of the den will be avoided until the young are weaned or until they have relocated to another den site on their own.

Impact BIO-15: Interfere with the movement of resident or migratory wildlife (less than significant with mitigation)

There is minimal existing disturbance and few natural or human-made dispersal barriers to wildlife movement within the VMVSP project area. Undeveloped grassland and woodland areas within the VMVSP project area provide potential breeding, foraging, and refuge habitat for many species of resident and migratory wildlife, such as black-tailed deer, wild turkey, squirrels, raccoons, skunks, mice, reptiles, and numerous birds. Extensive undeveloped lands are also present to the west, east, and south of the VMVSP project area, providing opportunities for long-ranging wildlife species, such as coyote, bobcat, mountain lion, and deer, to disperse through the project area. US 50 borders the northern edge of the VMVSP project area, substantially limiting north–south wildlife movements of terrestrial wildlife. The *Wildlife Movement and Corridors* report prepared for the County concluded that the existing US 50 undercrossing at Bass Lake Road adjacent to the VMVSP project area provides some opportunity for wildlife movement between lands north and south of US 50 and that it is one of several remaining wildlife crossings that allow for species movement (Sierra Ecosystem Associates 2010).

Based on the conceptual design of the proposed project, the proposed project would retain approximately 67.1% of the existing oak woodlands, with most of that habitat occurring within designated open space areas (Figure 3.3-3). In addition, the riparian corridors of Deer Creek and Marble Creek would be retained and would allow for species movement along these existing corridors. The VMVSP also provides a 300- to 500-foot north–south buffer that is designated as open space in order to maintain connectivity with the Bass Lake Road undercrossing (Marble Valley Company, LLC 2021: Section 6, Figure 6.1). Because large areas of oak woodland and riparian habitat would remain intact after project construction and because the proposed project is not part of or adjacent to any designated important biological corridors or ecological preserves, no significant impact on wildlife use and migratory corridors for large-ranging wildlife species is anticipated as a result of project development. Open space habitat would, however, be subject to encroachment by people and domesticated animals, which could cause increased disturbance to and mortality of wildlife in the open space riparian and oak woodland habitat. This impact would be significant.

Prior to submittal of the first small lot tentative subdivision map to the County, the project applicant has committed to preparing an OSMP under VMVSP Policy 6.46 that guides the conservation and protection of oak woodland and wildlife uses within designated project area open space in perpetuity (see Impact BIO-10). Compliance with the ORMP (as described under Impact BIO-1) would also ensure that oak habitat affected by the proposed project would be replaced onsite and offsite at a 1:1 ratio. Implementation of Mitigation Measure BIO-10b would ensure the OSMP includes requirements to help reduce the potential for domestic animal predation on wildlife such as the installation and maintenance of interpretive signs designating these areas as open space for the protection of sensitive natural resources with restricted uses defined (i.e., off-leash pets and off-road vehicle use would be prohibited).

Protection of open space lands, compensation for the loss of oak woodland habitat, and implementation of Mitigation Measures BIO-1d and BIO-10b would reduce indirect impacts on the movement of resident and migratory wildlife. Because the proposed project would avoid and minimize impacts on resident and migratory wildlife and their habitat, it would not substantially reduce the habitat of a wildlife species, cause a wildlife population to drop below self-sustaining levels, threaten to eliminate an animal community, or reduce the number or restrict the range of a rare or endangered animal. Therefore, the project would have a less-than-significant impact on resident and migratory wildlife.

Mitigation Measure BIO-1d: Avoid and minimize potential disturbance of oak woodland habitat and compensate for loss of oak woodland and individual trees

Mitigation Measure BIO-10b: Include measures in the open space management plan identifying homeowner responsibilities to help reduce potential for domestic animal predation on wildlife

Impact BIO-16: Potential conflict with the County General Plan oak protection policies (less than significant with mitigation)

As described under Impact BIO-1, the proposed project would retain approximately 1,198.3 acres (63.5%) of the existing oak woodland in open space and proposed development areas. Under the 2017 ORMP, the project would be required to mitigate all oak woodland impacts at a 1:1 ratio where 50% or less of onsite oak woodlands are affected. Construction of the proposed project would result in removal of less than 20% of the existing oak woodland, thereby retaining more than 80%. Further description of the impact on oak woodland is provided under Impact BIO-1. With implementation of the Mitigation Measure BIO-1d, the project would not conflict with the 2017 ORMP, and this impact would be less than significant.

In accordance with County General Plan Policy 7.4.5.1, focused tree surveys for landmark and heritage trees would be conducted for each project phase at the tentative map stage, and construction in residential lots would be adapted to avoid impacts on landmark and heritage trees, wherever feasible. In the development areas, maintenance and replacement of preserved trees would be enforced through the tree preservation and replacement plan required under VMVSP Policy 6.35. If any landmark or heritage trees could not be avoided, Mitigation Measure BIO-1d would compensate for this loss. Because the proposed project would avoid, minimize, and compensate for impacts on oak trees, it would not threaten to eliminate a plant community or reduce the number or restrict the range of a rare or endangered plant.

The project would comply with the ORMP, and permanent impacts would be reduced to a less-than-significant level. VMVSP policies would reduce potential temporary and indirect impacts on oak trees. Implementation of Mitigation Measures BIO-1a, BIO-1b, BIO-1c, BIO-1d, and BIO-1e would further reduce impacts on oak woodland by requiring barriers to protect sensitive areas, environmental awareness training for construction employees, periodic site visits during construction, avoidance or minimization of construction disturbance on retained oak woodland and maintaining retained oaks.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-1d: Avoid and minimize potential disturbance of oak woodland habitat and compensate for loss of oak woodland and individual trees

Mitigation Measure BIO-1e: Maintain retained oaks in development areas

Impact BIO-17: Potential introduction and spread of invasive plant species (less than significant with mitigation)

Invasive plants are present in the proposed project area. However, construction activities could introduce new invasive plants to the project area or contribute to the spread of existing invasive plants to uninfested areas outside the project area. Invasive plants or their seeds may be dispersed by construction equipment if appropriate prevention measures are not implemented. The introduction or spread of invasive plants as a result of the project could have a significant effect on sensitive natural communities within and outside the project area by displacing native flora.

Introduction or spread of invasive plant species is of concern to CDFW. Therefore, this would be a significant impact. Implementation of Mitigation Measure BIO-17 would reduce this impact to a less-than-significant level. Because the proposed project would avoid the introduction of and minimize the spread of invasive plants, it would not substantially reduce the habitat of a wildlife species or threaten to eliminate a plant or animal community.

Mitigation Measure BIO-17: Minimize the introduction and spread of invasive plants

To minimize the introduction of new invasive plants and minimize the spread of invasive plants previously documented in the study area, the project applicant will implement the following measures during construction. Compliance with these construction measures will be monitored by a qualified biologist and reported as indicated in Mitigation Measure BIO-1c.

- Educate construction supervisors and managers on weed identification and the importance of controlling and preventing the spread of noxious weed infestations.
- Clean construction equipment immediately prior to entering the project site to reduce potential for introducing seeds of invasive plants in the project area.

- Small, isolated infestations will be treated with approved eradication methods at an appropriate time to prevent and/or destroy viable plant parts or seed.
- Mulch with certified weed-free mulch. Rice straw may be used to mulch upland areas.
- Use native, noninvasive species or nonpersistent hybrids in erosion control plantings to stabilize site conditions and prevent invasive species from colonizing.
- Minimize surface disturbance to the greatest extent feasible.

Impacts on Biological Resources in the Offsite Infrastructure Improvement Areas

Impacts BIO-18 through BIO-32 address potential effects of offsite infrastructure improvements. The impact analysis addresses a 250-foot study area radius around the footprint (alignment) of each proposed offsite improvement area (Figure 2-13 in Chapter 2).

Additional impact analysis of the General Plan Policy TC-Xf traffic improvements that would be constructed outside of the offsite infrastructure improvement locations (Figure 2-15 in Chapter 2) is provided in this section. Most other TC-Xf traffic improvements would be within the area analyzed for other offsite infrastructure improvements and are noted in the impacts below where there would be potential effects on sensitive biological resources. The traffic improvements at the Cambridge Road/Knollwood Drive intersection and at the Latrobe Road/Towne Center Boulevard intersection would be located outside of any offsite infrastructure improvements, but in developed and landscaped areas that do not support sensitive biological resources.

Impact BIO-18: Potential loss of sensitive natural communities within the offsite infrastructure improvement areas (less than significant with mitigation)

Installation of infrastructure improvements within the proposed offsite infrastructure improvement areas has the potential to affect sensitive natural communities (Figure 2-13). Impacts on sensitive natural communities could include loss of oak woodland in the offsite infrastructure improvement areas (ECORP Consulting 2018). Estimates of oak woodland impacts were based on the preliminary habitat assessments and identified a maximum direct permanent impact area of 3.5 acres within the footprints of the proposed offsite infrastructure improvements and traffic improvements at the US 50/Bass Lake Road interchange, the Marble Valley Parkway/Marble Mountain Road intersection, and Marble Valley Parkway/Marble Ridge Road intersection.

Depending on the timing of construction, these direct impacts on natural communities in the Marble Valley Parkway/Bass Lake Road, Marble Valley Parkway connection, and Marble Valley Parkway/Cambridge Road offsite infrastructure improvement areas could result from development projects previously approved by the County (Campobello and Porter subdivisions) and might not be associated with the VMVSP project (ECORP Consulting 2014d).

To the extent feasible, any construction within the offsite infrastructure improvement areas would remain within existing easements in order to minimize impacts on sensitive natural communities.

The types of impacts from construction would be similar to those described under Impacts BIO-1 and BIO-2. The impacts on oak woodland and riparian woodland would be significant if they are not avoidable during construction. Implementation of Mitigation Measures BIO-1a, BIO-1b, BIO-1c, and BIO-1d would reduce temporary construction impacts by requiring barriers to protect sensitive areas, environmental awareness training for construction employees, periodic site visits during construction, and avoidance or minimization of construction disturbance on retained oak and

riparian woodland. Implementation of Mitigation Measure BIO-2 would reduce temporary and indirect impacts on riparian woodland to a less-than-significant level. Implementation of Mitigation Measure BIO-18 would reduce direct impacts on oak woodland to a less-than-significant level. Because the proposed project would avoid, minimize, and compensate for impacts on oak woodland through implementation of the IHMP and impacts on riparian woodland, it would not threaten to eliminate a plant community.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-1d: Avoid and minimize potential disturbance of oak woodland habitat and compensate for loss of oak woodland and individual trees

Mitigation Measure BIO-2: Compensate for permanent loss of riparian woodland

Mitigation Measure BIO-18: Compensate for loss of oak woodland in offsite infrastructure improvement areas

The mitigation below is presented for the requirements of the ORMP.

In accordance with the ORMP, replacement of removed oak woodland will be mitigated at a ratio of 1:1 and individual trees will be replaced on an inch-for-inch of diameter basis. Based on the maximum potential impact of up to 3.5 acres of oak woodland, 2,125 inches of individual native oaks, and 935 inches of Heritage Oak trees, up to 1.75 acre of oak woodland and 4,930 inches of oak trees will be planted as mitigation within the designated oak planting areas for the VMVSP project. Prior to construction, the actual oak resource impacts will be quantified, based on the design details, and proposed limits of construction, and a final oak woodland acreage and number of oak trees required for mitigation will be determined. The planting, maintenance, and monitoring details of this mitigation will follow those set forth in the ORMP for the oak woodland impacts within the project area and will be provided to the County prior to issuance of a grading permit.

Impact BIO-19: Potential loss of waters of the United States within the offsite infrastructure improvement areas (less than significant with mitigation)

Waters of the United States that are regulated by USACE under CWA Section 404, and waters of the state that are regulated by the Regional Water Board under CWA Section 401, and CDFW under California Fish and Game Code Section 1602 occur in the offsite infrastructure improvement areas. Installation of project infrastructure within the proposed offsite improvement areas has the potential to directly affect and fill waters of the United States. Wetlands and other waters that are adjacent to the infrastructure improvement areas would be retained but could be indirectly affected by adjacent construction.

Based on the preliminary mapping of wetlands and other waters in the proposed offsite infrastructure improvement areas (Figure 3.3-2), construction in these areas could have the following direct permanent impacts.

- Loss of up to 0.01 acre of seasonal wetland swale in the proposed Marble Valley Parkway/Bass Lake Road offsite improvement area.
- Loss of up to 0.34 acre of intermittent drainage in the proposed Marble Valley Parkway/Cambridge Road offsite improvement area and the combined EID water (potentially recycled water) and wastewater lines, dry utility connections.
- Loss of up to 0.54 acre of drainage ditch in the proposed Marble Valley Parkway/Bass Lake Road and Marble Valley Parkway connection offsite improvement areas.

Construction of traffic improvements at the Bass Lake Road/US 50 interchange could also have impacts on waters of the United States. Temporary direct impacts on wetlands could occur during construction activities. Temporarily affected wetlands would be returned to pre-project conditions after construction is completed.

Earthmoving activities in the construction footprint could result in indirect impacts on wetlands and other waters of the United States that are outside of the construction footprint as a result of erosion and sedimentation into the nonconstruction areas. To protect wetlands outside of the proposed development area, a minimum setback from wetland edges and setbacks from the OHWM of intermittent and perennial streams would be implemented. Actual setbacks for the VMVSP area would be determined in consultation with applicable regulatory agencies during the permitting process.

Impacts on wetlands and other waters of the United States are regulated under CWA Sections 404 and 401 by USACE and the Regional Water Boards, respectively, and impacts on streams are additionally regulated under California Fish and Game Code Section 1602 by CDFW, and direct impacts on these resources would require permits from all three agencies. Therefore, impacts on wetlands and other waters of the United States or waters of the state would be significant. However, in addition to implementing the measures required as part of the CWA permits, the project applicant would implement Mitigation Measures BIO-1a, BIO-1b, and BIO-1c to avoid temporary construction impacts on wetlands by requiring barriers to protect sensitive areas, environmental awareness training for construction employees, and periodic site visits during construction; Mitigation Measure BIO-3a to avoid and minimize direct and indirect impacts on wetlands; Mitigation Measure BIO-3b to compensate for direct impacts on wetlands at a minimum ratio of 1:1 or as required under the CWA permits; and Mitigation Measure BIO-4 to compensate for loss of other waters of the United States at a minimum ratio of 1:1 or as required under the CWA permits. Implementation of these mitigation measures would reduce project impacts on wetlands to a less-than-significant level. Because the proposed project would avoid, minimize, and compensate for impacts on waters of the United States, it would not threaten to eliminate a plant community.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-1d: Avoid and minimize potential disturbance of oak woodland habitat and compensate for loss of oak woodland and individual trees

Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands

Mitigation Measure BIO-3b: Compensate for loss of jurisdictional wetlands

Mitigation Measure BIO-4: Compensate for loss of other waters of the United States

Impact BIO-20: Potential loss of waters of the United States within the extension of Saratoga Way improvement area (no impact)

At the time of project design, waters of the United States and waters of the state may have occurred in the undeveloped area between the west end of Saratoga Way and the east end of Iron Point Road. Road construction in this area had the potential to directly affect and fill waters of the United States and indirectly affect waters of the United States or waters of the state adjacent to the construction. Since the time of initial project design, however, this road extension has been constructed and opened. Therefore, there would be no impact on waters of the United States or waters of the state in the Saratoga Way extension under the proposed project.

Impact BIO-21: Potential loss of waters of the United States within the Bass Lake Road/Hollow Oak Drive intersection improvement area (less than significant with mitigation)

Waters of the United States and waters of the state may occur adjacent to the area proposed for installation of a traffic signal at the Bass Lake Road/Hollow Oak Drive intersection. It is unlikely that direct effects due to placement of fill in waters of the United States would be necessary for this construction, but there could be indirect effects from construction.

Activities that would affect wetlands and other waters of the United States are regulated under CWA Section 404 by USACE and under CWA Section 401 by the Regional Water Boards. Intersection improvement activities also could indirectly affect water quality in waters of the United States. This would be a significant impact. However, the project applicant would implement Mitigation Measures BIO-1a, BIO-1b, and BIO-1c to avoid temporary construction impacts on wetlands by requiring barriers to protect sensitive areas, environmental awareness training for construction employees, and periodic site visits during construction, and Mitigation Measure BIO-3a to avoid and minimize direct and indirect impacts on wetlands. Implementation of these mitigation measures would reduce project impacts on wetlands to a less-than-significant level. Because the proposed project would avoid and minimize potential impacts on waters of the United States, it would not threaten to eliminate a plant community.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands

Impact BIO-22: Potential impacts on special-status plant species within the offsite infrastructure improvement areas (less than significant with mitigation)

Installation of infrastructure within the proposed offsite improvement areas has the potential to directly affect special-status plant species as part of project construction. Any special-status plants that are adjacent to the infrastructure improvement areas would be retained but could be indirectly affected by adjacent construction. Special-status plant species could also be affected by construction of traffic improvements, except at the locations that support only developed areas or landscaping (Cambridge Road/Knollwood Drive intersection, and Latrobe Road/Town Center Boulevard intersection).

Based on the preliminary assessment of special-status plant habitat in the proposed offsite infrastructure improvement areas, up to 14 species have potential to occur (Table 3.3-3). Specific surveys of these areas have not been conducted to confirm the presence or absence of special-status plants. Direct and indirect impacts on special-status plants would be a significant effect. Implementation of Mitigation Measures BIO-22a and BIO-22b would reduce this impact to a less-than-significant level. In addition, depending on the approach undertaken as part of Mitigation Measure BIO-22b, implementation of Mitigation Measures BIO-1a, BIO-1b, and BIO-1c would contribute to the avoidance of significant impacts on special-status plants. Because the proposed project would avoid, minimize, and compensate for impacts on special-status plants, it would not reduce the number or restrict the range of a rare or endangered plant.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-22a: Conduct floristic surveys in the offsite infrastructure improvement areas for special-status plants during appropriate identification periods

The project applicant will employ a qualified botanist to survey the offsite infrastructure improvement areas, after final design of the areas is complete and prior to start of any construction activities, to document the presence of special-status plants. The botanist will consult with the appropriate resource agency regarding special-status species survey methods during drought periods, if needed, but will primarily follow the CDFW botanical survey guidelines (California Department of Fish and Wildlife 2018). All plant species observed will be identified to the level necessary to determine whether they qualify as special-status plants or are plant species with unusual or significant range extensions. The guidelines also require that field surveys be conducted when special-status plants that could occur in the area are evident and identifiable, generally during the reported blooming period. The guidelines additionally recommend visiting reference populations of special-status species that may occur in the study area. Therefore, as feasible, the surveys will include site visits of reference populations of special-status plant species with potential to occur in the project area in order to ensure that

they are identifiable during the survey period. This is particularly important for any annual plant species that has a long-lived seedbank and is known to not germinate when conditions are not conducive (e.g., during a drought). To account for different special status–plant identification periods, one or more series of field surveys may be required in spring and summer (April and June). A survey report documenting the methods and results of the study will be prepared and submitted to the County for review and approval.

If any special-status plants are identified during the surveys, the botanist will photograph and map locations of the plants, document the location and extent of the special-status plant. Requirements for compensatory mitigation will be based on the results of these surveys and are discussed in Mitigation Measure BIO-22b.

Mitigation Measure BIO-22b: Avoid or compensate for substantial effects on special-status plants in the offsite infrastructure improvement areas

If one or more special-status plant(s) is identified in the offsite infrastructure improvement areas during the preconstruction surveys (Mitigation Measure BIO-22a), the project applicant will redesign or modify proposed project infrastructure components to avoid direct and indirect effects on special-status plants wherever feasible. If special-status plants can be avoided by redesigning projects, implementation of Mitigation Measures BIO-1a, BIO-1b, and BIO-1c would avoid significant impacts on special-status plants by requiring barriers to protect sensitive areas, environmental awareness training for construction employees, and periodic site visits during construction.

If complete avoidance of special-status plants is not feasible, the project applicant will compensate for the effects of the project on special-status plants by purchasing suitable habitat in a conservation area for the affected special-status plant species at a ratio to be negotiated with the resource agencies, but at a minimum ratio of 1:1 or by funding the transplanting or seeding replacements within appropriate habitats remaining in onsite open space areas. The conservation area will be preserved and managed in perpetuity by the County or its designee. Detailed information will be provided to the resource agencies on the location and quality of the plant habitat conservation area, the feasibility of protecting and managing the area in perpetuity, and the responsible parties. Other pertinent information also will be provided, to be determined through future coordination with the resource agencies. If suitable habitat in a conservation area is used, proof of purchase will be provided to the County.

Impact BIO-23: Potential mortality or disturbance of monarch butterfly and its habitat within offsite infrastructure improvement areas (less than significant)

If monarch butterflies are present in or adjacent to infrastructure improvement construction areas, impacts on this species would be similar to those described above under Impact BIO-6 and are considered less than significant. Construction of the offsite infrastructure improvement areas would not substantially reduce the number or restrict the range of the species or cause the population to drop below self-sustaining levels. Therefore, the proposed project would have a less-than-significant impact on monarch butterfly.

Impact BIO-24: Potential mortality or disturbance of listed vernal pool branchiopods and their habitat within offsite infrastructure improvement areas (less than significant with mitigation)

Installation of infrastructure within the proposed offsite improvement areas has the potential to directly and indirectly affect suitable habitat for vernal pool fairy shrimp and vernal pool tadpole shrimp. Based on a preliminary habitat assessment for special-status wildlife in the proposed offsite infrastructure improvement areas, seasonal wetlands represent potential habitat for vernal pool fairy shrimp (ECORP Consulting 2014c). Because of restricted property access at the time of the habitat assessment, focused surveys have not been conducted to document all suitable habitat within areas that would be directly or indirectly affected by infrastructure improvements. Suitable habitat for vernal pool fairy shrimp and vernal pool tadpole shrimp may be present in these areas. No protocol-level surveys for federally listed branchiopods have been conducted within the offsite infrastructure improvement areas. Direct and indirect impacts on vernal pool branchiopod habitat could occur from construction associated with the Marble Valley Parkway/Bass Lake Road, the Marble Valley Parkway connection offsite infrastructure improvement areas, and, if suitable habitat is present, the EID water (potentially recycled water) and wastewater lines. USFWS typically considers construction within 250 feet of vernal pool branchiopod habitat to have potential to indirectly affect habitat unless more detailed information is provided to further refine the limits of any such effects.

Direct and indirect impacts on federally listed branchiopods and their habitat would be a significant impact. The project applicant would implement Mitigation Measures BIO-1a, BIO-1b, and BIO-1c to avoid and minimize indirect impacts on wetlands and potential habitat for federally listed branchiopods outside the construction area, by requiring barriers to protect sensitive areas, environmental awareness training for construction employees, and periodic site visits during construction and Mitigation Measure BIO-3a to avoid and minimize direct and indirect impacts on other waters of the United States. In addition to these general protection measures, the project applicant would implement Mitigation Measures BIO-24a and BIO-24b, as applicable, to reduce potential impacts on vernal pool fairy shrimp and vernal pool tadpole shrimp. With the implementation of these collective measures, the proposed project would avoid and minimize impacts on federally listed branchiopods and their habitat and would not substantially reduce the number or restrict the range of these species or cause populations to drop below self-sustaining levels. Therefore, construction of offsite infrastructure improvement areas would have a less-than-significant impact on federally listed branchiopods.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands

Mitigation Measure BIO-24a: Conduct a habitat assessment for federally listed branchiopods in the offsite infrastructure improvement areas

The project applicant will employ a qualified biologist to conduct a habitat assessment for federally listed branchiopods within the offsite infrastructure improvement areas after the limits of proposed disturbance have been identified. A report documenting the study methods and results will be provided to the County. All seasonal pools, wetlands, and swales will be mapped within 250 feet of proposed construction areas identified for infrastructure improvements, including staging areas and access routes. Suitable habitat will be mapped and described sufficient to determine if these habitats could support vernal pool fairy shrimp or vernal pool tadpole shrimp.

If suitable habitat for vernal pool fairy shrimp or vernal pool tadpole shrimp is identified within 250 feet of proposed infrastructure improvements, the project applicant will implement Mitigation Measure Bio-24b.

Mitigation Measure BIO-24b: Avoid or compensate for effects on vernal pool fairy shrimp and vernal pool tadpole shrimp and their habitat

If suitable habitat for vernal pool fairy shrimp or vernal pool tadpole shrimp is identified within proposed construction areas for infrastructure improvements or within 250 feet of proposed construction during the habitat assessment (Mitigation Measure BIO-24a), the project applicant will redesign or modify proposed project components to avoid this habitat to the maximum extent feasible. If avoidance of direct and indirect impacts on this habitat is not feasible, the project applicant will either retain a USFWS-permitted biologist to conduct protocol-level branchiopod surveys to determine presence/absence of vernal pool fairy shrimp and vernal pool tadpole shrimp or the project applicant will assume presence of these species.

If the presence of vernal pool fairy shrimp or vernal pool tadpole shrimp is confirmed or inferred for the proposed project, the project applicant will compensate for direct and indirect effects on occupied or presumed occupied habitat for federally listed branchiopods by purchasing the appropriate mitigation credits from a USFWS-approved conservation area/mitigation bank. Minimum mitigation ratios will be 2:1 preservation and 1:1 creation for direct effects and 1:1 preservation for indirect effects (within 250 feet of ground disturbance) or as determined by USFWS during ESA Section 7 consultation.

If presence of vernal pool fairy shrimp or vernal pool tadpole shrimp is either inferred or confirmed, ESA consultation with USFWS will be required to address impacts on the species before any ground-disturbing activities can occur.

Documentation of the completion of ESA consultation will be provided to the County prior to the issuance of the grading permit.

Impact BIO-25: Potential mortality or disturbance of California red-legged frog within offsite infrastructure improvement areas (less than significant with mitigation)

No California red-legged frogs were observed within the VMVSP project area during a habitat assessment conducted in 2012 (ECORP Consulting 2013c). However, potential low-quality breeding habitat (Deer Creek) and potential foraging and dispersal habitat (annual grassland) for California red-legged frog is present within the proposed offsite infrastructure improvement areas. If California red-legged frogs are present in or adjacent to infrastructure improvement construction

areas, impacts on this species would be similar to those described under Impact BIO-6 and would be significant. Implementation of Mitigation Measures BIO-1a, BIO-1b, and BIO-1c to avoid temporary construction impacts on wetlands by requiring barriers to protect sensitive areas, environmental awareness training for construction employees, and periodic site visits during construction would reduce this impact. The project applicant also would implement Mitigation Measure BIO-3a to avoid and minimize direct and indirect impacts on wetlands and Mitigation Measure BIO-7 to avoid and minimize direct and indirect impacts on California red-legged frogs and their habitat. With the implementation of these collective measures, the proposed project would avoid and minimize impacts on California red-legged frogs and their habitat and would not substantially reduce the number or restrict the range of the species or cause the population to drop below self-sustaining levels. Therefore, the construction of offsite infrastructure improvement areas would have a less-than-significant impact on California red-legged frogs.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands

Mitigation Measure BIO-7: Conduct preconstruction surveys and implement California red-legged frog avoidance and minimization measures

Impact BIO-26: Potential mortality or disturbance of foothill yellow-legged frog within offsite infrastructure improvement areas (less than significant with mitigation)

No foothill yellow-legged frogs were observed during a habitat assessment conducted in 2012 within the VMVSP project area (ECORP Consulting 2013d) or during foothill yellow-legged frog surveys conducted in 2019 (ECORP Consulting 2019b). Although suitable habitat was not observed within the proposed offsite infrastructure improvement areas, the majority of Deer Creek was not accessible to be surveyed. Suitable yellow-legged frog habitat may be present within areas of Deer Creek and although there is considered to be a low likelihood of their presence, individual yellow-legged frogs may occur in the offsite infrastructure improvement areas. If yellow-legged frogs are present in or adjacent to infrastructure improvement construction areas, impacts on this species would be similar to those described under Impact BIO-8 and would be significant. Implementation of Mitigation Measure BIO-8 would document the presence of and minimize potential impacts on foothill yellow-legged frog individuals. Implementation of these measures, in addition to Mitigation Measures BIO-1a, BIO-1b, BIO-1c, and BIO-3a to avoid temporary construction impacts on wetlands by requiring barriers to protect sensitive areas, environmental awareness training for construction employees, and periodic site visits during construction, would reduce this impact. With the implementation of these collective measures, the proposed project would avoid and minimize impacts on foothill yellow-legged frogs and their habitat and would not substantially reduce the number or restrict the range of the species or cause the population to drop below self-sustaining levels. Therefore, the construction of offsite infrastructure improvement areas would have a less-than-significant impact on foothill yellow-legged frogs.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands

Mitigation Measure BIO-8: Avoid and minimize construction-related impacts on foothill yellow-legged frog

Impact BIO-27: Potential mortality or disturbance of northwestern pond turtle within offsite infrastructure improvement areas (less than significant with mitigation)

Suitable habitat for northwestern pond turtle is present within the offsite infrastructure improvement areas (ECORP Consulting 2014c). Northwestern pond turtles are known to occur in Deer Creek and its tributaries and were recorded in the VMVSP project area (ECORP Consulting 2013g), and construction associated with the EID water (potentially recycled water) and wastewater lines could directly and indirectly affect individual pond turtles. If pond turtles are present in or adjacent to infrastructure improvement construction areas, impacts on this species would be similar to those described under Impact BIO-9 and would be significant. Implementation of Mitigation Measures BIO-1a, BIO-1b, and BIO-1c to avoid temporary construction impacts on wetlands by requiring barriers to protect sensitive areas, environmental awareness training for construction employees, and periodic site visits during construction, and Mitigation Measure BIO-9 to conduct preconstruction surveys and exclude pond turtles from work area would reduce this impact. With the implementation of these collective measures, the proposed project would avoid and minimize impacts on northwestern pond turtle and its habitat and would not substantially reduce the number or restrict the range of the species or cause the population to drop below self-sustaining levels. Therefore, the construction of offsite infrastructure improvement areas would have a less-than-significant impact on northwestern pond turtle.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-9: Conduct preconstruction surveys for northwestern pond turtle and exclude turtles from the work area

Impact BIO-28: Potential mortality or disturbance of Blainville's horned lizard within offsite infrastructure improvement areas (less than significant with mitigation)

Blainville's horned lizard has the potential to be present within the offsite infrastructure improvement areas (ECORP Consulting 2014c). Chaparral communities, dirt roads, and firebreaks in the EID water (potentially recycled water) and wastewater lines provide suitable habitat for Blainville's horned lizard and probable sign of the species (scat) was observed during surveys of the VMVSP project area (ECORP Consulting 2013f). Construction activities such as grading, paving, and equipment staging could directly affect Blainville's horned lizards. If Blainville's horned lizards are present in or adjacent to infrastructure improvement construction areas, impacts on this species would be similar to those described under Impact BIO-10 and would be significant. Implementation of Mitigation Measures BIO-1a, BIO-1b, and BIO-1c to avoid temporary construction impacts on horned lizards by requiring barriers to protect sensitive Blainville's horned lizard habitat, as determined by the biological monitor prior to construction, environmental awareness training for construction employees, and periodic site visits during construction, and Mitigation Measure BIO-10a would minimize impacts on Blainville's horned lizard individuals. With the implementation of these collective measures, the proposed project would avoid and minimize impacts on Blainville's horned lizard and would not substantially reduce the number or restrict the range of the species or cause the population to drop below self-sustaining levels. Therefore, the construction of offsite infrastructure improvement areas would have a less-than-significant impact on Blainville's horned lizard.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-10a: Avoid and minimize impacts on Blainville's horned lizard

Impact BIO-29: Potential mortality or disturbance of nesting special-status and non-special-status birds within offsite infrastructure improvement areas (less than significant with mitigation)

Suitable nesting habitat for special-status (including white-tailed kite, golden eagle, Swainson's hawk, tricolored blackbird, and western burrowing owl) and non-special-status birds may be directly and indirectly affected by installation of infrastructure in the offsite improvement areas. If nesting special-status and non-special-status birds are present in or adjacent to infrastructure improvement construction areas, impacts on these species would be similar to those described under Impact BIO-11 and would be significant. Implementation of Mitigation Measures BIO-1a, BIO-1b, and BIO-1c to avoid temporary construction impacts on nesting birds by requiring barriers to protect active nests, environmental awareness training for construction employees, and periodic site visits during construction, and Mitigation Measures BIO-11a and BIO-11b, which require conducting vegetation removal outside of the breeding season for birds and raptors, and nesting surveys for special-status and non-special-status birds, would reduce this effect on special-status and non-special-status birds. With the implementation of these collective measures, the proposed project would avoid and minimize impacts on nesting birds and would not substantially reduce the

number or restrict the range of listed avian species or cause populations to drop below self-sustaining levels. Therefore, the construction of offsite infrastructure improvement areas would have a less-than-significant impact on special-status and non-special-status birds.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-11a: Conduct vegetation removal activities outside the breeding season for birds and raptors

Mitigation Measure BIO-11b: Conduct preconstruction nesting surveys for special-status and non-special-status birds and implement protective measures during construction

Impact BIO-30: Potential injury, mortality, or disturbance of tree-roosting bats and removal of roosting habitat within offsite infrastructure improvement areas (less than significant with mitigation)

Suitable habitat for colonial and solitary roosting bats is present within the offsite infrastructure improvement areas. Bats could roost in trees and structures within these areas. If roosting bats are present in or adjacent to infrastructure improvement construction areas, impacts on these species would be similar to those described under Impact BIO-12 and would be significant. Implementation of Mitigation Measures BIO-1a, BIO-1b, and BIO-1c to avoid temporary construction impacts on bats by requiring barriers to protect roosting habitat, environmental awareness training for construction employees, and periodic site visits during construction, in addition to Mitigation Measure BIO-12 to identify bat roosts and implement avoidance and minimization measures would reduce this impact on bat species. With the implementation of these collective measures, the proposed project would avoid and minimize impacts on bats and their habitat and would not substantially reduce the number or restrict the range of these species or cause populations to drop below self-sustaining levels. Therefore, the construction of offsite infrastructure improvement areas would have a less-than-significant impact on special-status and non-special-status bats.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-12: Identify suitable roosting sites for bats and implement avoidance and minimization measures

Impact BIO-31: Potential mortality or disturbance of American badger within offsite infrastructure improvement areas (less than significant with mitigation)

Suitable habitat for American badger is present within the offsite infrastructure improvement areas. Grassland habitat surrounding the proposed Marble Valley Parkway/Bass Lake Road offsite area is connected to a large area of relatively open grassland habitat to the southwest, and there is potential that construction-related activities could directly or indirectly disturb individuals. If badgers were present in or adjacent to infrastructure improvement construction areas, impacts on these species would be similar to those described under Impact BIO-13 and would be significant. Implementation of Mitigation Measures BIO-1a, BIO-1b, and BIO-1c to avoid temporary construction impacts on badgers by requiring barriers to protect active dens, environmental awareness training for construction employees, and periodic site visits during construction, and Mitigation Measure BIO-13 to avoid and minimize impacts on badger would reduce this impact. With the implementation of Mitigation Measure BIO-13, the proposed project would avoid and minimize impacts on American badgers and their habitat and would not substantially reduce the number or restrict the range of the species or cause the population to drop below self-sustaining levels. Therefore, the construction of the offsite infrastructure improvement areas would have a less-than-significant impact on this species.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-13: Implement measures to avoid and minimize potential impacts on American badger

Impact BIO-32: Potential mortality or disturbance of ringtail within offsite infrastructure improvement areas (less than significant with mitigation)

Suitable habitat for ringtail is present within the offsite infrastructure improvement areas (ECORP Consulting 2014c). Rock outcrops in the riparian area adjacent to Deer Creek and trees and snags in riparian and oak woodland communities could provide denning habitat for the species. A portion of the EID water (potentially recycled water) and wastewater lines was not accessible during initial site assessments, and additional ringtail habitat may be present in these areas. If ringtail is present in or adjacent to infrastructure improvement construction areas, impacts on the species would be similar to those described under Impact BIO-14 and would be significant. Implementation of Mitigation Measures BIO-1a, BIO-1b, and BIO-1c to avoid temporary construction impacts on ringtails by requiring barriers to protect active dens, environmental awareness training for construction employees, and periodic site visits during construction, Mitigation Measure BIO-11a to remove vegetation outside the breeding season for birds and raptors, and Mitigation Measure BIO-14 to identify suitable ringtail habitat and implement avoidance and protective measures would reduce this impact. With the implementation of these collective measures, the proposed project would avoid and minimize impacts on ringtails and their habitat and would not substantially reduce the number or restrict the range of the species or cause the population to drop below self-sustaining

levels. Therefore, the construction of the offsite infrastructure improvement areas would have a less-than-significant impact on ringtails.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-11a: Conduct vegetation removal activities outside the breeding season for birds and raptors

Mitigation Measure BIO-14: Identify suitable shelter and denning habitat for ringtail and implement avoidance and protective measures

Table 3.3-3. Special-Status Plant Species with Potential to Occur in the Village of Marble Valley Specific Plan Project Area

Scientific Name Common Name	Status[a] Fed/State/CNPS	Geographic Distribution	General Habitat Description	Blooming Period	Potential for Occurrence in Project Area	Potential for Occurrence in the Offsite Infrastructure Improvement Areas
Allium jepsonii Jepson's onion	–/–/1B.2	Sierra Nevada foothills in Butte, El Dorado, Placer, and Tuolumne Counties.	Serpentine or (volcanic) basalt outcrops in oak woodland, chaparral, and lower montane coniferous forest; 300–1,320 meters.	Apr–Aug	Suitable habitat is present in blue oak woodlands, blue oak savannah, and white-leaf manzanita chaparral in the project area. Nearest recorded occurrence is more than 5 miles from the project area. Species was not observed during the April and May 2005, May, June, and July 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in oak woodlands.
Allium sanbornii var. *sanbornii* Sanborn's onion	–/–/4.2	Cascade Range foothills and Sierra Nevada Foothills, from Shasta County to Calaveras County; Oregon.	Gravelly or usually serpentine soils in chaparral, cismontane woodland, and lower montane coniferous forest; 260-1510 meters.	May–Sep	Suitable habitat is present in white-leaf manzanita chaparral and oak woodland in the project area. Nearest recorded occurrence is more than 5 miles from the project area. Species was not observed during the April and May 2005, May, June, and July 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in annual grassland, chaparral, oak woodland, and riparian woodland.
Arctostapylos nissenana Nissenan manzanita	–/–/1B.2	Sierra Nevada foothills, El Dorado and Tuolumne Counties.	Closed-cone coniferous forest, chaparral on rocky, dry ridges; 450–1,100 meters.	Feb–Mar	Suitable habitat is present in white-leaf manzanita chaparral in the project area. Nearest recorded occurrence is more than 5 miles from the project area. Species was not observed during the April and May 2005, May 2012, or April 2019 surveys of the project area.	Potential for occurrence in annual grassland, chaparral, and oak woodland.
Balsamorhiza macrolepis Big-scale balsamroot	–/–/1B.2	Scattered occurrences in the Coast Ranges and Sierra Nevada foothills.	Sometimes on serpentine soils in chaparral, cismontane woodland, valley and foothill grassland; 90–1,555 meters.	Mar–Jun	Suitable habitat is present in annual grassland, white-leaf manzanita chaparral, and oak woodland in the project area. Nearest recorded occurrence is more than 5 miles from the project area. Species was not observed during the April and May 2005, May 2012, or April and May 2019 surveys of the project area.	Potential for occurrence in annual grassland, chaparral, oak woodland, and riparian woodland.

Scientific Name Common Name	Status[a] Fed/State/CNPS	Geographic Distribution	General Habitat Description	Blooming Period	Potential for Occurrence in Project Area	Potential for Occurrence in the Offsite Infrastructure Improvement Areas
Brodiaea rosea ssp. *vallicola* Valley brodiaea	–/–/4.2	Northern Sierra Nevada foothills and east side of Sacramento Valley in Butte, Calavera, Nevada, Placer, Sacramento, San Joaquin, and Yuba Counties.	Valley and foothill grassland (swales) and vernal pools on old alluvial terraces; silty, sandy, and gravelly loam.	Apr–May	Suitable habitat is present in the seasonal wetlands and quarry pond QP-2 in the project area. The nearest recorded occurrence is more than 5 miles from the project area. Species was not observed during the April and May 2005, May 2012, or April and May 2019 surveys of the project area.	Potential for occurrence in seasonal wetland and seasonal wetland swale habitats.
Calandrinia breweri Brewer's calandrinia	–/–/4.2	Widely scattered throughout California: Coast Ranges, central Sierra Nevada Foothills, Western Transverse Ranges.	On sandy or loamy, disturbed sites and burns in chaparral and coastal scrub; 10-1220 meters.	Mar–Jun	Suitable habitat is present in white-leaf manzanita chaparral in the project area. No recorded occurrences near the project area. Species was not observed during the April and May 2005, May 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in chaparral habitat.
Calystegia stebbinsii Stebbins' morning-glory	E/E/1B.1	Northern Sierra Nevada foothills with reported occurrences in El Dorado and Nevada Counties.	Serpentine or gabbro soils in chaparral openings, cismontane woodland; 185–730 meters.	Apr–Jul	Suitable habitat is present in blue oak woodlands, blue oak savannah, and white-leaf manzanita chaparral in the project area. Nearest recorded occurrence is approximately 1.6 miles northeast of the project area. Species was not observed during the April and May 2005, May, June, and July 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in chaparral and oak woodlands on serpentine rock land soil type.
Carex xerophila Chaparral sedge	–/–/1B.2	North Sierra Nevada foothills: Butte, El Dorado, Nevada, and Yuba Counties.	Serpentinite, gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest; 440–770 meters.	Mar–Jun	Suitable habitat is present in blue oak woodlands, blue oak savannah, and white-leaf manzanita chaparral in the project area. Nearest recorded occurrence is approximately 1.7 miles northeast of the project area. Species was not observed during the April and May 2005, May, June, and July 2012, or April and May 2019 surveys of the project area.	Potential for occurrence in chaparral and oak woodlands on serpentine rock land soil type.

Scientific Name Common Name	Status[a] Fed/State/CNPS	Geographic Distribution	General Habitat Description	Blooming Period	Potential for Occurrence in Project Area	Potential for Occurrence in the Offsite Infrastructure Improvement Areas
Ceanothus fresnensis Fresno ceanothus	–/–/4.3	Central Sierra Nevada, Calaveras, El Dorado, Fresno, Madera, Mariposa, Placer, Tulare, and Tuolumne Counties.	Openings in cismontane woodland, lower montane coniferous forest; 900-2,103 meters.	May–Jul	Project area is located at elevations well below known range for species.	Project area is located at elevations well below known range for species.
Ceanothus roderickii Pine Hill ceanothus	E/R/1B.2	Endemic to El Dorado County.	Serpentine or gabbro soils in chaparral or cismontane woodland; 245–630 meters.	Apr–Jun	Suitable habitat is present in blue oak woodlands, blue oak savannah, and white-leaf manzanita chaparral in the project area. Nearest recorded occurrence is approximately 1.4 miles northeast of the project area. Species was not observed during the April and May 2005, May, June, and July 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in chaparral and oak woodlands on serpentine rock land soil type.
Chlorogalum grandiflorum Red Hills soaproot	–/–/1B.2	North and central Sierra Nevada foothills: Amador, Butte, Calaveras, El Dorado, Placer, and Tuolumne Counties.	Serpentine or gabbro soils in chaparral, lower montane coniferous forest, and cismontane woodland; 245–1,240 meters.	May–Jun	Suitable habitat is present in blue oak woodlands, blue oak savannah, and white-leaf manzanita chaparral in the project area. Nearest recorded occurrence is approximately 1.7 miles northeast of the project area. Species was not observed during the April and May 2005, May, June, and July 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in chaparral and oak woodlands on serpentine rock land soil type.
Clarkia biloba ssp. *brandegeeae* Brandegee's clarkia	–/–/4.2	Northern Sierra Nevada foothills from Butte to El Dorado Counties.	Chaparral, cismontane woodland, lower coniferous forest, often on roadcuts; 73–915 meters.	May–Jul	Suitable habitat is present in oak woodland in the project area. The nearest recorded occurrence is approximately 0.25 mile southeast of the project area. Specimens of the brandegeeae subspecies intergrade were observed during the 2012 surveys of the project area.	Potential for occurrence in chaparral and oak woodlands.

Scientific Name Common Name	Status[a] Fed/State/CNPS	Geographic Distribution	General Habitat Description	Blooming Period	Potential for Occurrence in Project Area	Potential for Occurrence in the Offsite Infrastructure Improvement Areas
Claytonia parviflora ssp. *grandiflora* Streambank spring beauty	–/–/4.2	Known only from pine/blue oak woodlands in the Sierra Nevada foothills: Amador, Butte, Calaveras, El Dorado, Fresno, Kern, Placer, Tulare, Tuolumne Counties.	Rocky sites in cismontane woodland; 250-1200 meters.	Feb-Apr(May)	Suitable habitat is present in blue oak woodlands and blue oak savannah in the project area. Nearest recorded occurrence is more than 5 miles from the project area. Species was not observed during the April and May 2005, May, June, and July 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in oak woodlands.
Crocanthemum [*Helianthemum*] *suffrutescens* Bisbee Peak rush-rose	–/–/3.2	Amador, Calaveras, El Dorado, Mariposa, Sacramento, and Tuolumne Counties.	Chaparral openings, often on serpentinite, gabbro, or Ione soils; 45–840 meters.	Apr–Jun	Suitable habitat is present in the white-leaf manzanita chaparral project area. Nearest recorded occurrence is approximately 2 miles northeast of the project area. Based on surveys for the proposed Lime Rock Valley Specific Plan, nearest occurrence is less than 0.5 mile east of the project area. Species was not observed during the April and May 2005, May and June 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in chaparral on serpentine rock land soil type.
Downingia pusilla Dwarf downingia	–/–/2B.2	Central Valley.	Vernal pools and mesic valley and foothill grasslands; below 445 meters.	Mar–May	Suitable habitat is present in the seasonal wetlands and quarry pond QP-2 in the project area. The nearest recorded occurrence is more than 5 miles from the project area. Species was not observed during the April and May 2005, May 2012, or April and May 2019 surveys of the project area.	Potential for occurrence in seasonal wetland and seasonal wetland swale habitats.
Erigeron miser Starved daisy	–/–/1B.3	Lassen, Mono, Nevada, and Placer Counties.	Rocky places in upper montane coniferous forest; 1,840–2,620 meters.	Jun–Oct	No coniferous forest habitat is present in the project area.	No coniferous forest habitat is present in the offsite areas.

Scientific Name Common Name	Status[a] Fed/State/CNPS	Geographic Distribution	General Habitat Description	Blooming Period	Potential for Occurrence in Project Area	Potential for Occurrence in the Offsite Infrastructure Improvement Areas
Eriogonum tripodum Tripod buckwheat	–/–/4.2	Amador, Colusa, El Dorado, Glenn, Lake, Mariposa, Napa, Nevada, Placer, Shasta, Tehama, and Tuolumne Counties.	Chaparral, cismontane woodland, often on serpentine; 200–1,600 meters.	May–Jul	Suitable habitat is present in blue oak woodlands, blue oak savannah, and white-leaf manzanita chaparral in the project area. Nearest recorded occurrence is more than 5 miles from the project area. Species was not observed during the April and May 2005, May, June, and July 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in chaparral and oak woodlands.
Eriophyllum jepsonii Jepson's woolly sunflower	–/–/4.3	Alameda, Contra Costa, El Dorado, Kern, Monterey, San Benito, Santa Clara, San Luis Obispo, Stanislaus, and Ventura Counties.	Chaparral, cismontane woodland, coastal scrub, sometimes serpentinite, on dry, rocky slopes; 200–1025 meters.	Apr–Jun	Suitable habitat is present in blue oak woodlands, blue oak savannah, and white-leaf manzanita chaparral in the project area. Nearest recorded occurrence is more than 5 miles from the project area. Species was not observed during the April and May 2005, May, June, and July 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in chaparral and oak woodlands.
Eryngium pinnatisectum Tuolumne button-celery	–/–/1B.2	Amador, Calaveras, Sacramento, and Tuolumne Counties.	Vernal pools and moist areas in cismontane woodland and lower montane coniferous forest; 70–915 meters.	May–Aug	Suitable habitat is present in seasonal wetlands and quarry pond QP-2 in the project area. Nearest recorded occurrence is more than 5 miles from the project area. Species was not observed during the April and May 2005, May, June, and July 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in seasonal wetland and seasonal wetland swale habitats.
Fremontodendron decumbens Pine Hill flannelbush	E/R/1B.2	Pine Hill area in El Dorado County, Grass Valley vicinity in Nevada County, Yuba County.	Rocky gabbro or serpentine soils in chaparral, cismontane woodland; 425–760 meters.	Apr–Jul	Suitable habitat is present in blue oak woodlands, blue oak savannah, and white-leaf manzanita chaparral in the project area. Nearest recorded occurrence is approximately 3.8 miles north of the project area. Species was not observed during the April and May 2005, May, June, and July 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in chaparral and oak woodlands on serpentine rock land soil type.

Scientific Name Common Name	Status[a] Fed/State/CNPS	Geographic Distribution	General Habitat Description	Blooming Period	Potential for Occurrence in Project Area	Potential for Occurrence in the Offsite Infrastructure Improvement Areas
Fritillaria agrestis Stinkbells	–/–/4.2	Alameda, Contra Costa, Fresno, Kern, Mendocino, Monterey, Merced, Monterey, Mariposa, Placer, Sacramento, Santa Barbara, San Benito, San Luis Obispo, San Mateo, Stanislaus, and Tuolumne Counties.	Chaparral, cismontane woodland, pinyon and juniper woodland, valley and foothill grassland; 10–1,555 meters.	Mar–Jun	Suitable habitat is present in annual grassland, white-leaf manzanita chaparral, and oak woodland in the project area. Nearest recorded occurrence is more than 5 miles from the project area. Species was not observed during the April and May 2005, May 2012, or April and May 2019 surveys of the project area.	Potential for occurrence in annual grassland, chaparral, oak woodland, and riparian woodland.
Galium californicum ssp. *sierrae* El Dorado bedstraw	E/R/1B.2	Endemic to El Dorado County.	On gabbro soils in chaparral, cismontane woodland, lower montane coniferous forest; 100–585 meters.	May–Jun	No gabbro soils are known to occur in the project area, although otherwise suitable habitat is present in blue oak woodlands, blue oak savannah, and white-leaf manzanita chaparral in the project area. Nearest recorded occurrence is approximately 1.6 miles northeast of the project area. Species was not observed during the April and May 2005, May and June 2012, or April, May, and July 2019 surveys.	Potential for occurrence in chaparral and oak woodlands, although soils might not be suitable.
Githopsis pulchella ssp. *serpentinicola* Serpentine bluecup	–/–/4.3	Amador, El Dorado, Mariposa, Stanislaus, and Tuolumne Counties.	On loam serpentine soils in cismontane woodland; 1,050–2,000 feet.	May–Jun	Suitable habitat is present in oak woodlands in the project area where serpentine soils occur. Nearest recorded occurrence is more than 5 miles from the project area. Species was not observed during the April and May 2005, May and June 2012, or April, May, and July 2019 surveys.	Potential for occurrence in oak woodlands, although soils might not be suitable.

Scientific Name Common Name	Status[a] Fed/State/CNPS	Geographic Distribution	General Habitat Description	Blooming Period	Potential for Occurrence in Project Area	Potential for Occurrence in the Offsite Infrastructure Improvement Areas
Gratiola heterosepala Boggs Lake hedge-hyssop	–/E/1B.2	Inner north Coast Ranges, Central Sierra Nevada foothills, Sacramento Valley and Modoc Plateau: Fresno, Lake, Lassen, Madera, Merced, Modoc, Placer, Sacramento, Shasta, Siskiyou, San Joaquin, Solano, and Tehama Counties; also Oregon.	Clay soils in areas of shallow water, lake margins of swamps and marshes, vernal pool margins; 10–2,375 meters.	Apr–Aug	Suitable habitat is present in seasonal wetlands, seeps, stock ponds, and quarry pond QP-2 in the project area. Nearest recorded occurrence is more than 5 miles from the project area. Species was not observed during the April and May 2005, May, June, and July 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in seasonal wetland and seasonal wetland swales.
Hesperevax caulescens Hogwallow starfish	–/–/4.2	Alameda, Amador, Butte, Contra Costa, Colusa, Fresno, Glenn, Kern, Merced, Napa, San Diego, San Joaquin, San Luis Obispo, Solano, Stanislaus, Sutter, Tehama, and Yolo Counties.	Valley and foothill grassland on mesic clay, shallow vernal pools, sometimes on alkaline soils; 0–505 meters.	Mar–Jun	Suitable habitat is present in the seasonal wetlands in the project area. The nearest recorded occurrence is more than 5 miles from the project area. Species was not observed during the April and May 2005, May, June, and July 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in seasonal wetland and seasonal wetland swales.
Horkelia parryi Parry's horkelia	–/–/1B.2	Amador, Calaveras, El Dorado, and Mariposa Counties.	Chaparral, or cismontane woodland openings, especially Ione formation, dry slopes; 80–1,035 meters.	Apr–Sep	No Ione formation soils are present in the project area. Nearest recorded occurrence is more than 5 miles from the project area. Species was not observed during the April and May 2005, May and June 2012, or April, May, and July 2019 surveys of the project area.	No Ione formation soils are present in the offsite infrastructure improvement areas.
Iris longipetala Coast iris	–/–/4.2	Alameda, Contra Costa, El Dorado, Glenn, Humboldt, Marin, Mendocino, Merced, Monterey, Napa, San Benito, San Francisco, San Mateo Santa Clara, Santa Cruz, Solano, Sonoma, Ventura Counties.	Mesic coastal prairie, lower montane coniferous forest, meadows and seeps; 0–600 meters.	Mar–May(Jun)	Suitable habitat is present in the seasonal wetlands in the project area. The nearest recorded occurrence is more than 5 miles from the project area. Species was not observed during the April and May 2005, May and June 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in seasonal wetland and seasonal wetland swales.

Scientific Name Common Name	Status[a] Fed/State/CNPS	Geographic Distribution	General Habitat Description	Blooming Period	Potential for Occurrence in Project Area	Potential for Occurrence in the Offsite Infrastructure Improvement Areas
Juncus leiospermus var. *ahartii* Ahart's dwarf rush	–/–/1B.2	Eastern Sacramento Valley, northeastern San Joaquin Valley with occurrences in Butte, Calaveras, Placer, Sacramento, Tehama, and Yuba Counties.	Wet areas in valley and foothill grassland, vernal pool margins; 30–229 meters.	Mar–May	Suitable habitat is present in the seeps, ponds, and seasonal wetlands in the project area. The nearest recorded occurrence is more than 5 miles from the project area. Species was not observed during the April and May 2005, May and June 2012, or April, May, and July 2019 surveys.	Potential for occurrence in seasonal wetland and seasonal wetland swales.
Legenere limosa Legenere	–/–/1B.1	Primarily in the lower Sacramento Valley, also from north Coast Ranges, northern San Joaquin Valley, and the Santa Cruz Mountains.	Deep, seasonally wet habitats such as vernal pools, ditches, marsh edges, and riverbanks; below 880 meters.	Apr–Jun	Suitable habitat is present in seasonal wetlands, stock ponds, and quarry pond QP-2 in the project area. Nearest recorded occurrence is more than 5 miles from the project area. Species was not observed during the April and May 2005, May and June 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in seasonal wetland and seasonal wetland swales.
Leptosiphon ambiguous Serpentine leptosiphon	–/–/4.2	Alameda, Contra Costa, Merced, San Benito, Santa Clara, Santa Cruz, San Joaquin, San Mateo, and Stanislaus Counties.	Usually on serpentine in cismontane woodland, coastal scrub, valley and foothill riparian; 120-1130 meters.	Mar–Jun	Suitable habitat is present in oak woodlands in the project area where serpentine soils occur. Nearest recorded occurrence is more than 5 miles from the project area. Species was not observed during the April and May 2005, May and June 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in oak woodlands.
Lilium humboldtii ssp. *humboldtii* Humboldt lily	–/–/4.2	Southern Cascade Range, high Sierra Nevada: Amador, Butte, Calaveras, El Dorado, Fresno, Madera, Mariposa, Nevada, Placer, Tehama, Tuolumne, and Yuba Counties.	Openings in chaparral, cismontane woodland, lower montane coniferous forest; 90-1280 meters.	May–Jul	Suitable habitat is present in blue oak woodlands, blue oak savannah, and white-leaf manzanita chaparral in the project area. No known occurrences near the project area. Species was not observed during the April and May 2005, May, June, and July 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in chaparral and oak woodlands.

Scientific Name Common Name	Status[a] Fed/State/CNPS	Geographic Distribution	General Habitat Description	Blooming Period	Potential for Occurrence in Project Area	Potential for Occurrence in the Offsite Infrastructure Improvement Areas
Navarretia heterandra Tehama navarretia	–/–/4.3	Interior North Coast Ranges, Cascade Range foothills, western Sacramento Valley, east San Francisco Bay Area, interior South Coast Ranges, Modoc Plateau in Butte, Colusa, Lake, Napa, Shasta, Tehama, Trinity, and Yuba Counties; Oregon.	Mesic valley and foothill grassland, vernal pools; 30–1,110 meters.	Apr–Jun	Suitable habitat is present in the seasonal wetlands in the project area. The nearest recorded occurrence is approximately 1.5 miles northwest of the project area. Species was not observed during the April and May 2005, May, June, and July 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in seasonal wetland and seasonal wetland swales.
Navarretia myersii ssp. *myersii* Pincushion navarretia	–/–/1B.1	Central Valley in Amador, Calaveras, Merced, Placer, and Sacramento Counties.	Edges of vernal pools; 20–330 meters.	Apr–May	Suitable habitat is present in seasonal wetlands and quarry pond QP-2 in the project area. Nearest recorded occurrence is more than 5 miles from the project area. Species was not observed during the April and May 2005, May 2012 or April and May 2019 surveys of the project area.	Potential for occurrence in seasonal wetland and seasonal wetland swales.
Orcuttia tenuis Slender Orcutt grass	T/E/1B.1	Sierra Nevada and Cascade Range foothills from Siskiyou to Sacramento Counties.	Vernal pools; 35–1,760 meters.	May–Sep (Oct)	No suitable vernal pool habitat is present in the study area. Nearest recorded occurrence is more than 5 miles from the project area. Species was not observed during the April and May 2005, May, June, and July 2012, or April, May, and July 2019 surveys of the project area.	Low potential for occurrence in seasonal wetland and seasonal wetland swales.
Orcuttia viscida Sacramento Orcutt grass	E/E/1B.1	Endemic to Sacramento County.	Vernal pools; 30–100 meters.	Apr–Jul	No suitable vernal pool habitat is present in the study area. Nearest recorded occurrences are more than 5 miles from the project area. Species was not observed during the April and May 2005, May, June, and July 2012, or April, May, and July 2019 surveys of the project area.	Low potential for occurrence in seasonal wetland and seasonal wetland swales.

Scientific Name Common Name	Status[a] Fed/State/CNPS	Geographic Distribution	General Habitat Description	Blooming Period	Potential for Occurrence in Project Area	Potential for Occurrence in the Offsite Infrastructure Improvement Areas
Packera layneae Layne's ragwort (or Layne's butterweed)	T/R/1B.2	Northern Sierra Nevada foothills, Butte, El Dorado, Placer, Tuolumne, and Yuba Counties.	Rocky serpentine or gabbro soils in chaparral and foothill woodland; 200–1,000 meters.	Apr–Aug	Suitable habitat is present in blue oak woodlands, blue oak savannah, and white-leaf manzanita chaparral in the project area. Nearest recorded occurrence is approximately 1.2 miles north of the project area. Species was not observed during the April and May 2005, May, June, and July 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in chaparral and oak woodlands on serpentine rock land soil type.
Sagittaria sanfordii Sanford's arrowhead	–/–/1B.2	Scattered locations in Central Valley and Coast Ranges.	Freshwater marshes, sloughs, canals, and other slow-moving water habitats; below 650 meters.	May–Oct	Suitable habitat is present in Marble Creek, Deer Creek, stock ponds, and quarry ponds in the project area. Nearest recorded occurrence is approximately 3 miles southwest of the project area. Species was not observed during the April and May 2005, May, June, and July 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in Deer Creek.
Trichostema rubisepalum Hernandez bluecurls	–/–/4.3	Mariposa, Napa, San Benito, and Tuolumne Counties.	On volcanic or serpentinite derived soils in broadleaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, vernal pools; 300-1435 meters.	Jun-Aug	Suitable habitat is present in blue oak woodlands, blue oak savannah, white-leaf manzanita chaparral, seasonal wetlands and quarry pond QP-2 in the project area. Nearest recorded occurrence is more than 5 miles from the project area. Species was not observed during the April and May 2005, May, June, and July 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in chaparral, oak woodlands, seasonal wetland, and seasonal wetland swales.

Scientific Name Common Name	Status[a] Fed/State/CNPS	Geographic Distribution	General Habitat Description	Blooming Period	Potential for Occurrence in Project Area	Potential for Occurrence in the Offsite Infrastructure Improvement Areas
Viburnum ellipticum Oval-leaved viburnum	–/–/2.3	Northwest California, San Francisco Bay Area, north and central Sierra Nevada foothills: Contra Costa, El Dorado, Fresno, Glenn, Humboldt, Mendocino, Napa, Placer, Shasta, Sonoma, and Tehama Counties; also Oregon, Washington.	Chaparral, cismontane woodland, and lower montane coniferous forest; 215–1,400 meters.	May–Jun	Suitable habitat is present in blue oak woodlands, blue oak savannah, and white-leaf manzanita chaparral in the project area. Nearest recorded occurrence is more than 5 miles from the project area. Species was not observed during the April and May 2005, May, June, and July 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in chaparral and oak woodlands.
Wyethia reticulata El Dorado County mule ears	–/–/1B.2	El Dorado and Yuba Counties.	On clay or gabbro soils in chaparral, cismontane woodland, and lower montane coniferous forest; 185–630 meters.	Apr–Aug	No gabbro soils are known to occur in the project area, although otherwise suitable habitat is present in blue oak woodlands, blue oak savannah, and white-leaf manzanita chaparral in the project area. Nearest recorded occurrence is approximately 1.3 miles north of the project area. Species was not observed during the April and May 2005, May, June, and July 2012, or April, May, and July 2019 surveys of the project area.	Potential for occurrence in chaparral and oak woodlands, although soils might not be suitable.

Scientific Name Common Name	Status[a] Fed/State/CNPS	Geographic Distribution	General Habitat Description	Blooming Period	Potential for Occurrence in Project Area	Potential for Occurrence in the Offsite Infrastructure Improvement Areas

Sources: California Native Plant Society (2024); California Department of Fish and Wildlife (2024); Consortium of California Herbaria (2024).

[a] Status explanations:

Federal

T = listed as threatened under the federal Endangered Species Act.
E = listed as endangered under the federal Endangered Species Act.
– = no listing.

State

E = listed as endangered under the California Endangered Species Act.
R = listed as rare under the California Endangered Species Act.
– = no listing.

California Native Plant Society (CNPS) California Rare Plant Rank

1B = List 1B species: rare, threatened, or endangered in California and elsewhere.
2 = List 2 species: plants rare, threatened, or endangered in California but more common elsewhere.
3 = List 3 species: plants about which we need more information—a review list.
4 = List 4 species: plants of limited distribution—a watch list.

CNPS Code Extensions

0.1 = seriously endangered in California (more than 80% of occurrences threatened/high degree and immediacy of threat).
0.2 = fairly endangered in California (20%–80% of occurrences threatened).

Table 3.3-4. Special-Status Wildlife Species Known or with Potential to Occur in the Village of Marble Valley Specific Plan Project Region

Common Name *Scientific Name*	Status[a] Fed/State/ Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in the VMVSP Project Area	Potential Occurrence in Offsite Infrastructure Improvement Area
Invertebrates					
Monarch butterfly *Danaus plexippus*	C/-/-	Adults breed and migrate throughout California, and winter along the California coast and in central Mexico.	Open habitats including fields, meadows, weedy areas, marshes, and roadsides. Monarch butterflies roost in wind-protected tree groves (such as eucalyptus) with nectar and water sources nearby. Caterpillar host plants are milkweeds.	Moderate. The project area is within the spring/summer breeding and spring/fall migration ranges. Breeding was documented within one mile of the project area in 2023 and three adult monarch butterfly occurrences have been recorded within 5 miles of the project area (Western Monarch Milkweed Occurrence Database 2024). Milkweed (caterpillar host plants) were observed in the project area during plant surveys in 2005 and adults may breed, forage, and migrate through project area.	Moderate. Adults may breed, forage, and migrate through the offsite area, and milkweed may be present in the annual grassland in the offsite area.
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	T/–/–	Shasta County in the north to Fresno County in the south including the valley floor and lower foothills below approximately 500 feet in elevation	Riparian and oak savanna habitats with elderberry shrubs; elderberries are the host plant.	None. 46 elderberry shrubs (host plant) were identified in the project area during 2012 surveys; however, the project area is outside of the USFWS's currently defined range for the species.[b] Therefore, valley elderberry longhorn beetle is not expected to occur within the project area.	None. Three elderberry shrubs (host plant) were observed in the Marble Valley Parkway/Flying C Road Realignment area and additional shrubs may be present throughout the offsite area; however, the offsite area is outside of the USFWS's currently defined range for the species.[b] Therefore, valley elderberry longhorn beetle is not expected to occur within the offsite area.

Common Name *Scientific Name*	Status[a] Fed/State/ Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in the VMVSP Project Area	Potential Occurrence in Offsite Infrastructure Improvement Area
Vernal pool fairy shrimp *Branchinecta lynchi*	T/–/–	Central Valley, central and south Coast Ranges from Tehama County to Santa Barbara County; isolated populations also in Riverside County.	Common in vernal pools; also found in sandstone rock outcrop pools.	None. Protocol-level 2012/2013 wet- and dry-season branchiopod surveys did not locate vernal pool fairy shrimp within potential habitat (13 seasonal wetlands and two ponds) in the project area.	Moderate. Aquatic features in the offsite area provide potential habitat for vernal pool fairy shrimp.
Vernal pool tadpole shrimp *Lepidurus packardi*	E/–/–	Shasta County south to Merced County.	Vernal pools and ephemeral stock ponds.	None. Protocol-level 2012/2013 wet- and dry-season branchiopod surveys did not locate vernal pool tadpole shrimp within potential habitat (13 seasonal wetlands and two ponds) in the project area.	Low. Aquatic features in the offsite area may provide potential habitat for vernal pool tadpole shrimp.
Amphibians					
California red-legged frog *Rana draytonii*	T/SSC/–	Along the coast and coastal mountain ranges of California from Marin County to San Diego County and in the Sierra Nevada from Tehama County to Fresno County.	Permanent and semi-permanent aquatic habitats, such as creeks and coldwater ponds, with emergent and submergent vegetation; may estivate in rodent burrows or cracks during dry periods.	Low. Habitat assessment identified potential aquatic breeding and dispersal habitat on-site and within a 1-mile radius. The closest confirmed sighting is 24 miles to the northeast.	Low. Potential breeding and dispersal habitat is present in offsite area. The closest confirmed sighting is 24 miles to the northeast.
California tiger salamander *Ambystoma californiense*	T/T/–	Central Valley, including Sierra Nevada foothills, up to approximately 1,500 feet, and coastal region from Butte County south to northeastern San Luis Obispo County.	Small ponds, lakes, or vernal pools in grasslands and oak woodlands for larvae; rodent burrows, rock crevices, or fallen logs for cover for adults and for summer dormancy.	None. Project area is north of the known range, closest occurrence is 14 miles to the southwest, and no salamander larvae were observed during protocol branchiopod surveys.	None. Offsite areas are north of species known range. No suitable habitat is present within offsite area.

Common Name *Scientific Name*	Status[a] Fed/State/ Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in the VMVSP Project Area	Potential Occurrence in Offsite Infrastructure Improvement Area
Foothill yellow-legged frog *Rana boylii*	E/E/–	Foothill and mountain streams in the Klamath, Cascade, Sutter Buttes, Coast, Sierra Nevada, and Transverse ranges from sea level to 6,400 feet.	Rocky streams in a variety of habitats including valley-foothill hardwood, conifer, and riparian forests, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral and wet meadow.	Low. Habitat is present for adult frogs in Deer and Marble Creek but essential breeding microhabitats such as cobble point bars are lacking and species was not observed during focused surveys conducted in May and June 2012 and in 2019 (ECORP Consulting 2019b). The nearest record (CNDDB Occurrence #273) is just over 5 miles north of the project area (California Department of Fish and Wildlife 2024).	Low. Suitable habitat was not observed but the majority of Deer Creek was not accessible to be surveyed; species was not observed during focused surveys conducted in 2012 within Deer and Marble Creek in the VMVSP area. Closest documented occurrence is just over 5 miles north of the offsite area (California Department of Fish and Wildlife 2024).
Western spadefoot *Scaphiopus hammondii*	PT/SSC/–	Sierra Nevada foothills, Central Valley, Coast Ranges, coastal counties in Southern California.	Shallow streams with riffles and seasonal wetlands, such as vernal pools in annual grasslands and oak woodlands.	None. Potential habitat is present within the project area but species was not observed during focused surveys conducted within the project area. The nearest record (CNDDB Occurrence #498) is just over 5 miles northwest of the project area (California Department of Fish and Wildlife 2024). Given the lack of any observations of western spadefoots during extensive aquatic and terrestrial surveys of the project area, western spadefoot is not expected to occur in the project area.	None. Potential habitat is present within drainages and seasonal wetlands within the offsite area. However, the nearest record (CNDDB Occurrence #498) is greater than 5 miles northwest of the project area (California Department of Fish and Wildlife 2024) and species were not observed in the adjacent project area during extensive surveys. Western spadefoot is not expected to occur in the offsite improvement areas.

Common Name *Scientific Name*	Status[a] Fed/State/ Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in the VMVSP Project Area	Potential Occurrence in Offsite Infrastructure Improvement Area
Reptiles					
Blainville's horned lizard *Phrynosoma blainvillii*	–/SSC/–	Northern California to the tip of Baja California.	Various scrublands, grasslands, coniferous and broadleaf forests and woodlands; associated with sandy soils that support native ant colonies and the presence of chaparral plants.	High. Chaparral habitat within the project area provides habitat for the species. Probable scat was observed during focused surveys in 2012, in addition to an incidental observation of a likely horned lizard. There are also four recorded occurrences within 5 miles of the project area (California Department of Fish and Wildlife 2024).	High. Potential habitat is present within the offsite area and probable scat was observed in the VMVSP area. There are four recorded occurrences within approximately 5 miles of offsite area with the nearest occurrence approximately 1.5 miles to the northeast (California Department of Fish and Wildlife 2024).
Giant garter snake *Thamnophis gigas*	T/T/–	Central Valley from the vicinity of Burrel in Fresno County north to near Chico in Butte County; has been extirpated from areas south of Fresno.	Sloughs, canals, low gradient streams and freshwater marsh habitats where there is a prey base of small fish and amphibians; also found in irrigation ditches and rice fields; requires grassy banks and emergent vegetation for basking and areas of high ground protected from flooding during winter.	None. Project area is outside of the species range.	None. Offsite area is outside of the species range.

Common Name *Scientific Name*	Status[a] Fed/State/ Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in the VMVSP Project Area	Potential Occurrence in Offsite Infrastructure Improvement Area
Western pond turtle *Actinemys marmorata*	PT/SSC/–	Occurs from the Oregon border of Del Norte and Siskiyou Counties south along the coast to San Francisco Bay, inland through the Sacramento Valley, and on the western slope of the Sierra Nevada.	Occupies ponds, marshes, rivers, streams, and irrigation canals with muddy or rocky bottoms and with watercress, cattails, water lilies, or other aquatic vegetation in woodlands, grasslands, and open forests.	High. Pond turtles were observed within the two quarry ponds and in Deer Creek in the project area during the 2012 survey. Turtles were incidentally observed in Marble Creek. Turtles have also been previously documented within Latrobe Creek southwest of the project area; there are 5 recorded occurrences within 5 miles of the project area (California Department of Fish and Wildlife 2024).	High. Pond turtles have been observed within Deer Creek and its tributaries and were observed in the project area during the 2012 survey.
Birds					
Bald eagle *Haliaeetus leurocephalus*	-/E,FP	Breeding range includes the Sierra Nevada, Cascade Range and portions of the Coast Ranges; winter range expands to include most of the state.	Forages primarily in large inland fish-bearing waters with adjacent large trees or snags and occasionally in uplands with abundant rabbits, other small mammals, or carrion.	None. No suitable foraging or nesting habitat is present within the project area (ECORP Consulting 2013j). One occurrence approximately 1 mile north of the project area (California Department of Fish and Wildlife 2024).	None. No suitable foraging or nesting habitat is present within the offsite area (ECORP Consulting 2015).
California black rail *Laterallus jamaicensis coturniculus*	–/T,FP	Permanent resident in the San Francisco Bay and eastward through the Delta into Sacramento and San Joaquin Counties; small populations in Marin, Santa Cruz, San Luis Obispo, Orange, Riverside, and Imperial Counties.	Tidal salt marshes associated with heavy growth of pickleweed; also occurs in brackish marshes or freshwater marshes at low elevations.	None. No suitable nesting and foraging habitat; one occurrence approximately 2 miles west of the project area (California Department of Fish and Wildlife 2024).	None. No suitable nesting and foraging habitat; one occurrence approximately 2 miles west of the project area (California Department of Fish and Wildlife 2024).

Common Name *Scientific Name*	Status[a] Fed/State/ Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in the VMVSP Project Area	Potential Occurrence in Offsite Infrastructure Improvement Area
Bank swallow *Riparia riparia*	–/T/–	Breeds in much of lowland and riparian California, with 75% of the nesting colonies occurring on the Sacramento and Feather Rivers and their tributaries; additional breeding locations are scattered throughout the northern and central portions of the state; migrates south of California in fall/winter.	Nests in vertical banks or bluffs, typically adjacent to water, devoid of vegetation with friable, eroding soils; forages in a wide variety of habitats.	None. No suitable nesting habitat in the project area.	None. No suitable nesting habitat in the offsite area.
Golden eagle *Aquila chrysaetos*	-/FP/-	Winter range spans most of California; breeding range excludes the Central Valley floor.	Nests in cliffs, rocky outcrops and large trees; Forages in a variety of open habitats, including grassland, shrubland, and cropland.	Moderate. Suitable foraging and nesting habitat is present within the project area; record of recent nest within 5 miles of the project area.	Moderate. Suitable nesting habitat is present within offsite improvement areas; record of recent nest within 5 miles of the project area.
Grasshopper sparrow *Ammodramus savannarum*	–/SSC/–	Breeding range spans much of the Central Valley and California coast, but populations are typically localized and disjunct; most individuals migrate, although some may be present year-round.	Nests and forages in dense grasslands; favors a mix of native grasses, forbs, and scattered shrubs.	Moderate. Suitable nesting and foraging grassland habitat is present within the project area. However, species was not observed during 2012 breeding bird surveys.	Moderate. Suitable nesting and foraging grassland habitat is present within the offsite area.
Loggerhead shrike *Lanius ludovicianus*	–/SSC/–	Resident and winter visitor in lowlands and foothills throughout California; rare on coastal slope north of Mendocino County, occurring only in winter.	Nests in isolated shrubs and trees and woodland/scrub edges of open habitats; forages in grasslands, agricultural fields and low, scrub habitats.	High. Suitable nesting and foraging habitat is present within the project area and species was observed during 2012 breeding bird surveys.	High. Suitable nesting and foraging habitat is present within the offsite area.

Common Name *Scientific Name*	Status[a] Fed/State/ Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in the VMVSP Project Area	Potential Occurrence in Offsite Infrastructure Improvement Area
Swainson's hawk *Buteo swainsoni*	-/T/–	Breeding range spans the Central Valley and Sacramento–San Joaquin Delta west of Suisun Marsh, northeastern California, and a few additional scattered sites; most of the population migrates south of California in fall/winter, although a small number winters in the Sacramento–San Joaquin Delta.	Nests in isolated trees, open woodlands, and woodland margins; forages in grasslands and agricultural fields.	Low. Project area is east of known nesting range but suitable nesting habitat is present. Closest documented breeding record is approximately 5 miles to the west (California Department of Fish and Wildlife 2024).	Low. Offsite area is east of known nesting range but suitable nesting habitat is present. Closest documented breeding record is approximately 5 miles to the west (California Department of Fish and Wildlife 2024).
Tricolored blackbird *Agelaius tricolor*	BCC/T,SSC /–	Year-round resident throughout the Central Valley and the central and southern coasts, with additional scattered locations throughout California.	Nests colonially in large, dense stands of freshwater marsh, riparian scrub and other shrubs; forages in grasslands and agricultural fields.	Low. Potential riparian habitat is present in the project area, but suitable marsh habitat is lacking. No breeding colonies were observed during the 2012 breeding bird surveys within the project area; There are seven recorded presumed extant occurrences within 5 miles of the project area (California Department of Fish and Wildlife 2024).	Low. Potential riparian habitat is present in the offsite area but suitable marsh habitat is lacking. There are seven recorded presumed extant occurrences within 5 miles of the project area (California Department of Fish and Wildlife 2024).

Common Name *Scientific Name*	Status[a] Fed/State/ Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in the VMVSP Project Area	Potential Occurrence in Offsite Infrastructure Improvement Area
Burrowing owl *Athene cunicularia*	BCC/SSC/ –	Year-round range includes the Central Valley and Sacramento–San Joaquin Delta and portions of the central coast, eastern California, and Southern California.	Nests and forages in grasslands, agricultural fields, and low scrub habitats, especially where ground squirrel burrows are present; occasionally inhabits artificial structures and small patches of disturbed habitat.	Moderate. Annual grassland in the project area provides potential habitat. No burrowing owls were observed during the 2012 breeding bird surveys. There are three documented occurrences of burrowing owl within 5 miles of the project area with the closest occurrence approximately 3 miles to the west (California Department of Fish and Wildlife 2024).	Moderate. Annual grassland in the offsite area provides potential breeding and wintering habitat. Closest documented occurrence is approximately 3 miles to the west (California Department of Fish and Wildlife 2024).
White-tailed kite *Elanus leucurus*	–/FP/–	Year-round range spans the Central Valley, Coast Ranges and coast, Sierra Nevada foothills, and Colorado River.	Low foothills or valley areas with valley or live oaks, riparian areas, and marshes near open grasslands for foraging.	High. Suitable nesting and foraging habitat occurs in the project area. Species observed foraging and exhibiting territorial behavior during 2012 breeding bird surveys but no nests were detected. There are two documented occurrences within 5 miles of the project area with the closest occurrence approximately 4 miles to the northwest (California Department of Fish and Wildlife 2024).	High. Suitable nesting and foraging habitat occurs in the offsite area. Closest documented nest is 4 miles to the northwest (California Department of Fish and Wildlife 2024).
Yellow warbler *Setophaga petechia*	–/SSC/–	Range includes coastal and Northern California and the Sierra Nevada below approximately 7,000 feet.	Nests and forages in early successional riparian habitats.	Moderate. Suitable migratory habitat is present within the project area. Species was observed during 2012 surveys within the project area. However, the species does not breed in this region.	Moderate. Suitable migratory habitat is present within the offsite areas. However, the species does not breed in this region.
Mammals					

Common Name *Scientific Name*	Status[a] Fed/State/ Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in the VMVSP Project Area	Potential Occurrence in Offsite Infrastructure Improvement Area
Pacific fisher *Martes pennanti*	-/SSC/–	Uncommon resident of Sierra Nevada, Cascades, Klamath Mountains and North Coast Ranges.	Inhabits large areas of conifer, mixed conifer, and hardwood forests; requires mature dense stands with snags and > 50% canopy cover.	None. No suitable habitat is present in the project area, and the project is not within the elevation range of this species.	None. No suitable habitat is present in the offsite area, and the project is not within the elevation range of this species.
Ringtail *Bassariscus astutus*	–/FP/–	Found throughout most of California except for the San Joaquin Valley and portions of southern deserts.	Rocky outcrops in open grassland and oak woodland; riparian habitats.	Moderate. Suitable habitat is present among rock outcrops and snags within riparian habitats. Outside of species known range; however, unconfirmed observations of the species have been reported (ECORP Consulting 2014c).	Moderate. Suitable habitat is present among rock outcrops adjacent to Deer Creek. Outside of species known range; however, unconfirmed observations of the species have been reported (ECORP Consulting 2014c).
American badger *Taxidea taxus*	–/SSC/-	In California, occurs throughout the state except in humid coastal forests of northwestern California in Del Norte and Humboldt Counties.	Wide variety of open, arid habitats but most commonly associated with grasslands, savannas, mountain meadows, and open areas of desert scrub; the principal habitat requirements for the species appear to be sufficient food (burrowing rodents), friable soils, and relatively open, uncultivated ground.	Low. No documented occurrences within 5 miles of the project area (California Department of Fish and Wildlife 2024) but suitable habitat is present in project area.	Low. Suitable habitat is present within the offsite areas.

Common Name *Scientific Name*	Status[a] Fed/State/ Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in the VMVSP Project Area	Potential Occurrence in Offsite Infrastructure Improvement Area
Fringed myotis *Myotis thysanodes*	–/–/ WBWG: High priority	Widespread in California, occurring in all but the Central Valley and Colorado and Mojave deserts.	Prefers pinyon-juniper, valley foothill hardwood and hardwood-conifer, generally 4,000–7,000 feet elevation; roosts in caves, mines, buildings, or crevices.	Low. Preferred roosting areas not present within the project area and species was not detected during spring and autumn 2012 acoustic bat surveys (Wyatt 2013).	Low. Preferred roosting areas do not appear to be present within the offsite area and species was not detected during spring and autumn 2012 acoustic bat surveys conducted in the nearby project area (Wyatt 2013).
Hoary bat *Lasurius cinerius*	–/–/ WBWG: Moderate priority	Occurs in forested areas throughout most of California from sea level to 13,200 feet.	Primarily found in forested habitats; also found in riparian areas and in park and garden settings in urban areas; day roosts in foliage of trees.	High. Suitable roosting and foraging habitat is present in the project area. Species was detected throughout the project area during 2012 acoustic bat surveys (Wyatt 2013).	High. Suitable roosting and foraging habitat is present in the offsite area. Species was detected throughout the VMVSP area during 2012 acoustic bat surveys (Wyatt 2013).
Long-eared myotis *Myotis evotis*	–/–/ WBWG: Moderate priority	Occurs throughout California.	Occurs in semi-arid shrublands, sage, chaparral and agricultural areas, but is usually associated with coniferous forests.	None. Preferred roosting areas not present within the project area and species was not detected during spring and autumn 2012 acoustic bat surveys (Wyatt 2013).	Low. Preferred roosting areas do not appear to be present within the offsite area and species was not detected during spring and autumn 2012 acoustic bat surveys conducted in the nearby project area (Wyatt 2013).
Pallid bat *Antrozous pallidus*	–/SSC/ WBWG: High priority	Occurs throughout California except the high Sierra from Shasta to Kern Counties and the northwest coast, primarily at lower and mid-level elevations.	Occurs in a variety of habitats from desert to coniferous forest; most closely associated with oak, yellow pine, redwood, and giant sequoia habitats in Northern California and oak woodland, grassland, and desert scrub in Southern California.	High. Suitable roosting and foraging habitat is present in the project area. Species was confirmed adjacent to Marble Creek and Deer Creek in the project area during 2012 acoustic bat surveys (Wyatt 2013).	High. Suitable roosting and foraging habitat is present in the offsite areas. Species was confirmed within the VMVSP area during acoustic bat surveys (Wyatt 2013).

Common Name *Scientific Name*	Status[a] Fed/State/ Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in the VMVSP Project Area	Potential Occurrence in Offsite Infrastructure Improvement Area
Silver-haired bat *Lasionycteris noctivagans*	–/–/ WBWG: Moderate priority	Only a few scattered breeding locations are known in the San Francisco Bay Area, Central Valley, or central coast.	Typically roosts in tree cavities, crevices and under loose bark; may also use leaf litter, buildings, mines, and caves; breeds in coastal and montane coniferous forests, valley foothill and montane riparian habitats; may occur in any habitat during migration.	Moderate. Suitable roosting and foraging habitat is present in the project area. Species is primarily known from higher elevations, but was potentially detected during 2012 acoustic bat surveys throughout the project area (Wyatt 2013).	Moderate. Suitable roosting and foraging habitat is present in the offsite area. Species is primarily known from higher elevations, but was potentially detected within the VMVSP area during 2012 acoustic bat surveys (Wyatt 2013).
Townsend's big-eared bat *Corynorhinus townsendii*	–/SSC/ WBWG: High priority	Year-round range spans most of California except the highest elevations of the Sierra Nevada south of Lake Tahoe.	Typically roosts in colonies of fewer than 100 individuals in caves or mines; occasionally roosts in buildings or bridges, and rarely, hollow trees; forages in all habitats except alpine and subalpine, although most commonly in mesic forests and woodlands.	Low. Suitable roosting and foraging habitat is present in the project area. Species was not detected during the 2012 acoustic bat surveys (Wyatt 2013).	Low. Suitable roosting and foraging habitat is present in the offsite area. Species was not detected within the VMVSP area during the 2012 acoustic bat surveys (Wyatt 2013).
Western red bat *Lasiurus blossevillii*	–/SSC/ WBWG: High priority	Year-round range spans the Central Valley, Sierra Nevada foothills, Coast Ranges, and coast except Humboldt and Del Norte Counties.	Found primarily in riparian and wooded habitats; occurs at least seasonally in urban areas; day roosts in trees within the foliage; found in fruit orchards and sycamore riparian habitats in the Central Valley.	High. Suitable roosting and foraging habitat is present in the project area. Species was detected adjacent to the two quarry ponds during the 2012 acoustic bat surveys (Wyatt 2013).	High. Suitable roosting and foraging habitat is present in the offsite area. Species was detected adjacent to the two quarry ponds in the VMVSP area during 2012 acoustic bat surveys (Wyatt 2013).

Common Name *Scientific Name*	Status[a] Fed/State/ Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in the VMVSP Project Area	Potential Occurrence in Offsite Infrastructure Improvement Area
Western small-footed myotis *Myotis ciliolabrum*	–/– WBWG: High priority	Occurs throughout much of California except the northwest and coastal areas.	Particularly associated with coniferous forests and rocky xeric habitats; typically roosts in rock crevices in mines, caves and occasionally in buildings, bridges, and other human structures; forages over a wide variety of habitats.	High. Suitable roosting and foraging habitat is present in the project area. Species was detected adjacent to Marble Creek and the two quarry ponds during the 2012 acoustic surveys (Wyatt 2013).	High. Suitable roosting and foraging habitat is present in the offsite area. Species was detected in the VMVSP area during the 2012 acoustic surveys (Wyatt 2013).
Fish					
Delta smelt *Hypomesus transpacificus*	T/E/–	Sacramento–San Joaquin Delta.	Brackish-water channels and sloughs.	None. Outside the range of the species.	None. Outside the range of the species.
Central Valley steelhead *Oncorhynchus mykiss*	T/-/–	Sacramento River and tributary Central Valley rivers.	Occurs in well-oxygenated, cool, riverine habitat with water temperatures from 7.8°C to 18°C (Moyle 2002). Habitat types are riffles, runs, and pools.	None. Outside the range of the species and no suitable habitat present.	None. Outside the range of the species and no suitable habitat present.
Central Valley spring-run chinook salmon *Oncorhynchus tshawytcha*	T/T/–	Upper Sacramento River and Feather River.	Has the same general habitat requirements as winter-run Chinook salmon; coldwater pools are needed for holding adults (Moyle 2002).	None. Outside the range of the species and no suitable habitat present.	None. Outside the range of the species and no suitable habitat present.

Common Name *Scientific Name*	Status[a] Fed/State/ Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in the VMVSP Project Area	Potential Occurrence in Offsite Infrastructure Improvement Area

[a] Status explanations:

Federal

E = listed as endangered under the federal Endangered Species Act.
T = listed as threatened under the federal Endangered Species Act.
C = candidate species for listing under the federal Endangered Species Act.
BCC = bird of conservation concern.
– = no listing.

State

E = listed as endangered under the California Endangered Species Act.
T = listed as threatened under the California Endangered Species Act.
FP = fully protected under the California Fish and Game Code.
SSC = species of special concern in California.
C = candidate species for listing under the California Endangered Species Act.
– = no listing.

Western Bat Working Group (WBWG) 2013.

High priority = species are imperiled or at high risk of imperilment.
Moderate priority = This designation indicates a level of concern that should warrant closer evaluation, more research, and conservation actions of both the species and possible threats. A lack of meaningful information is a major obstacle in adequately assessing these species' status and should be considered a threat.

[b] Valley elderberry longhorn beetle range clarification: On May 25, 2016, the U.S. Army Corps of Engineers (USACE) initiated consultation with the U.S. Fish and Wildlife Service (USFWS) for valley elderberry longhorn beetle. In response to this request, USFWS Branch Chief Kellie Berry confirmed in a June 15, 2016 email to ECORPS Consulting Environmental Scientist/Project Manager Dave Krolick that new scientific data on valley elderberry longhorn beetle has prompted USFWS to revise the species' range. The revision puts the Village of Marble Valley project area outside the currently defined range of valley elderberry longhorn beetle (Berry pers. comm.). Ms. Berry requested that USACE rescind its request for formal consultation for valley elderberry longhorn beetle. On July 13, 2016, USACE sent a letter to USFWS requesting the withdrawal of its formal consultation request for the Village of Marble Valley project (SPK-2012-00209) (U.S. Army Corps of Engineers 2016).

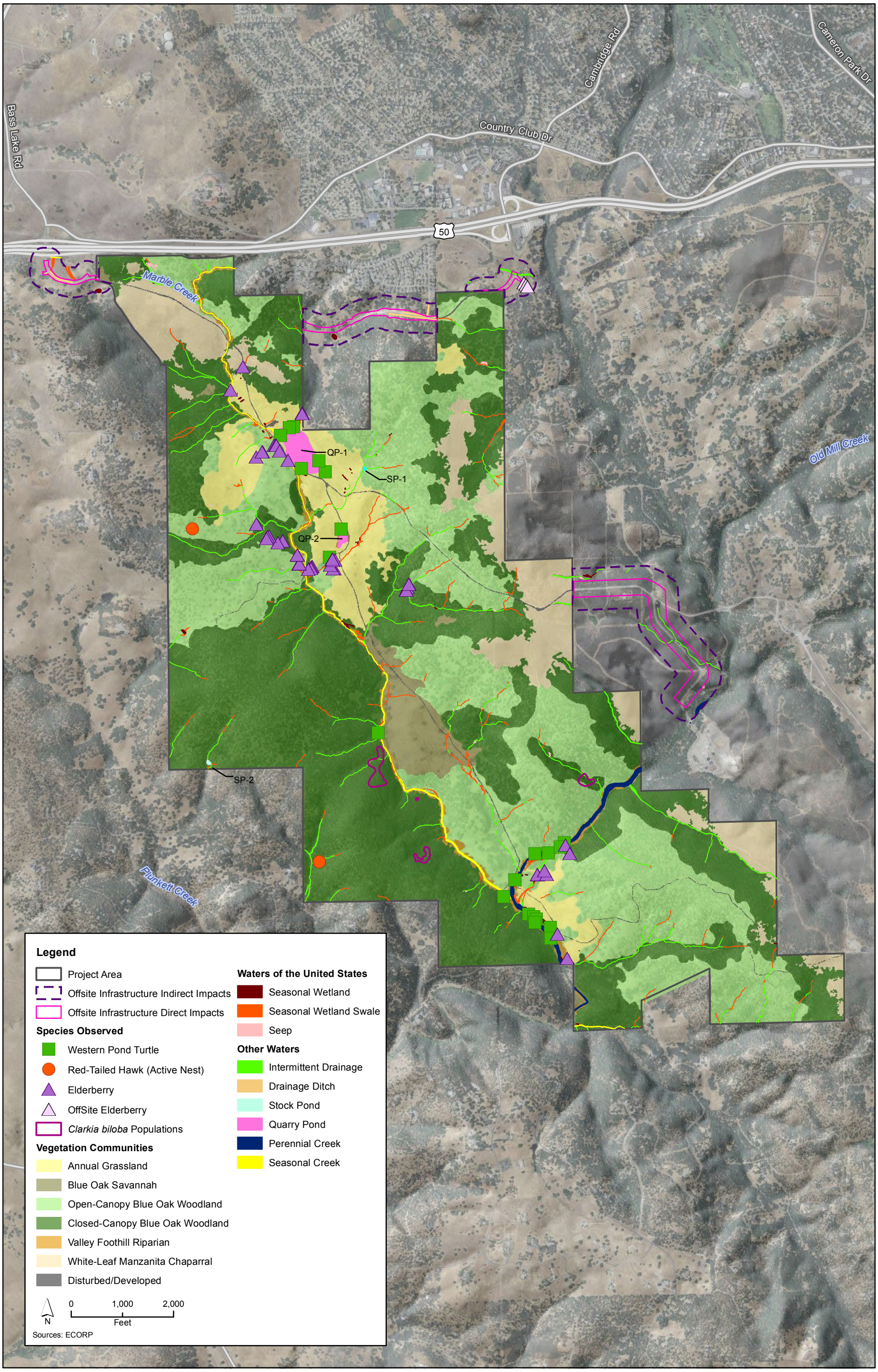


Figure 3.3-1
Biological Resources in the VMVSP Study Area

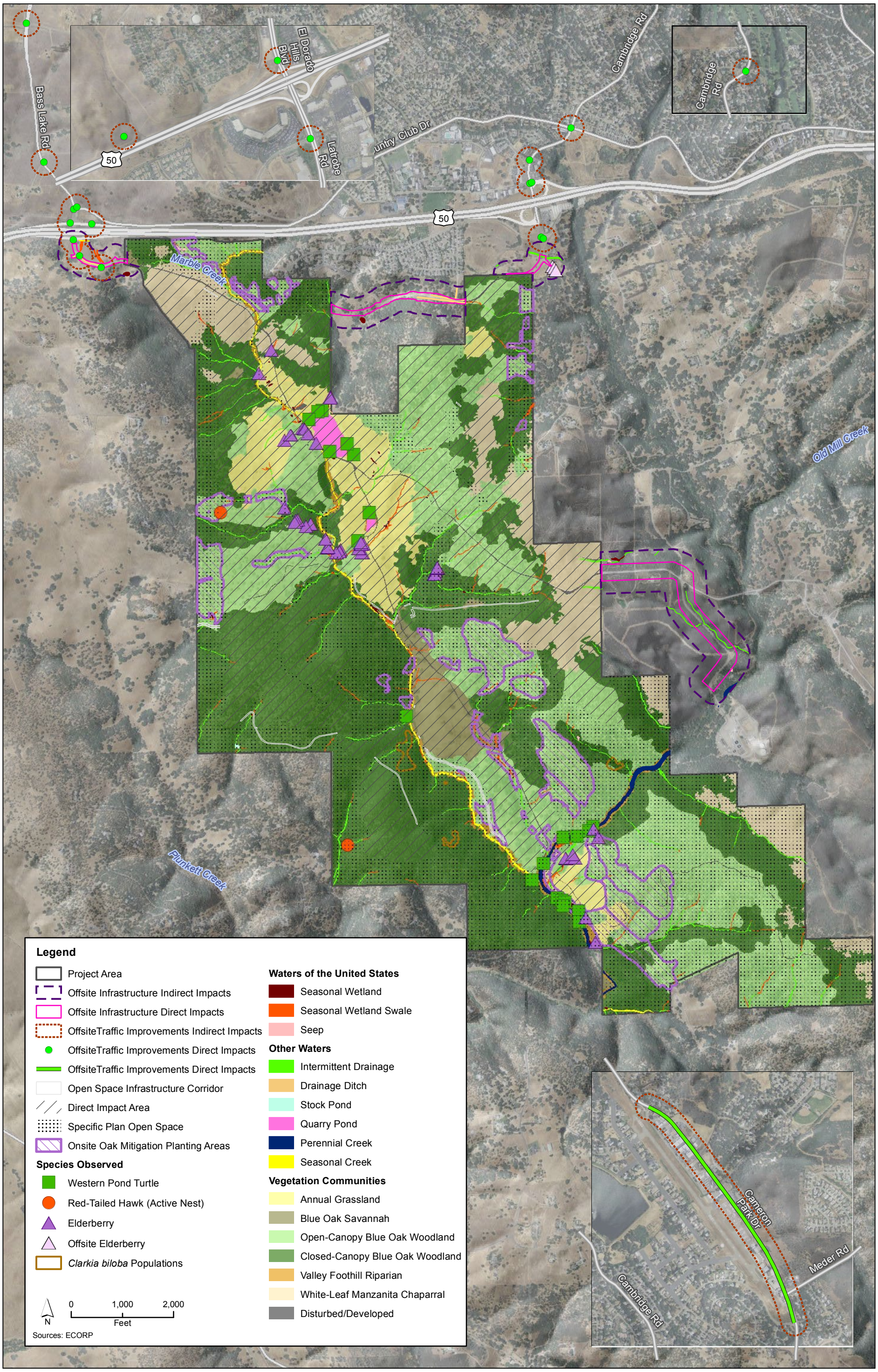


Figure 3.3-2
Biological Resources Impacts, VMVSP Study Area and Offsite Improvement Areas

3.4 Cultural Resources

This section identifies the regulatory and environmental setting for cultural resources for the build-out of the Village of Marble Valley Specific Plan (VMVSP; proposed project). For the purposes of this section, *cultural resources* consist of historic-period and precontact archaeological sites, traditional cultural properties, and built environment resources.

Archaeological resources consist of the physical remains of past human activity that have been preserved in the ground but no longer take the form of a standing structure (e.g., a house or building) and can date to any period from the Paleolithic to 50 years ago. Archaeological remains may occur in the same place as standing structures but are considered a distinct element (called a *component*) of the larger resource.

Ethnographic landscapes are a type of cultural landscape containing a variety of natural and cultural resources that associated peoples define as heritage resources. Examples include contemporary settlements and sacred religious sites (U.S. Department of Interior n.d.).

Traditional cultural properties consist of resources that are associated with the practices or beliefs of a living community and are (a) rooted in that community's history for at least 50 years, and (b) important in maintaining the continuing cultural identity of the community (Parker and King 1998:1).

Built environment resources consist of buildings, structures, objects, sites, or districts. Typically, built environment resources must be 50 years of age or older to qualify as cultural resources. Where these resources form a landscape unified by a coherent historical or design theme, they may qualify as a rural historic landscape (U.S. Department of the Interior 1999:1).

Information presented in the discussion and used for the subsequent analysis was drawn primarily from the following studies.

- *Cultural Resources Inventory Report for The Village of Marble Valley Specific Plan, El Dorado County, California (ECORP Project No. 2012-020)* (ECORP Consulting 2013a).
- *Cultural Resources Testing and Evaluation Report for The Village of Marble Valley Project, El Dorado County, California (ECORP Project No. 2012-020)* (ECORP Consulting 2013b).
- *Due Diligence Cultural Resources Constraints Analysis of the Village of Marble Valley Offsite Property in El Dorado County (ECORP Project No. 2012-020)* (ECORP Consulting 2014).
- *Environmental Site Assessment: S.H. Cowell Property at Marble Valley, El Dorado County, California* (EBASCO Services 1989).
- *Cultural Resources Study for the Lime Rock Valley Specific Plan, El Dorado County, California* (Patrick and Supernowicz 2014).

These studies (in redacted form to protect confidential information), as well as other documents referenced in this section, are available for review during normal business hours at the El Dorado County (County) Community Development Agency office: 2850 Fair Lane, Building C, Placerville, California.

3.4.1 Existing Conditions

Regulatory Setting

Federal

National Historic Preservation Act

Archaeological and built environment resources (buildings and structures) are protected through the National Historic Preservation Act (NHPA) of 1966, as amended (54 United States Code 300101 et seq.) and its implementing regulations: Protection of Historic Properties (36 Code of Federal Regulations [CFR] Part 800).

Prior to implementing an *undertaking* (e.g., issuing a federal permit), federal agencies (e.g., U.S. Army Corps of Engineers [USACE]) are required by Section 106 of the NHPA to consider the effects of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation and the State Historic Preservation Officer (SHPO) a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the National Register of Historic Places (NRHP). NHPA Section 101(d)(6)(A) allows properties of traditional religious and cultural importance to a tribe to be determined eligible for inclusion in the NRHP. Under the NHPA, a find is significant if it meets the NRHP listing criteria under 36 CFR 60.4, as stated below.

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:
>
> a) that are associated with events that have made a significant contribution to the broad patterns of our history, or
>
> b) that are associated with the lives of persons significant in our past, or
>
> c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, or
>
> d) that have yielded, or may be likely to yield, information important in prehistory or history.

Federal review of projects is normally referred to as the Section 106 process. The Section 106 process normally involves step-by-step procedures that are described in detail in the implementing regulations (36 CFR 800) and summarized here.

- Establish a federal undertaking.
- Delineate the Area of Potential Effects.
- Identify and evaluate historic properties in consultation with the SHPO and interested parties.
- Assess the effects of the undertaking on properties that are eligible for inclusion in the NRHP.
- Consult with the SHPO, other agencies, and interested parties to develop an agreement that addresses the treatment of historic properties and notify the Advisory Council on Historic Preservation.
- Proceed with the project according to the conditions of the agreement.

Because the proposed project would likely affect waters of the United States, the applicant will be required to meet the requirements of Section 404 of the Clean Water Act by obtaining a permit from USACE. Therefore, the proposed project is subject to Section 106 of NHPA as described above.

State

The State of California implements the NHPA through its statewide comprehensive cultural resource preservation programs. The California Office of Historic Preservation, an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The California Office of Historic Preservation also maintains the California Historical Resources Inventory. The SHPO is an appointed official who implements historic preservation programs within the state's jurisdiction.

California Environmental Quality Act

The California Environmental Quality Act (CEQA), as codified in Public Resource Code (PRC) Section 21000 et seq. and implemented via the State CEQA Guidelines (14 California Code of Regulations [CCR] 15000 et seq.), is the principal statute governing the environmental review of projects in the state. To be considered a historical resource, a resource must be at least 50 years old. In addition, the State CEQA Guidelines define a *historical resource* as listed below.

a. A resource listed in the California Register of Historical Resources (CRHR).

b. A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g).

c. Any object, building, structure, site, area, place, record, or manuscript that 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, provided the lead agency's determination is supported by substantial evidence in light of the whole record. The CRHR is "an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1[a]). The CRHR criteria are based on National Register of Historic Places (NRHP) criteria (PRC Section 5024.1[b]). Certain resources are determined by CEQA to be automatically included in the CRHR, including California properties formally eligible for or listed in the NRHP. To be eligible for listing in the CRHR as a historical resource, a prehistoric or historic-period resource must be significant at the local, state, and/or federal level under one or more 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; or,

    4. Has yielded, or may be likely to yield, information important in prehistory or history [14 CCR Section 4852(b)].

For a resource to be eligible for the California Register of Historical Resources (CRHR), it must also retain enough integrity to be recognizable as a historical resource and to convey its significance. A

resource that does not retain sufficient integrity to meet the NRHP criteria may still be eligible for listing in the CRHR.

CEQA requires lead agencies to determine if a proposed project would have a significant effect on important historical resources or unique archaeological resources. If a lead agency determines that an archaeological site is a historical resource, the provisions of PRC Section 21084.1 and State CEQA Guidelines Section 15064.5 would apply. If an archaeological site does not meet the State CEQA Guidelines criteria for a historical resource, then the site may meet the threshold of PRC Section 21083.2 regarding unique archaeological resources. A *unique archaeological resource* is an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria.

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC 21083.2(g)).

The State CEQA Guidelines note that if a resource is neither a unique archaeological resource nor a historical resource, the effects of the project on that resource will not be considered a significant effect on the environment (14 CCR 15064(c)(4)).

Madera Oversight Coalition, Inc. v. County of Madera and Tesoro Viejo, Inc. (2011)

In the past, it was common practice for many CEQA practitioners to provide performance-based mitigation for cultural resources, stipulating that further evaluation and treatment of resources would be performed in the future. The 2011 decision from the *Madera Oversight Coalition, Inc. v. County of Madera and Tesoro Viejo, Inc.* (2011 [199 Cal. App.4th 48, 81]) case determined this practice to be unacceptable under CEQA and required evaluation of cultural resources subject to CEQA to be performed at a level sufficient to characterize the resources prior to environmental impact report (EIR) certification (instead of waiting until preconstruction or construction stages of a project). Additionally, the case determined that if preservation in place, the preferred mitigation under CEQA (14 CCR 15126.4(b)(3)), is not employed, the EIR should disclose why that is not feasible. Cultural resources evaluations in this EIR have been completed consistent with the *Madera Oversight* decision.

Discovery of Human Remains

Section 7050.5 of the California Health and Safety Code states the following.

(a) Every person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in Section 5097.99 of the [California Public Resources Code (PRC)]. The provisions of this subdivision shall not apply to any person carrying out an agreement developed pursuant to subdivision (l) of Section 5097.94 of the [PRC] or to any person authorized to implement Section 5097.98 of the [PRC].

(b) In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which

the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the [California] Government Code [CGC], that the remains are not subject to the provisions of Section 27491 of the [CGC] or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the [PRC]. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains.

(c) If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the [Native American Heritage Commission (NAHC)] (California Health and Safety Code Section 7050.5).

Of particular note to cultural resources is subsection (c), requiring the coroner to contact the Native American Heritage Commission (NAHC) within 24 hours if discovered human remains are determined to be Native American in origin. After notification, NAHC will follow the procedures outlined in PRC Section 5097.98, which include notification of most likely descendants (MLD), if possible, and recommendations for treatment of the remains. The MLDs will have 24 hours after notification by the NAHC to make their recommendation (PRC 5097.98). In addition, knowing or willful possession of Native American human remains, or artifacts taken from a grave or cairn is a felony under state law (PRC 5097.99).

Senate Bill 18

California Senate Bill (SB) 18 (Burton, Chapter 905, Statutes of 2004) requires local governments to consult with California Native American tribes prior to making certain planning decisions and to provide notice to the tribes at certain key points in the planning process. These consultation and notice requirements apply to adoption and amendment of both general plans and specific plans, and designation of open space. The principal objective of SB 18 is to preserve and protect cultural places of California Native Americans. SB 18 is unique in that it requires local government consultation with Native American tribes in early stages of land use planning, extends to both public and private lands. The California Civil Code was amended by SB 18 and now allows state-recognized California Native American tribes to acquire and hold conservation easements. The County's SB 18 consultation for this project is discussed below under *Native American Consultation* and documentation is presented in Appendix G, *Native American Consultation Documentation*.

Assembly Bill 52

Assembly Bill (AB) 52 (Chapter 532, Statutes of 2014) establishes a formal consultation for California tribes as part of the CEQA process and equates significant impacts on tribal cultural resources with significant environmental impacts (PRC 21084.2). AB 52 defines a California Native American Tribe as a Native American tribe located in California that is on the contact list maintained by the NAHC. AB 52 requires formal consultation with California Native American tribes prior to determining the level of environmental document if a tribe has requested in writing to be informed by the lead agency of proposed projects. AB 52 also requires that consultation include project alternatives, mitigation measures, or significant effects, if requested by the California Native American Tribe, and that consultation be considered concluded when either parties agree to measures to mitigate or avoid a significant effect, or the agency concludes that mutual agreement

cannot be reached. Under AB 52, such measures will be recommended for inclusion in the environmental document and adopted mitigation monitoring program if determined to avoid or lessen a significant impact on a tribal cultural resource. AB 52 became law on January 1, 2015, but only applies to projects that have a notice of preparation or notice of negative declaration/mitigated negative declaration filed on or after July 1, 2015. The notice of preparation for the VMVSP EIR was filed on February 20, 2013, and therefore this project is not subject to the requirements of AB 52.

Local

El Dorado County General Plan

To protect cultural resources, the Conservation and Open Space Element of the *El Dorado County General Plan* (County General Plan) (El Dorado County 2017) includes the following goal and policies to protect cultural resources. The full text of this goal and policies can be found in Appendix B, *Consistency with El Dorado County General Plan Policies*, which provides an analysis of the project's consistency with County General Plan policies as required under State CEQA Guidelines Section 15125.

- Goal 7.5, *Cultural Resources*, addresses preservation of the County's important resources through protection of cultural heritage, and includes Policies 7.5.1.1, 7.5.1.3, and 7.5.1.6.

Environmental Setting

The following archaeological, ethnographic, and historic contexts have been summarized from the report *Cultural Resources Testing and Evaluation Report for The Village of Marble Valley Project, El Dorado County, California (ECORP Project No. 2012-020)* (ECORP Consulting 2013b) and the *Environmental Site Assessment: S.H. Cowell Property at Marble Valley, El Dorado County, California* (EBASCO Services 1989), as well as *California Archaeology* (Moratto 1984).

Archaeological Background

The project area is located in the Northern Sierra subregion of the Sierra Nevada archaeological region. In this area, four complexes have been defined: (1) the Tahoe Reach Complex, from 6000 BC to about 5000 BC; (2) the Spooner Complex, from about 5000 BC to 2000 BC; (3) the Martis Complex from about 2000 BC to about AD 500; and (4) the Kings Beach Complex, from AD 500 to the historic period.

The Tahoe Reach Complex describes archaeological phenomena that date as early as about 6000 BC, and was represented by large Parman projectile points, scrapers, crescents, and bifaces. Basalt was the primary material source for lithic artifacts, due to several quarries located within the northern Sierra Nevada Mountains. Population densities for this period were low, with small mobile groups hunting local megafauna.

The subsequent Spooner Complex describes the time period from 5000 BP to around 2000 BP and is believed to be the first occupation in the high Sierras. Spooner Complex sites tended to be larger in size than those of the Tahoe Reach Complex (though not larger in population) and were primarily located along streams and permanent water sources. Little artifactual evidence has been found from the Spooner Complex, consisting of basalt Humboldt and Pinto projectile points, milling stones, and unshaped pestles.

The Martis Complex is composed of three time periods: the early (2000 to 1500 BC); middle (1500 to 500 BC); and late (500 BC to AD 500). Basalt stone tool use increased during this complex, with blades, punches, core tools, and smaller flake tools being recovered from archaeological sites dating to this time period. A wide variety of projectile points, including contracting stemmed, side notched, corner notched, and concave-based dart points, were also associated with the Martis Complex. A greater emphasis on small game hunting and plant gathering allowed for more permanent villages in ecological rich areas, as evidenced by circular houses with subsurface floors.

The Kings Beach Complex describes the period between AD 500 and historic contact. This complex is characterized by sparse artifact scatters in the higher elevations that may indicate that dry climatic conditions lowered the carrying capacity and pushed populations to lower altitudes.

Ethnographic Background

The Nisenan occupied the project area at the time of Euro-American contact and spoke a Maiduan language. The Maiduan family of languages is part of the Penutian stock. Penutian speakers occupied the Central Valley, Central Sierra Nevada, and the San Francisco Bay Area at the time of Euro-American contact. The Nisenan occupied the lower Feather River drainage, and the drainages of the Yuba, Bear, and American Rivers. The boundary with the Miwok to the south was near the Cosumnes River. The western boundary was the Sacramento River, and the eastern boundary was the crest of the Sierra Nevada.

The principal Nisenan villages and associated smaller settlements controlled resources within a territory containing between 20 and 500 residents. Families in each territory controlled specific oak groves and fishing sites. A headman lived in the principal village and arbitrated disputes, directed festivities, provided advice, and consulted with family leaders. His authority was limited, however, absent the support of the family leaders and the shamans.

In the Central Valley, principal villages were located on low natural rises along rivers and streams. In the project vicinity, villages were located along the American River, approximately 8 kilometers southeast of the project area at nearest approach. Valley villages had 5 to 50 houses that were dome-shaped and covered with earth, mats, and grass. Brush shelters were used in the summer and when people were away from the village. Major villages had semi-subterranean dance houses with post and beam construction.

Villages in the foothills were located on ridges and on flats along streams. Houses were conical and covered with brush bark and skins. Most villages had bedrock milling stations. Other site types included seasonal camps, quarries, ceremonial grounds, fishing stations, trading sites, and cemeteries. Some people lived away from the main village.

The dead were cremated along with their property, their houses moved or destroyed, and the cremated bones and ashes buried in the cemetery of their birth village.

Acorns were an important part of the Nisenan diet. Large groups left the villages in the fall to gather acorns. While the women and children collected the acorns, the men hunted. Stored in granaries in the village, acorns were shelled, ground in a bedrock mortar, leached with water, and cooked by means of stone-boiling in watertight baskets. Other plant foods were roots, seeds, and berries. Deer, antelope, and rabbits were hunted by groups using drives. Rabbits were also trapped and snared. Rivers provided salmon, sturgeon, eels, and freshwater clams and mussels, and birds and grasshoppers were also captured and eaten.

Historical Background

Although the Spanish had made forays into the Central Valley since about 1769, it was not until 1808 that Captain Gabriel Moraga explored and named the Sacramento area. The Spanish took little interest in the area and did not establish any missions or settlements in the Central Valley. When Mexico gained its independence from Spain in 1821, California became a remote northern province of Mexico. In 1827, American trapper Jedediah Smith traveled along the Sacramento River and into the San Joaquin Valley to meet other trappers of his company who were camped there, but no permanent settlements were established by the fur trappers.

John Sutter, a European immigrant, built a fort at the confluence of the Sacramento and American Rivers in 1839 and petitioned the Mexican governor of Alta (Upper) California for a land grant, which he received in 1841. Sutter built a flour mill and grew wheat near the fort. Gold was discovered in the flume of Sutter's lumber mill at Coloma on the South Fork of the American River in January 1848. That same year Mexico ceded Alta California to the United States, and in 1850 California became a state.

The influx of gold rush emigrants into the state prompted the development of camps and towns in the Sierra Nevada foothills. In the project vicinity, Clarksville was one such community. Located approximately 4 miles west of the project area, Clarksville was originally known as Clarkson's Village. When a post office was established there in 1855, the name was changed to Clarksville. Early settlers in Clarksville included the Tong family, who operated a hotel and restaurant known as Railroad House beginning in 1855. By 1866, Clarksville had a population of several hundred, and the surrounding area had been settled by ranchers and dairy farmers.

During the gold rush, the current project area was extensively placer mined. Prospectors dug ditches and canals to divert water from nearby streams or rivers to the dry diggings to facilitate the extraction of gold. Hundreds of these water conveyance systems were constructed throughout the Sierra Nevada foothills, including some portions of the current project area in Marble Valley.

Marble Valley received its name from the deposits of marble discovered in the area. Initially, the marble was presumed to be of high quality, but it was soon discovered to be of poor grade and unmarketable for construction purposes because it crumbled easily.

Marble Valley did, however, contain large amounts of high-quality limestone. This sedimentary calcium rock was burned in either a pot kiln or a continuous kiln to release the inherent carbon dioxide in order to produce the highly marketable calcium oxide dust commonly known as lime. When mixed with water, lime hardens to form a plaster coating for walls or mortar to bond bricks. The extensive reserves in Marble Valley attracted a number of companies and individual miners into the area. The first limestone quarry in Marble Valley appears to have been established in 1852 by the El Dorado Lime and Marble Company. Other early small-scale lime businesses in the current project area were operated by individual owners, including Dr. Merriam, Eben Bennett, Patrick Bannon, H. T. Holmes, and Francis Schwalm.

The most intensive and continuous limestone production operation in Marble Valley was established in the project area by Henry Cowell. Originally from Wrentham, Massachusetts, Cowell moved to California in 1850. He settled in San Francisco and became involved in the lime business through the partnership of Isaac E. Davis and Albion P. Jordan. Cowell later purchased Jordan's half of the business for approximately $100,000. In 1887, under the business name of Davis and Cowell, the new partners began extracting limestone and producing lime in Marble Valley. The following

year Davis passed away, and by 1889 Cowell had purchased Davis's interests in the company. On December 21, 1889, Cowell brought his family into the business and incorporated the firm under the new name of the Henry Cowell Lime and Cement Company. The company had operations in Santa Cruz, Marble Valley, Cave Valley, and San Juan Island, with an aggregate capacity of 300,000 barrels of lime per year. Although Henry Cowell died in 1903, his son Ernest Victor Cowell continued to manage the company's lime operations in Marble Valley. During the busy summer months, Ernest hired eight to twenty workers, mostly Chinese, to burn limestone in the kiln. The Marble Valley facility remained under Ernest's management until his death in 1911. After his death, the estate was divided among his surviving siblings. In 1918, the Cowell family closed the Marble Valley quarry and kiln after it became too expensive to burn lime at the facility. Thereafter, the Cowell family leased the property to the company's former manager at Marble Valley, Fred Dixon, who used it for ranching activities until around 1930. Since 1956, the Cowell Foundation has owned the property. In 2001, the property was sold to the Marble Valley Company, LLC.

Approximately 0.25 mile north of the Cowell facility in the current project area is another quarry that is identified in the 1989 EBASCO site assessment report as the North Marble Valley Quarry.[1] Limestone mining activities began at this open pit quarry at some point after the closure of the Cowell facility in 1918. The northern quarry operated intermittently for a number of years under various owners and lease holders, including the Kelly Moore Paint Company (1966–1970), the El Dorado Limestone Company (1971–1985), and Amstar (1986 to at least 1989). The leased area of the North Marble Valley Quarry was approximately 200 acres. Numerous mining facilities were constructed on the 200-acre site from the early to mid-1960s. These resources, however, are no longer extant. Using more efficient crushers, the El Dorado Limestone Company increased the mining of limestone ore sharply beginning in 1979, from approximately 7,201 tons per year to 345,714 tons per year. In 1986, Amstar made further improvements to the facility when it constructed a connection road between the Marble Valley area and the El Dorado Limestone mine site to allow more direct transport of larger-sized limestone ore.

Existing Cultural Resources

Efforts to locate cultural resources consisted of conducting records searches, consulting with NAHC and Native American representatives, and conducting archaeological surveys and studies. No pedestrian surveys were conducted for the offsite improvement areas because the exact locations of improvements have not yet been established and property access was not obtained. A sensitivity analysis was conducted for the offsite improvement areas (ECORP Consulting 2013a) and for areas for General Plan Policy TC-Xf traffic improvements that were not covered by previous analysis. Locations for traffic mitigation measures covered by other studies are primarily those south of U.S. Highway (US) 50 associated with interchanges or intersections that are co-located with offsite improvements, specifically improvements to the Marble Valley Parkway/Marble Mountain Road and Marble Valley Parkway/Marble Ridge Road intersections, and improvements to Bass Lake Road between Hollow Oak Drive and County Club Drive. Several traffic improvement locations are so developed, and the improvements of such a nature, that impacts on cultural resources would be extremely unlikely. These include the improvements to the El Dorado Hills Boulevard/Park Drive/Saratoga Way intersection and improvements to the Latrobe Road/Town Center Boulevard intersection. The remaining traffic improvement locations were addressed in the 2016 constraints study.

[1] This is also referred to as the North Quarry pit and as Marble Lake.

Records Search

In April 2012, ECORP conducted a records search at the North Central Information Center (NCIC), the repository of the California Historical Resources Information System responsible for the project area, for the project area and a 0.5-mile radius around the project area. In October 2013, ECORP conducted an additional record search at the NCIC for the four proposed offsite improvement areas associated with the proposed project. Additionally, in October 2016, ICF conducted an additional records search at NCIC for the traffic improvement locations not covered by previous records searches. These records searches covered these proposed offsite and traffic improvement areas and all areas within 0.5 mile of the offsite improvement areas. The purpose of the records searches was to determine the extent of previous cultural resources studies and locations of previously recorded cultural resources within the search area.

Native American Consultation

To comply with SB 18 and Section 106 of the NHPA, consultation with Native Americans regarding the project has been ongoing since 2012. On April 30, 2012, ECORP submitted a request to NAHC for a list of potentially interested Native American representatives and a Sacred Lands File records search for the project area, receiving the results on May 3, 2012. The NAHC reply stated that the Sacred Lands File had no record of any Native American cultural resources within or adjacent to the project area. Contact information for seven Native American representatives and organizations that may be able to provide information about unrecorded Native American resources within the project area and in its vicinity was also provided at that time. On May 7, 2012, ECORP sent letters to all contacts provided, requesting information on possible unrecorded Native American resources in or near the project area, and also inquiring as to whether or not they have any concerns regarding sacred sites or traditional cultural properties in or near the project area.

ECORP received a letter dated May 16, 2012, from the United Auburn Indian Community (UAIC) of the Auburn Rancheria Chairman David Keyser. He requested reports from previous cultural resources studies that have been conducted in the project area, additional details on potential project impacts and proposed mitigations measures related to cultural resources, and the opportunity to provide Native American monitors for the field survey. Also, on May 16, 2012, ECORP received a letter with the same requests from UAIC Tribal Preservation Committee member Marcos Guerrero. ECORP forwarded both letters to USACE, the federal lead agency, for follow-up consultation.

On May 25, 2012, ECORP telephoned all contacts received from the NAHC for which a phone number was provided, except for the UAIC representative who had already responded to ECORP's initial letter, to ensure that they had received the letter and to elicit any comments or concerns. ECORP left messages with all of these contacts. On May 29, 2012 ECORP telephoned these same contacts, speaking with the receptionist for three Shingle Springs Band of Miwok Indians contacts, who stated that ECORP's initial letter had been forwarded to Shingle Springs Band of Miwok Indians Cultural Resources Director Daniel Fonseca for review and that he would contact ECORP with any questions or comments. Also on May 29, 2012, ECORP spoke by telephone with Native American contact April Wallace Moore, who confirmed that she had received ECORP's initial letter and would like more time to review it. During the May 29, 2012, ECORP telephone calls, the phone number for T'si-Akim Maidu contact Eileen Moon was found to be disconnected. After the May 29, 2012, telephone calls, ECORP received a letter dated May 14, 2012 from Mr. Fonseca. He requested information on records searches and previous cultural resources studies that have covered the project area, as well as

formal consultation regarding the project. See Appendix G for documentation of consultation with Native Americans under SB 18 and Section 106 of the NHPA.

Fieldwork

In June and July 2012, ECORP conducted a cultural resources pedestrian survey of the project area using parallel 15-meter transects. Surface visibility averaged approximately 15%, and approximately 5% of the project area was inaccessible due to extremely dense vegetation. Any cultural resource that contained at least three artifacts in a 10-square-meter area or consisted of one or more features was recorded as a site.

During the survey, to minimize vandalism to site CA-ELD-705H (Cowell Lime Quarry and Lime Kiln; P-09-793), ECORP conducted emergency data collection and stabilization. Feature D, one locus of CA-ELD-705H, is composed of a rectangular limestone masonry structure and a masonry kiln with iron chimney stack and was, in particular, prone to vandalism. These efforts consisted of preparing an updated plan view map of the surface of Feature D (photographing of the feature, and global positioning system [GPS] documentation of the feature). ECORP then collected all visible, portable artifacts thought to be in jeopardy of vandalism and unauthorized collection. In consultation with USACE, all visible surface historic-era artifacts were systematically collected and cataloged and are being temporarily curated, pending the Section 106 NHPA consultation.

In 2013, ECORP conducted test excavations and additional archival research in order to evaluate the 26 cultural resources identified during ECORP's 2012 survey for NRHP and CRHR eligibility. When boundaries were not fully understood, 40-centimeter-diameter shovel probes were excavated at 10-meter intervals in a pattern consistent with the cardinal directions.

The exact location of offsite improvements is not known because the specific alignments have not yet been determined or designed. Therefore, property access has not been obtained and the offsite improvement areas have not been surveyed for cultural resources as part of this project, though records searches have been conducted. Studies will be required prior to development and may require further CEQA review if new or worsened impacts would result.

Because of the uncertainty of the timing for the traffic improvements, no field studies have been conducted. Some of these traffic improvements would not be implemented for many years, and studies conducted at this time may not be adequate. Some of the improvements were conceptual at the time of analysis and specific alignments had not been determined. Therefore, property access has not been obtained, and the analysis of these areas is based on information from the records searches. Studies will be required prior to development and may require further CEQA review if new or worsened impacts would result.

Findings

For brevity, all in-text references to resources will hereafter use only the P number (e.g., P-09-793). Table 3.4-1 includes additional information about the resources.

No individually eligible built environment resources were identified within the project area as a result of the field surveys conducted in 2012 and 2013. ECORP conducted both archaeological and architectural evaluations for two resources (P-09-793 and the Marble Valley Historic Limestone Mining District [MVHLMD]). These resources contain remnants of buildings and structures and are considered archaeological resources for the purposes of this document.

During the 2013 NCIC records search for the offsite improvement areas, one previously recorded built environment resource (P-09-3381) was identified as being located within an offsite area. This resource is a historic-period metal shed. It is unknown whether the resource has been evaluated for NRHP or CRHR eligibility.

During the 2012 and 2013 archaeological studies for the project, ECORP relocated all 21 previously identified resources in the project area, as returned from the NCIC records search, and identified 85 additional resources in the project area, for a total of 106 cultural resources. These consist of 100 sites, including two districts and six isolated artifacts. The districts include the historic-period MVHLMD (composed of two contributing elements) and the Marble Valley Archaeological District (MVAD) (composed of 11 contributing elements). Both districts are NRHP- and CRHR-eligible, by definition, with the MVHLMD composed of two resources individually eligible for the NRHP and CRHR, and the MVAD composed of one resource individually eligible for the NRHP or CRHR (habitation and burial site P-09-786) and 10 resources not individually eligible for the NRHP or CRHR. Of those resources in the project area that are not a district or a contributing element to a district, 3 are NRHP- and CRHR-eligible, and 89 (83 sites, 6 isolates) are not eligible for the NRHP or CRHR (Table 3.4-1). None of the archaeological resources within the project area meets the requirements for a unique archaeological resource under PRC Section 21083.2.

Table 3.4-1. Known Cultural Resources Sites in the Onsite VMVSP Area

Site Number	Description	Individually Eligible for NRHP/ CRHR	Contributing Element to District	Proposed Project Land Use Designation	Direct Impact?
Marble Valley Historic Limestone Mining District—Historic					
P-09-793 (CA-ELD-705H; MV-11)	Cowell Limestone Quarry and Lime Kiln Complex	Yes	Yes	AT/VC/VP/ VRM	Yes
P-09-797 (CA-ELD-709H; MV-17)	Collapsed fireplace	Yes	Yes	OS	No
Marble Valley Archaeological District—Native American					
P-09-167 (CA-ELD-79; MV-12 & 15)	Bedrock mortar stations	No	Yes	AT/VC/VP	Yes
P-09-786 (CA-ELD-698; MV-4)	Habitation/ burial site	Yes	Yes	OS	No
P-09-787 (CA-ELD-699; MV-5)	Bedrock mortar station	No	Yes	OS	No
P-09-789 (CA-ELD-701; MV-7)	Bedrock mortar stations	No	Yes	OS	No
P-09-790 (CA-ELD-702; MV-8)	Bedrock mortar station	No	Yes	OS	No
P-09-791 (CA-ELD-703; MV-9)	Bedrock mortar station	No	Yes	OS	No
P-09-794 (CA-ELD-706; MV-13)	Lithic scatter	No	Yes	VC	Yes
P-09-795 (CA-ELD-707; MV-14)	Bedrock mortar station	No	Yes	VC	Yes
P-09-5572 (EC-12-261)	Lithic scatter	No	Yes	VRM	Yes
P-09-5577 (EC-13-020)	Bedrock mortar stations	No	Yes	AT	Yes
P-09-5589 (EC-12-303)	Bedrock mortar cup	No	Yes	VRM	Yes
Non-District Sites (all historic period)					
P-09-788 (CA-ELD-700H; MV-6)	H.B. Taylor's homestead	Yes	No	OS	No
P-09-982 (EC-12-219)	Rock wall	No	No	OS	No
P-09-792 (EC-12-212)	Marble Creek mining landscape	No	No	OP/OS/VRL	Yes
P-09-796 (CA-ELD-708H; MV-16)	Double pot kiln	Yes	No	VRL	Yes

Site Number	Description	Individually Eligible for NRHP/ CRHR	Contributing Element to District	Proposed Project Land Use Designation	Direct Impact?
P-09-798 (CA-ELD-710H; MV-20)	Pot kiln	No	No	VP	Yes
P-09-1642 (CA-ELD-779; IF-89-1)	Rock wall	No	No	VP	Yes
P-09-1682 (CA-ELD-1268; MV-34)	Mine shafts and cabin site	Yes	No	PS	Yes
P-09-1683 (CA-ELD-1269; MV-35)	Historical road grade	No	No	OS/PS	Yes
P-09-5560 (EC-12-200)	Pits and berms	No	No	OS	No
P-09-5564 (MV-26)	Hearth	No	No	OS	No
P-09-5565 (EC-12-209)	Prospecting pit	No	No	OS	No
P-09-5566 (EC-12-211)	Hearth	No	No	OS	No
P-09-5567 (EC-12-213)	Prospecting pit	No	No	OS	No
P-09-5569 (EC-12-206)	Rock wall	No	No	OS	No
P-09-5571 (EC-12-243)	Limestone prospecting area	No	No	VRL	Yes
P-09-5573 (MV-33)	Prospecting pit	No	No	VP	Yes
P-09-5574 (MV-27)	Foundation remnant	No	No	OS	No
P-09-5575 (MV-23)	Rock wall	No	No	OS/VRL	Yes
P-09-5576 (MV-22)	Rock wall	No	No	VRL	Yes
P-09-5578 (EC-12-315)	Diversion ditch	No	No	VRL	Yes
P-09-5579 (EC-12-314)	Prospecting pit	No	No	OP	Yes
P-09-5581 (EC-12-312)	Prospecting pits	No	No	OP	Yes
P-09-5582 (EC-12-311)	Ditch segment	No	No	OS	No
P-09-5583 (EC-12-310)	Prospecting pits	No	No	OS	No
P-09-5584 (EC-12-309)	Trench	No	No	OS	No
P-09-5585 (EC-12-308)	Dam	No	No	OS	No
P-09-5586 (EC-12-307)	Ravine diggings	No	No	OS	No
P-09-5587 (EC-12-305)	Ditch	No	No	OS/PS/VP	Yes
P-09-5590 (EC-12-300)	Rock piles	No	No	OS/VRM	Yes
P-09-5591 (EC-12-299)	Historical road grade	No	No	VRL	Yes
P-09-5592 (EC-12-298)	Trench or pit	No	No	VRL	Yes
P-09-5593 (EC-12-297)	Berm and marker	No	No	VC	Yes
P-09-5594 (EC-12-296)	Rock pile	No	No	VC	Yes
P-09-5595 (EC-12-294)	Berm and trench	No	No	VRL	Yes
P-09-5596 (EC-12-293)	Prospecting pit	No	No	VRL	Yes
P-09-5597 (EC-13-006)	Hearth	No	No	OS	No
P-09-5598 (EC-12-292)	Prospecting pit	No	No	VRL	Yes
P-09-5599 (EC-12-291)	Earthen dam	No	No	VRL	Yes
P-09-5600 (EC-12-290)	Prospecting pit	No	No	VRL	Yes
P-09-5601 (EC-12-252)	Ditch	No	No	VRM	Yes
P-09-5602 (EC-12-250)	Prospecting pits	No	No	OS/VRM	Yes
P-09-5603 (EC-12-249)	Rock wall	No	No	OS	No

Site Number	Description	Individually Eligible for NRHP/ CRHR	Contributing Element to District	Proposed Project Land Use Designation	Direct Impact?
P-09-5604 (EC-12-248)	Trench/ditch	No	No	VRM	
P-09-5606 (EC-12-242)	Prospecting pits and cobble tailings	No	No	OS	No
P-09-5607 (EC-12-241)	Hilltop prospecting pit	No	No	OS	No
P-09-5609 (EC-12-236)	Potentially modified natural spring	No	No	VRL	Yes
P-09-5610 (EC-12-235)	Prospecting pits	No	No	OS	No
P-09-5612 (EC-12-233)	Earthen dam and reservoir	No	No	OS	No
P-09-5613 (EC-12-232)	Prospecting pit	No	No	VRL	Yes
P-09-5614 (EC-12-230)	Earthen dam	No	No	OS	No
P-09-5615 (EC-12-229)	Trench	No	No	OS	No
P-09-5616 (EC-12-228)	Prospecting pit	No	No	OS	No
P-09-5617 (EC-12-227)	Prospecting pits	No	No	OS	No
P-09-5618 (EC-12-226)	Prospecting pit	No	No	OS	No
P-09-5619 (EC-12-225)	Earthen berm	No	No	VRL	Yes
P-09-5620 (EC-12-224)	Prospecting pit	No	No	OS	No
P-09-5621 (EC-12-223)	Ditch	No	No	OS/VRL	Yes
P-09-5622 (EC-12-222)	Ditch	No	No	OS	No
P-09-5623 (EC-12-221)	Prospecting pit	No	No	OS	No
P-09-5624 (EC-12-289)	Dam	No	No	VRL	Yes
P-09-5625 (EC-12-288)	Pit and trench	No	No	VRL	Yes
P-09-5626 (EC-12-208)	Historical road grade	No	No	OS/VRL	Yes
P-09-5628 (EC-12-214)	Rock wall	No	No	OS	No
P-09-5629 (EC-12-218)	Prospecting pit	No	No	OS	No
P-09-5630 (EC-12-217)	Pit	No	No	OS	No
P-09-5631 (EC-12-287)	Prospecting pit	No	No	OS	No
P-09-5632 (EC-12-286)	Prospecting pits	No	No	OS	No
P-09-5633 (EC-12-285)	Rock wall	No	No	VRL	Yes
P-09-5635 (EC-12-265)	Limestone quarry fill	No	No	AT/VC/VP/ VRH/VRM	Yes
P-09-5636 (EC-12-264)	Rock wall	No	No	VRL	Yes
P-09-5637 (EC-12-262)	Pit	No	No	VRM	Yes
P-09-5638 (EC-12-260)	Prospecting pit	No	No	VRM	Yes
P-09-5639 (EC-12-259)	Earth dam	No	No	VRM	Yes
P-09-5640 (EC-12-258)	Prospecting pit	No	No	VRM	Yes
P-09-5641 (EC-12-257)	Prospecting pits	No	No	VRM	Yes
P-09-5642 (EC-12-256)	Prospecting pit	No	No	OS	No
P-09-5643 (EC-12-254)	Prospecting pits	No	No	OS	No
P-09-5644 (EC-12-220)	Hearth	No	No	OS	No

Site Number	Description	Individually Eligible for NRHP/ CRHR	Contributing Element to District	Proposed Project Land Use Designation	Direct Impact?
P-09-5645 (EC-12-282 and EC-12-283)	Rock wall	No	No	OP	Yes
P-09-5646 (EC-12-281)	Limestone quarry	No	No	VRL	Yes
P-09-5647 (EC-12-280)	Ditch segment	No	No	VRH	Yes
P-09-5648 (EC-12-279)	Berm	No	No	VRH	Yes
P-09-5649 (EC-12-275)	Ravine diggings	No	No	OS/VRL	Yes
P-09-5650 (EC-12-273)	Prospecting pits	No	No	VRL	Yes
P-09-5651 (EC-12-272)	Rock wall	No	No	PU	Yes
P-09-5652 (EC-12-271)	Mine shaft	No	No	PS	Yes
P-09-5653 (EC-12-270)	Hilltop pit	No	No	PS	Yes
Isolates (all historic period)					
P-09-5562 (EC-12-202)	Iron penstock pipes	No	No	OS	No
P-09-5580 (EC-12-313)	Pipe segment	No	No	OS	No
P-09-5588 (EC-12-304)	Aircraft fuselage	No	No	VP	Yes
P-09-5605 (EC-12-247)	Wagon parts	No	No	VRM	Yes
P-09-5611 (EC-12-234)	Gas can isolate	No	No	VRL	Yes
P-09-5634 (EC-12-284)	Trailer isolate	No	No	OS	No

AT = Agriculture Tourism
OS = Open Space
OP = Office Park
PS = Public School
PU = Public Utilities
VC = Village Commercial
VP = Village Park
VRL = Village Residential, Low
VRM = Village Residential, Medium
VRH = Village Residential, High

The NCIC records search showed that seven archaeological resources (and one metal shed addressed in the built environment discussion above) are located within the proposed offsite improvement areas. Of these, three are historic-period sites, two are Native American sites, one is both a historic-period and a Native American site, and one is the Lime Rock Valley Historic District (LRVHD), a historic-period district. The historic-period sites consist of wagon remnants, prospecting pits, and placer mining ditches. The Native American resources consist of a site with bedrock milling features and a lithic scatter site. The site with both a historic-period and Native American component consists of a ranch complex and bedrock milling features. The LRVHD is a historic-period district related to mining operations, consisting of structures and archaeological deposits. Of all these resources, none have been evaluated for NRHP eligibility, and only the LRVHD and P-09-1950 have been evaluated for CRHR eligibility. Patrick and Supernowicz (2014) recommended the LRVHD eligible for listing in the CRHR under Criteria 1, 3, and 4, and recommended P-09-1950 as not eligible for the CRHR (Table 3.4-2).

Table 3.4-2. Known Cultural Resources in the Offsite Improvement Areas

Site Number	Description	Individually Eligible for NRHP/CRHR	Contributing Element to District	Proposed Project Land Use Designation
P-09-75	Historic wagon remnants	Unknown	No	Infrastructure
P-09-867 (CA-ELD-779H)	Two historic prospect pits	Unknown	No	Infrastructure
P-09-869 (CA-ELD-781)	Bedrock milling stations	Unknown	No	Infrastructure
P-09-871 (CA-ELD-783/H)	Mortar cups/historic ranch complex	Unknown	No	Infrastructure
P-09-1684 (CA-ELD-1270)	Historic placer mining ditch	Unknown	No	Infrastructure
P-09-1950 (CA-ELD-1716)	Lithic scatter	CRHR-ineligible; NRHP-unevaluated	No	Infrastructure
P-09-3381	Historic metal shed	Unknown	No	Infrastructure
P-09-5550	Lime Rock Valley Historic District	(As district) CRHR-eligible; NRHP-unevaluated	NA	Infrastructure

ECORP's 2013 constraints analysis for the offsite improvement areas determined that the offsite improvement areas had the following sensitivity for cultural resources (Figure 3.4-1).

- Marble Valley Parkway—high.
- Northeast portion and southern portion of the El Dorado Irrigation District (EID) wastewater/water lines and Foundation Open Space access—high.
- Creek crossing and Foundation Open Space access and staging area—high.
- Northern, eastern, and center of the EID wastewater/water lines and Foundation Open Space access—moderate.
- Marble Valley Parkway extension to Cambridge Road interchange access road—low.
- Marble Valley Parkway extension to Bass Lake Road interchange—low.

The 2016 NCIC records search showed that five historic-period archaeological resources are located within the General Plan Policy TC-Xf traffic improvement areas (Table 3.4-3). One of these resources, the Sacramento-Placerville Road, includes segments that have been recommended eligible for listing in state and federal registers, and that are contributing elements to the Mormon Hill Historic District, which is located between El Dorado Hills Boulevard and Bass Lake Road.

Table 3.4-3. Known Cultural Resources in the Traffic Improvement Areas

Site Number	Description	Individually Eligible for NRHP/CRHR	Contributing Element to District	Proposed Project Land Use Designation
P-09-58 (CA-ELD-1233H)	Historic rock wall	Unknown	No	Infrastructure
P-09-60	Historic rock wall	Unknown	No	Infrastructure
P-09-61	Historic rock wall	Unknown	No	Infrastructure
P-09-809 (CA-ELD-721H)	Historic Sacramento-Placerville Road, Mormon Hill Road, Lincoln Highway	Unknown (some segments eligible)	Possibly Mormon Hill Historic District	Infrastructure
P-09-1695 (CA-ELD-1278H)	Historic Bass Lake Road	Unknown	No	Infrastructure

Based on the presence of known cultural resources, previous studies, landforms, and level of existing disturbance, ICF's 2016 constraints analysis for the General Plan Policy TC-Xf traffic improvements areas determined that the traffic improvement areas have the following sensitivity for cultural resources.

- Bass Lake Road and US 50/Bass Lake Road interchange—moderate
- US 50/Cambridge Road Interchange and the intersections of Cambridge Road with Knollwood Drive and Country Club Drive—low

3.4.2 Environmental Impacts

Methods of Analysis

This Draft EIR analyzes whether the project would have the potential to adversely affect existing cultural resources. The identified resources within the plan area have been examined for their significance and the potential for the development under the proposed project to result in impacts on that significance. Neither offsite improvement areas nor the 466-acre open space area was surveyed for cultural resources. Assessment of effects in the offsite improvement areas are based on the potential of the improvements to affect cultural resources that may be present.

CEQA requires an assessment of a project's potential effects on significant historical resources (i.e., those that are listed or eligible for listing in the CRHR or in a local register or survey that meets the requirements of PRC Sections 5020.1(k) and 5024.1(g)). This assessment entails the following steps.

- Identify potential historical resources.
- Evaluate the significance of identified historical resources.
- Evaluate the anticipated effects of a project on all significant historical resources.

Under CEQA, only effects on significant resources are considered potentially significant, so only those impacts require detailed analysis.

Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the proposed project would be considered to have a significant effect if it would result in any of the conditions listed below.

- Cause a substantial adverse change in the significance of an archaeological resource that is a historical resource as defined in Section 15064.5.
- Cause a substantial adverse change in the significance of a built environment resource that is a historical resource pursuant to Section 15064.5.
- Disturb any human remains, including those interred outside of formal cemeteries.

Impacts and Mitigation Measures

Impact CUL-1: Cause a substantial adverse change in the significance of an archaeological resource that is a historical resource as defined in Section 15064.5 (less than significant with mitigation)

Within the project area there are 2 archaeological districts recommended NRHP- and CRHR-eligible (MVAD and MVHLMD), 3 archaeological resources recommended NRHP- and CRHR-eligible as individual resources and as contributing elements to a district (P-09-786 [MVAD]; P-09-793 [MVHLMD]; P-09-797 [MVHLMD]), 3 archaeological resources recommended only individually NRHP- and CRHR-eligible (P-09-796; P-09-788; P-09-1682), and 10 archaeological resources recommended not individually NRHP- or CRHR-eligible but eligible as contributing elements to the MVAD (P-09-167; P-09-787; P-09-789; P-09-790; P-09-791; P-09-794; P-09-795; P-09-5572; P-09-5589; P-09-5577) (Table 3.4-1).

The MVAD is partially located in portions of the project area that would be designated Open Space (OS). Other designations would be Agriculture Tourism (AT), Village Commercial (VC), Village Park (VP), Village Residential – Low (VRL), and Village Residential – Medium (VRM). The MVAD consists of 11 contributing elements, 1 of which (P-09-786) is also recommended individually eligible. Six of these resources are in areas designated for development and would be directly affected by construction of the project. Five of these resources (approximately 45% of the contributing elements) are in areas that would be designated OS and would not be directly affected by the construction of the project. However, these five resources could be indirectly affected by operation of the project in that people would be introduced to the area and may disturb or destroy the resource. These are both significant impacts on contributing elements of an archaeological district. Preservation in place of these four elements will not be possible because of local topography, constraints for road construction, and impacts on oak canopy. Implementation of Mitigation Measure CUL-1a would ensure the appropriate treatment of the resource and would reduce these impacts to a less-than-significant level.

The MVHLMD is partially located in portions of the project area that would be designated OS. Other designations would be AT, VC, VP, and VRM. Two resources make up the MVHLMD (P-09-793 and P-09-797, both also recommended individually eligible). P-09-793 is located in an area that would be designated for development and would be directly affected by construction of the project. P-09-797 is located in an area that would be designated OS and would not be directly affected by the project. However, the resource could be indirectly affected by operation of the project in that people would be introduced to the area and may disturb or destroy the resource. These are both significant impacts on contributing elements of an archaeological district. Preservation in place of P-09-793

will not be possible because of local topography, constraints for road construction, and impacts on oak canopy. The VMVSP proposes to develop part of this district as a historic park, and VMVSP Policies 5.12 and 5.13 commit to minimizing disturbance to the resources and encouraging restoration of the facilities. In addition to these policies, implementation of Mitigation Measure CUL-1b would reduce these impacts to a less-than-significant level.

Regardless of individual eligibility for listing on the CRHR or NRHP, all contributing elements to the MVAD and the MVHLMD will be preserved in OS whenever feasible to preserve the integrity of the district. Should this not be feasible, implementation of Mitigation Measures CUL-1a or CUL-1b to mitigate impacts on the respective districts would reduce this impact to a less-than-significant level by including avoidance measures to implement prior to construction.

Six archaeological resources that are recommended eligible for listing in the CRHR and NRHP, and which are therefore historical resources under CEQA, are located within the project area. Three of these resources are also contributing elements to archaeological districts (P-09-793 and P-09-797 contribute to MVHLMD; P-09-786 contributes to MVAD) and have been addressed above. The other three resources are individually eligible historic-period archaeological sites (P-09-788, P-09-796, P-09-1682). P-09-796 and P-09-1682 are in areas that would be designated for development and would be directly affected by the construction of the project. P-09-788 is in an area that would be designated OS and would not be directly affected. However, P-09-788 could be indirectly affected by operation of the project in that people would be introduced to the area and may disturb or destroy the resource. These are significant impacts on historical resources. During final design, if feasible, P-09-788, P-09-796, and P-09-1682 will be maintained in OS and impacts will be avoided through project design. If avoidance is not feasible, implementation of Mitigation Measure CUL-1c would reduce these impacts to a less-than-significant level.

Additionally, there is always the possibility that buried resources with no surface components are located within the project area. Construction of the project could result in impacts on buried cultural resources. If those resources are eligible for listing in the CRHR or the NRHP, disturbance or destruction would be a significant impact. Implementation of Mitigation Measures CUL-1d and/or CUL-1e would reduce this impact to a less-than-significant level.

Mitigation Measure CUL-1a: Avoid impacts on the Marble Valley Archaeological District where possible and implement appropriate treatment where avoidance is not possible

The following measures to avoid and mitigate impacts shall be implemented prior to issuance of grading permits and shall be incorporated into the construction plans and specifications.

Avoidance measures:

- The portion of the existing gravel road that passes through the capped burial site P-09-786 will be covered with 2 feet of soil and reseeded.
- Prior to construction within 500 feet of P-09-786, a scraper shall remove the top 5 centimeters of soil of any area proposed for ground-disturbing activities, which is to be monitored by a qualified professional archaeologist and tribal monitor.
- As a Native American burial site, P-09-786 shall be maintained as an area designated open space and placed into a conservation easement.
- Protect contributing elements of the MVAD from vandalism due to the increase in people in the vicinity by discouraging foot traffic in the area. Methods to achieve this goal could

include using fencing or walls or landscaping using native plants such as blackberries or poison oak to redirect foot traffic away from sensitive areas.

To mitigate potential impacts the project applicant shall retain a qualified archaeologist to develop a historic properties treatment plan (HPTP) that meets the requirements of Section 106 of the NHPA. The HPTP shall stipulate specifications for treatment of adversely affected resources. Measures may include the following.

- Conduct an oral history of the MVAD and prepare a report documenting the history of the site.
- Recover data through excavation to address pertinent research issues. Excavation methods, locations, and volumes and the disposition of any artifacts recovered will be determined prior to excavation.
- Install interpretive displays or panels along newly constructed trail routes or in appropriate public areas to educate the public about the Native American history of the area.

The HPTP shall be approved by the County as satisfying the requirement of mitigation prior to issuance of the first grading permit for development in the MVAD.

Mitigation Measure CUL-1b: Avoid impacts on the Marble Valley Historic Limestone Mining District where possible and implement appropriate treatment where avoidance is not possible

The following measures to avoid and mitigate impacts shall be implemented prior issuance of grading permits and shall be incorporated into the tentative map.

Avoidance measures:

- Avoid impacts on contributing elements adjacent to construction activities using avoidance fencing.
- Protect contributing elements of the MVHLMD from vandalism due to the increase in people in the vicinity by discouraging foot traffic in the area. Methods to achieve this goal could include using fencing or walls or landscaping using native plants such as blackberries or poison oak to redirect foot traffic away from sensitive areas.
- Maintain a sample of resources associated with the MVHLMD within the proposed S. H. Cowell Historic Park.

To mitigate potential impacts the project applicant shall retain a qualified archaeologist to develop a HPTP that meets the requirements of Section 106 of the NHPA. The HPTP shall stipulate specifications for treatment of adversely affected resources. Measures to be implemented by qualified archaeologists retained by the applicant may include the following.

- Recover data through archival research and oral histories.
- Recover data through excavation to address pertinent research issues. Excavation methods, locations, and volumes and the disposition of any artifacts recovered will be determined prior to excavation.
- Install interpretive displays or panels along newly constructed trail routes or in appropriate public areas to educate the public about the history of limestone mining in the area and about the Cowell family mining operation.

The HPTP shall be approved by the County as satisfying the requirement of mitigation prior to issuance of the first grading permit for development in the MVHLMD.

Mitigation Measure CUL-1c: Avoid impacts on archaeological resources P-09-788, P-09-796, and P-09-1682 where possible and implement appropriate measures where avoidance is not possible

The following measures to avoid and mitigate impacts on archaeological resources shall be implemented prior issuance of grading permits and shall be incorporated into the tentative map.

Potential impacts on P-09-788 from vandalism due to the increase in people in the vicinity shall be avoided by discouraging foot traffic in the area. Methods to achieve this goal could include using fencing or walls or landscaping using native plants such as blackberries or poison oak to redirect foot traffic away from sensitive areas.

To mitigate potential impacts the project applicant shall retain a qualified archaeologist to develop a HPTP that meets the requirements of Section 106 of the NHPA. The HPTP shall stipulate specifications for treatment of adversely affected resources. Measures to be implemented by qualified archaeologists retained by the applicant may include the following.

- Recover data through archival research and oral histories.
- Recover data through excavation to address pertinent research issues. Excavation methods, locations, and volumes and the disposition of any artifacts recovered will be determined prior to excavation.
- Install interpretive displays or panels along newly constructed trail routes or in appropriate public areas to educate the public about the history of settlement and mining in the area.

The HPTP shall be approved by the County as satisfying the requirement of mitigation prior to issuance of the first grading permit for development in the vicinity of these resources.

Mitigation Measure CUL-1d: Perform archaeological construction monitoring during ground-disturbing activities within 100 feet of known cultural resource sites

The project applicant shall retain a qualified archaeologist to conduct construction monitoring during ground-disturbing construction activities within 100 feet of known cultural resource sites. The archaeologist shall observe the ground-disturbing activities to ensure that no cultural material is present or disturbed during those activities. If potential cultural material is observed, all work within 100 feet of the find shall cease and the archaeologist and, if deemed necessary, a Native American representative, shall assess the significance of the find. If the find is determined to be associated with the MVAD, MVHLMD, P-09-788, P-09-796, or P-09-1682, it shall be treated in accordance with the HPTP and retained in open space if feasible. If the find is not associated with one of these resources, Mitigation Measure CUL-1e will be implemented.

Upon completion of the monitoring in sensitive areas, the archaeologist shall prepare a report that describes the results of the monitoring and/or testing, including any measures that may have been implemented for mitigation of impacts on significant archaeological deposits identified during monitoring. The report shall be submitted to the El Dorado County Planning Division and the NCIC.

Mitigation Measure CUL-1e: Stop work in the event of discovery of previously unknown cultural resources

If at any point during construction cultural resources, artifacts, midden, or any concentration of chipped or ground stone are encountered, construction shall stop within 100 feet of the find until the find is assessed by a qualified archaeologist. The archaeologist shall determine if the resource is associated with the MVAD, MVHLMD, P-09-788, P-09-796, or P-09-1682, in which case the HPTP shall apply. If the resource is not associated with one of the above-mentioned resources, it shall be evaluated for listing in the CRHR or NRHP or to determine whether it qualifies as a unique archaeological resource under CEQA. If the deposits are neither a historical nor unique archaeological resource, avoidance and mitigation is not necessary. If the find is determined to be significant and cannot be avoided by project design, mitigation measures shall be developed in consultation with the SHPO, the County (or its authorized technical representative) and other appropriate agencies. Mitigation can include, but is not necessarily limited to, excavation of the deposit in accordance with a data recovery plan (see State CEQA Guidelines 15126.4(b)(3)(C)) and standard archaeological field and laboratory methods and procedures and curation standards.

Upon completion of project construction, the archaeologist shall prepare a report that documents discoveries and their disposition. The report shall include any measures that may have been implemented for mitigation of impacts on significant archaeological deposits identified during project construction. The report shall be submitted to the El Dorado County Planning Division and the NCIC.

Impact CUL-2: Cause a substantial adverse change in the significance of a built environment resource that is a historical resource pursuant to Section 15064.5 (no impact)

There are no built environment resources that are historical resources located in the project area. Therefore, there would be no impact.

Impact CUL-3: Disturb any human remains, including those interred outside of formal cemeteries (less than significant with mitigation)

Human remains are known to be located at site P-09-786 (within the MVAD), though the resource would be preserved in an OS area. Though no direct impacts, which would be significant, are anticipated on P-09-786, any impacts would be reduced to a less-than-significant level by implementing Mitigation Measures CUL-1a and CUL-1c. The possibility always exists that unmarked burials may be unearthed during project construction throughout the project area. Impacts would be significant but would be reduced to a less-than-significant level by implementing Mitigation Measure CUL-3.

Mitigation Measure CUL-1a: Avoid impacts on the Marble Valley Archaeological District where possible and recover data where avoidance is not possible

Mitigation Measure CUL-1c: Avoid impacts on archaeological resources P-09-788, P-09-796, and P-09-1682 where possible and recover data where avoidance is not possible

Mitigation Measure CUL-3: Perform construction monitoring during ground-disturbing activities and stop work if human remains are encountered

The project applicant shall retain a qualified archaeologist to conduct construction monitoring during ground-disturbing construction activities within 100 feet of the boundaries of a known cultural resources site. The archaeologist shall observe the ground-disturbing activities to ensure that no human remains are present or disturbed during those activities. During any project excavation, regardless of the presence of an archaeological monitor, if human remains (or remains that are suspected to be human) are discovered, all work shall cease in the vicinity of the find (a minimum of 100 feet) and the El Dorado County coroner shall be notified immediately. If the coroner determines the remains to be Native American in origin, the coroner shall be responsible for notifying NAHC, which shall appoint a MLD (PRC 5097.99). The archaeological consultant, project applicant, County, and MLD shall make all reasonable efforts to develop an agreement for the dignified treatment of human remains and associated or unassociated funerary objects (14 CCR 15064.5(d)). The agreement shall consider the appropriate excavation, removal, recording, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. The MLD shall have 24 hours after notification by NAHC to make their recommendation (PRC 5097.98). If the MLD does not agree to the reburial method, the project shall follow PRC Section 5097.98(b), which states, "The landowner or his or her authorized representative shall reinter the human remains, and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance."

Impact CUL-4: Result in disturbance to or destruction of cultural resources as a result of offsite infrastructure and General Plan Policy TC-Xf traffic improvements (less than significant with mitigation)

As described in Chapter 2, *Project Description*, the proposed project would include offsite improvements, including extension of the new Marble Valley Parkway to the US 50/Cambridge Road interchange; an upgraded connection of Marble Valley Parkway to the US 50/Bass Lake Road interchange; US 50 interchange improvements at Bass Lake and Cambridge Roads; a new section of Marble Valley Parkway between the east and west sides of the northern portion of the proposed project site (Beasley Road); extension of the new Lime Rock Valley Road to Deer Creek Road; water, recycled water (potentially), and wastewater line extensions to connect to existing EID infrastructure; and connection to electricity and natural gas services to be constructed by the Pacific Gas and Electric Company. Approximate locations of these improvements are shown in Figures 2-13 and 2-15 in Chapter 2, and in Figure 3.4-1. The specific locations and design of the offsite improvements are not yet identified, but preliminary research has indicated there are some areas of sensitivity for cultural resources.

Eight previously recorded cultural resources (P-09-75; P-09-867; P-09-869; P-09-871; P-09-1950; P-09-1684; P-09-3381; P-09-5550) are in the proposed offsite improvement areas. The NRHP and CRHR eligibility for resources other than the LRVHD (P-09-5550) is unknown. ECORP's 2013 constraints analysis indicates that the area proposed for the new section of Marble Valley Parkway between the east and west sides of the northern portion of the project area, and portions of the EID wastewater and water line extensions and improvements are highly sensitive for cultural resources. The constraints analysis determined that the remaining portions of the EID wastewater and water line extensions and improvements are moderately sensitive for cultural resources (Table 3.4-2).

Additionally, improvements to address traffic impacts are included in the project description. These include improvements to intersections, interchanges, and road segments in the El Dorado Hills and Cameron Park areas. A number of these improvements would be in the same areas as offsite infrastructure improvements, but there are two areas that are not co-located with offsite improvements. Known cultural resources potentially located within these General Plan Policy TC-Xf traffic improvements areas include two historic-period resources (P-9-809, and P-9-1695).

Construction of offsite infrastructure improvements as well as offsite traffic improvements required under General Plan Policy TC-Xf could result in disturbance to or destruction of known or unknown cultural resources. If those resources were listed in or eligible for listing in the CRHR or the NRHP, this would be a significant impact. Because the LRVHD is recommended eligible for listing in the CRHR, disturbance or destruction of the LRVHD would be a significant impact. Implementation of Mitigation Measures CUL-1d, CUL-1e, and CUL-3 require monitoring during construction and that work stop in the event of discovery of previously unknown cultural resources. Mitigation Measure CUL-4 requires preconstruction surveys of the offsite areas and evaluation and treatment of resources, consistent with the requirements of VMVSP Policy 6.36. These mitigation measures would reduce any impacts on unknown cultural resources in offsite improvement areas to a less-than-significant level. Implementation of Mitigation Measure CUL-4 would also reduce impacts on the LRVHD to a less-than-significant level.

Mitigation Measure CUL-1d: Perform archaeological construction monitoring during ground-disturbing activities within 100 feet of known cultural resource sites

Mitigation Measure CUL-1e: Stop work in the event of discovery of previously unknown cultural resources

Mitigation Measure CUL-3: Perform construction monitoring during ground-disturbing activities and stop work if human remains are encountered

Mitigation Measure CUL-4: Perform cultural resources surveys of the offsite infrastructure and traffic improvement areas and mitigate impacts on any eligible resources in accordance with State CEQA Guidelines Section 15126.4

When the exact locations and specific design of offsite improvements are finalized, the project applicant shall retain a qualified cultural resources management firm to conduct studies to determine whether cultural resources are located within the area that would be affected by the construction and operation of the improvements. These studies shall include, as appropriate, a records search, archival research, contacting NAHC and interested parties, and pedestrian inventories. Recommendations made for avoidance and minimization shall be considered by the County and implemented as required. These measures could include monitoring and presence/absence testing in sensitive areas, or training for construction personnel. Any resources that are located will be evaluated for eligibility for listing in the CRHR or NRHP. If resources found eligible cannot be avoided through project design, mitigation measures will be designed in consultation with the County (or its authorized technical representative), SHPO, and other appropriate agencies or parties. These mitigation measures may include data recovery, site capping, interpretation, or other means. Mitigation can include, but is not necessarily limited to, excavation of the deposit in accordance with a data recovery plan (see State CEQA Guidelines 15126.4(b)(3)(C)) and standard archaeological field and laboratory methods and procedures, and curation standards.

Upon completion of cultural resources studies, the archaeologist shall prepare a report that describes the methods and results of the studies. The report shall be submitted to the El Dorado County Planning Division and the NCIC.

N

Scale in Feet

0 1,500

Map Features

Development Project Boundary

Open Space

Off-Site Infrastructure Impact Cultural Sensitivity

High

Moderate

Low [1]

Source: ECORP Consulting,Inc., 2018.

ICF Graphics... 00667.12 (7-5-2018)

Figure 3.4-1
Offsite Improvements, Cultural Resources Sensitivity

3.5 Geology, Soils, Minerals, and Paleontological Resources

This section identifies existing conditions and discusses the regulatory setting for geology and soils, minerals, and paleontological resources in the Village of Marble Valley Specific Plan (VMVSP; proposed project) area and analyzes the potential for the proposed project to affect these resources. Information presented in the discussion and subsequent analysis was primarily drawn from the following sources, which are available for review at the El Dorado County Planning Division office located at 2850 Fair Lane, Building C, Placerville, CA.

- *Village of Marble Valley Specific Plan, El Dorado Hills, El Dorado County, California, Marble Valley Quarry Development Setbacks* (Youngdahl Consulting Group 2013).
- *Preliminary Geotechnical Engineering Study for Marble Valley, El Dorado Hills, California.* (Youngdahl Consulting Group 2012a).
- *Marble Valley Vineyard Soils, Preliminary Sampling and Testing For Agricultural Suitability* (Youngdahl Consulting Group 2012b).
- *Preliminary Assessment for Naturally Occurring Asbestos for Marble Valley, El Dorado Hills, El Dorado County, California* (Youngdahl Consulting Group 2012c).
- *Marble Valley Contaminated Soil Stockpiles APN 119-020-56, Preliminary Assessment for Total Petroleum Hydrocarbons* (Youngdahl Consulting Group 2012d).
- *Village of Marble Valley Specific Plan, El Dorado Hills, El Dorado County, California, Marble Valley Quarry Risk Assessment* (Youngdahl Consulting Group 2014).
- *Geotechnical Engineering Slope Stability Study of the Marble Valley Development, Bass Lake Road Area, EI Dorado County, California* (Youngdahl & Associates 1994).
- *Preliminary Engineering Geology Report, Marble Valley Property, EI Dorado Hills, California* (Wallace Kuhl & Associates 2000).
- *Preliminary Geologic and Geotechnical Study Marble Valley Development, Bass Lake Road, El Dorado County, California* (Lowry & Associates 1991a).
- *Geotechnical Study, Marble Valley Quarry, Marble Valley Road, El Dorado County, California* (Lowry & Associates 1991b).
- *Preliminary Geologic Investigation, Marble Valley* (Bailey Scientific 1991a).
- *Seismic Refraction Survey, Marble Valley* (Bailey Scientific 1991b).
- *Proposed Marble Valley Development, Hydrogeologic Analysis and Preliminary Geotechnical Report* (EBASCO 1989a).
- *Proposed Marble Valley Development, Addendum (A) Soil Investigation to the Environmental Site Assessment, S. H. Cowell Property at Marble Valley, El Dorado County, California* (EBASCO 1989b).
- Regional geologic maps and fault maps prepared by the California Department of Conservation's California Geological Survey (formerly the Division of Mines and Geology) and the U.S. Geological Survey.

- Soils information made available by the Earth System Science Center at Pennsylvania State University, based on soils mapping by the U.S. Department of Agriculture, Soil Conservation Service (now the Natural Resources Conservation Service [NRCS]).
- Soils information from the *Soil Survey of El Dorado Area, California* (Rogers 1974).

Specific reference information is provided in the text.

3.5.1 Existing Conditions

Regulatory Setting

Geology and Soils

Federal

Clean Water Act 402/National Pollutant Discharge Elimination System

The Clean Water Act (CWA) is discussed in detail in Section 3.8, *Hydrology, Water Quality, and Water Resources*. However, because CWA Section 402 is directly relevant to excavation, additional information is provided below.

Section 402 mandates that certain types of construction activity comply with the requirements of the U.S. Environmental Protection Agency's (USEPA) National Pollutant Discharge Elimination System (NPDES) program. USEPA has delegated to the State Water Resources Control Board (State Water Board) the authority for the NPDES program in California, where it is implemented by the state's nine Regional Water Quality Control Boards (Regional Water Boards). Construction activity disturbing 1 acre or more must obtain coverage under the state's General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (see *Construction Activities Storm Water Construction General Permit*, below). General construction permit applicants are required to prepare a Notice of Intent and a stormwater pollution prevention plan (SWPPP) and implement and maintain best management practices (BMPs) to avoid adverse effects on receiving water quality as a result of construction activities, including earthwork.

Because the proposed project would result in the disturbance of an area greater than 1 acre, the project applicant would need to obtain coverage under the NPDES general construction permit and obtain a NPDES stormwater permit from the Central Valley Regional Water Quality Control Board (Central Valley Water Board).

Additionally, El Dorado County (County) is in the process of implementing requirements of the State Water Board's NPDES General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4) Order No. 2013-0001-DWQ as amended by Order WQ 2015-0133-EXEC, Order WQ 2016-0069-EXEC, WQ Order 2017-XXXX-DWQ, Order WQ 2018-0001-EXEC, and Order WQ 2018-0007-EXEC. The proposed project qualifies as a "Regulated Project" as defined in Section E.12 of the Order and therefore will be required to comply with the standards provided in the Order. The Section E.12 requirements are described in Section 3.8, *Hydrology, Water Quality, and Water Resources*, under *NPDES General Municipal Stormwater Permit*.

U.S. Geological Survey National Landslide Hazard Program

To fulfill the requirements of Public Law 106-113, the U.S. Geological Survey created the National Landslide Hazards Program to reduce long-term losses from landslide hazards by improving understanding of the causes of ground failure and suggesting mitigation strategies. The Federal Emergency Management Agency is the responsible agency for the long-term management of natural hazards.

State

Alquist-Priolo Earthquake Fault Zoning Act

California's Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) (Public Resources Code [PRC] 2621 et seq.), originally enacted in 1972 as the Alquist-Priolo Special Studies Zones Act and renamed in 1994, is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The Alquist-Priolo Act prohibits the location of most types of structures intended for human occupancy across the traces of active faults and strictly regulates construction in the corridors along active faults (Earthquake Fault Zones). It also defines criteria for identifying active faults, giving legal weight to terms such as *active*, and establishes a process for reviewing building proposals in and adjacent to Earthquake Fault Zones.

Under the Alquist-Priolo Act, faults are zoned and construction along or across them is strictly regulated if they are sufficiently active and well-defined. A fault is considered sufficiently active if one or more of its segments or strands show evidence of surface displacement during the Holocene time (defined for purposes of the Alquist-Priolo Act as referring to approximately the last 11,000 years). A fault is considered well-defined if its trace can be clearly identified by a trained geologist at the ground surface or in the shallow subsurface, using standard professional techniques, criteria, and judgment (Bryant and Hart 2007).

Seismic Hazards Mapping Act

Like the Alquist-Priolo Act, the Seismic Hazards Mapping Act of 1990 (PRC 2690–2699.6) is intended to reduce damage resulting from earthquakes. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. Its provisions are similar in concept to those of the Alquist-Priolo Act: the state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards, and cities and counties are required to regulate development within mapped Seismic Hazard Zones.

Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development. Specifically, cities and counties are prohibited from issuing development permits for sites in Seismic Hazard Zones until appropriate site-specific geologic or geotechnical investigations have been carried out, and measures to reduce potential damage have been incorporated into the development plans. Geotechnical investigations conducted within Seismic Hazard Zones must incorporate standards specified by California Geological Survey Special Publication 117a, *Guidelines for Evaluating and Mitigating Seismic Hazards* (California Geological Survey 2008).

Construction Activities Storm Water Construction General Permit (Order No. 2022-0057-DWQ)

Dischargers whose projects disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, are required to obtain coverage under the Construction General Permit. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

Coverage under the Construction General Permit is obtained by submitting permit registration documents to the State Water Board that include a risk level assessment and a site-specific SWPPP identifying an effective combination of erosion control, sediment control, and non-stormwater BMPs. The Construction General Permit requires that the SWPPP define a program of regular inspections of the BMPs and, in some cases, sampling of water quality parameters. The Central Valley Water Board administers the NPDES stormwater permit program in El Dorado County.

Municipal Separate Storm Sewer System Program

USEPA defines a MS4 as any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, country, or other public body having jurisdiction over stormwater, that is designed or used for collecting or conveying stormwater. As part of the NPDES program, USEPA initiated a program requiring that entities having MS4s apply to their local Regional Water Board for stormwater discharge permits. The program proceeded through two phases. Under Phase I, the program initiated permit requirements for designated municipalities with populations of 100,000 or more to obtain NPDES permit coverage for their stormwater discharges. Phase II expanded the program to municipalities with populations less than 100,000 as well as small MS4s outside the urbanized areas that are designated by the permitting authority to obtain NPDES permit coverage for their stormwater discharges.

Generally, Phase I MS4s are covered by individual permits and Phase II MS4s are covered by a general permit. Each regulated MS4 is required to develop and implement a stormwater management program to reduce the contamination of stormwater runoff and prohibit illicit discharges. The County is a Phase II Small MS4 Traditional Renewal Permittee under MS4 Order No. 2013-0001-DWQ.

California Building Standards Code

The state's minimum standards for structural design and construction are given in the California Building Standards Code (CBSC) (24 California Code of Regulations [CCR]). The CBSC is based on the International Building Code (IBC), which is used widely throughout United States (generally adopted on a state-by-state or district-by-district basis) and has been modified for California conditions with numerous, more detailed or more stringent regulations. The CBSC requires that "classification of the soil at each building site will be determined when required by the building official" and that "the classification will be based on observation and any necessary test of the materials disclosed by borings or excavations." In addition, the CBSC states that "the soil classification and design-bearing capacity will be shown on the (building) plans, unless the foundation conforms to specified requirements." The CBSC provides standards for various aspects of construction, including excavation, grading, and earthwork construction; fills and embankments; expansive soils; foundation investigations; and liquefaction potential and soil strength loss. In accordance with

California law, certain aspects of the project would be required to comply with all provisions of the CBSC.

Local

El Dorado County General Plan

To protect public health and the environment from geologic and seismic hazards, the Public Health, Safety, and Noise Element of the El Dorado County General Plan (County General Plan) includes the following goal, objectives and policies (El Dorado County 2019). The full text of these goals, objectives, and policies can be found in Appendix B, *Consistency with El Dorado County General Plan Policies*, which provides an analysis of the project's consistency with County General Plan policies as required under State California Environmental Quality Act (CEQA) Guidelines Section 15125.

- Goal 6.3*, Geologic and Seismic Hazards,* addresses minimizing threats to life and property from seismic and geologic hazards through development regulations and building and site standards and ongoing evaluation of seismic hazards and includes Objective 6.3.1, *Building and Site Standards*, and Policy 6.3.1.1; and Objective 6.3.2, *County-Wide Seismic Hazards*, and Policy 6.3.2.5.

In addition, the Conservation and Open Space Element (El Dorado County 2017) includes the following relevant goal, objectives, and policies, the full text of which can be found in Appendix B.

- Goal 7.1*, Soil Conservation,* addresses conservation and protection of the County's soil resources and protection of natural drainage patterns and includes Objective 7.1.2, *Erosion/Sedimentation*, and Policies 7.1.2.1 and 7.1.2.2; and Objective 7.3.4, *Drainage*, and Policies 7.3.4.1 and 7.3.4.2.

Compliance with El Dorado County Code of Ordinances Chapter 110.16, Uniform Building Code, would ensure the project would be consistent with County General Plan policies related to geology.

Geotechnical Investigations

Local jurisdictions typically regulate construction activities through a multistage permitting process that may require a site-specific geotechnical investigation. The purpose of the investigation is to provide a basis for the development of appropriate construction design. The site-specific geotechnical investigation is to be based on adequate test borings or excavations in the area where construction would occur and prepared by a civil engineer who is registered with the state.

The County's *Design and Improvement Standards Manual* (specifically, Volume III: Grading, Erosion, and Sediment Control, Section D: Grading Permit Application Submittal Requirements) describes when geotechnical and other similar reports are required (El Dorado County 2007). The County also requires investigation of the soils underlying proposed areas of grading in conformance with the mandates of the IBC and CSBC.

As part of tentative map approval, the County requires that areas having expansive clays and seasonably wet areas be identified by a geotechnical engineer. Such areas, if deemed to be potential construction hazards, are subject to further evaluation and identification to determine appropriate mitigation measures (El Dorado County Community Development Department 1998).

Grading, Erosion, and Sediment Control Ordinances

The County Grading, Erosion, and Sediment Control Ordinance (Grading Ordinance) (Chapter 110.14 of the County Code) establishes provisions for public safety and environmental protection

associated with grading activities on private property. The Grading Ordinance requires all drainage facilities, aside from those in subdivisions that are regulated by the County's Subdivision Ordinance, be approved by the County Department of Transportation. Pursuant to the ordinance, the design of the drainage facilities in the county must comply with the *County of El Dorado Drainage Manual* (Drainage Manual) (El Dorado County 1995).

El Dorado County Subdivision Ordinance

The County's Subdivision Ordinance (El Dorado County Code Title 120) requires the submission of drainage plans prior to the approval of tentative maps for proposed subdivision projects. The drainage plans must include an analysis of upstream, onsite, and downstream facilities and pertinent details, as well as details of any necessary offsite drainage facilities. The tentative map must include data on the location and size of proposed drainage structures. In addition, drainage culverts consistent with the drainage plan may be required in all existing drainage courses, including roads.

El Dorado County Design and Improvement Standards Manual

The County's *Design and Improvement Standards Manual* was adopted in 1990 and provides required erosion and sediment control measures that are applicable to subdivisions, roadways, and other types of developments. Specifically, Volume III: Grading, Erosion and Sediment Control, describes the criteria for when an erosion and sediment control plan is required. When required, erosion and sediment control plans must comply with the adopted County stormwater management plan (El Dorado County 2004b) and the NPDES Small MS4 Order.

El Dorado County Drainage Manual

The Drainage Manual provides standard procedures for future designs of drainage improvements. The Drainage Manual supersedes the stormwater drainage system design standards in the County's *Design Improvements Standards Manual*. The Drainage Manual requires that a hydrologic and hydraulic analysis be submitted for all proposed drainage facilities. The analysis must include an introduction/background, location map/description, catchment description/delineation, hydrologic analysis, hydraulic and structural analysis, risk assessment/impacts discussion, unusual or special conditions, conclusions, and technical appendices. This analysis is usually required on projects undergoing discretionary review. However, under the County Building Code and Grading Ordinance, the County also reviews ministerial development, including required drainage plans, to ensure that appropriate runoff design and controls are in place.

El Dorado County Code of Ordinances

The County has adopted the CBSC as the basis for the County Building Code (El Dorado County Code of Ordinances Section 110.16.010). The County's enforcement of its Building Code ensures the project would be consistent with the CBSC.

Minerals

Federal

No federal regulations related to mineral resources apply to the proposed project because there are no federally owned lands in the project area.

State

Surface Mining and Reclamation Act of 1975

The Surface Mining and Reclamation Act of 1975 (SMARA) (PRC 2710–2719) is the principal legislation addressing mineral resources in California. SMARA was enacted in response to land use conflicts between urban growth and essential mineral production. The stated purpose of SMARA is to provide a comprehensive surface mining and reclamation policy that will encourage the production and conservation of mineral resources while ensuring that adverse environmental effects of mining are prevented or minimized; that mined lands are reclaimed and residual hazards to public health and safety are eliminated; and that consideration is given to recreation, watershed, wildlife, aesthetic, and other related values.

SMARA provides for the evaluation of an area's mineral resources using a system of mineral resource zone (MRZ) classifications that reflect the known or inferred presence and significance of a given mineral resource. MRZ classifications are based on available geologic information, including geologic mapping and other information on surface exposures, drilling records, and mine data, and socioeconomic factors such as market conditions and urban development patterns. The MRZ classifications are defined as follows.

- MRZ-1—Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- MRZ-2—Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists.
- MRZ-3—Areas containing mineral deposits, the significance of which cannot be evaluated from available data.
    - MRZ-3a—Areas containing known mineral deposits that may qualify as mineral resources. Further exploration work within these areas could result in the reclassification of specific localities into the MRZ-2 category.
    - MRZ-3b—Areas containing inferred mineral deposits that may qualify as mineral resources. Land classified MRZ-3b represents areas in geologic settings which appear to be favorable environments for the occurrence of specific mineral deposits. Further exploration work could result in the reclassification of all or part of these areas into the MRZ-3a or MRA-2 categories.
- MRZ-4—Areas where available information is inadequate for assignment into any other MRZ.

SMARA governs the use and conservation of a wide variety of mineral resources. However, certain resources and activities are exempt from the provisions of SMARA. Subject to certain conditions, exempted activities include excavation and grading conducted for farming, onsite construction, or recovery from flooding or other natural disaster.

Local

The County Surface Mining and Reclamation Ordinance (Chapter 8.36 of the County Code) recognizes the SMARA MRZ designations and identifies requirements related to mining and mine reclamation. Additionally, the County has designated general plan land uses and zoning on sites with previous or potential mines. The project area is not identified as an Important Mineral Resource Area in the County General Plan, and there is no mineral resources (-MR) overlay.

Paleontological Resources

Federal

No federal regulations related to paleontological resources apply to the proposed project because there are no federally owned lands in the project area. There is one National Natural Landmarks Program site in El Dorado County, but it is at Lake Tahoe, outside the project area.

State

California Public Resources Code

Several sections of the PRC protect paleontological resources. Section 5097.5 prohibits "knowing and willful" excavation, removal, destruction, injury, and defacement of any paleontological feature on public lands (lands under state, county, city, district, or public authority jurisdiction, or the jurisdiction of a public corporation), except where the agency with jurisdiction has granted express permission. Section 30244 requires reasonable mitigation for impacts on paleontological resources that occur as a result of development on public lands.

Local

El Dorado County General Plan

To protect paleontological resources, the Conservation and Open Space Element of the County General Plan (El Dorado County 2004a) includes the following goal and policies to protect cultural resources, which also address paleontological resources. The full text of the goal and policies can be found in Appendix B, which provides an analysis of the project's consistency with County General Plan policies as required under State CEQA Guidelines Section 15125.

- Goal 7.5, *Cultural Resources*, addresses preservation of the County's important resources through protection of cultural heritage, and includes Policies 7.5.1.3 and 7.5.1.6.

Environmental Setting

Geology and Soils

Regional Geologic Framework

The project area is in the western portion of the Sierra Nevada geomorphic province, which is a linear, tilted fault block almost 400 miles long that extends from northern Butte County to the Mohave Desert. In stark contrast to its steep eastern slope, its western slope is gentle. This western slope is deeply incised by rivers and disappears beneath the sediments of the Central Valley. The upper-elevation Sierra Nevada is comprised of massive granites shaped by glaciation, such as is seen in Yosemite. Lower in the Sierra Nevada is the northwest-trending Mother Lode, which is made up of metamorphic rock containing gold-bearing veins. The Sierra Nevada disappears to the north beneath the Cenozoic volcanic rock of the Cascade Ranges (California Geological Survey 2002:2).

Geologic Setting of Western El Dorado County

A north–northwest-trending belt of metamorphic rocks—the Western Sierra Nevada Metamorphic Belt—extending from Mariposa northward to Lake Almanor underlies the western slope of the Sierra Nevada, including western El Dorado County. This belt consists of accumulations of seafloor

rocks and marine sedimentary and volcanic rocks (formed by crystallization of magma at or near the Earth's surface) of various types. These rocks have been buried and recrystallized at depth under elevated temperatures and pressures to produce the belt and range in age from about 160 to 300 million years old. Within the county, the belt is intruded by numerous small to moderately large bodies of igneous rock (the 165-million-year-old Pine Hill Intrusive Complex and the slightly younger granitic intrusions of the Sierra Nevada batholith and small dikes) (California Geological Survey 2000:4).

The structural framework of the Western Sierra Nevada Metamorphic Belt is dominated by a group of north–northwest-trending faults, also referred to as *fault zone*s, which mark the boundaries of different packages of rocks along the length of the belt. These packages of rocks, called *terranes*, are believed to have been emplaced along the western margin of the North American continent at various times when a convergent plate tectonic setting existed (when the oceanic plate was sliding under the continental plate). Throughout the metamorphic belt, including western El Dorado County, the faults are locally characterized by long bands and isolated lenses of serpentinite, schist containing the minerals talc and chlorite, quartz vein complexes, and highly sheared country rock. The faults cut across western El Dorado County from north to south and include segments of the Bear Mountains and Melones fault zones, a probable segment of the Calaveras-Shoo Fly Thrust, and several other unnamed structures (California Geological Survey 2000:4).

Project Area Topography

The project area is composed primarily of hilly, oak savannah with lowland riparian oak woodland along Marble and Deer Creeks, and chaparral on several southern aspect hill slopes. The elevation ranges from approximately 680 to 1,300 feet above mean sea level. Marble Creek flows in a southerly direction from the northern boundary of the project area into Deer Creek, which flows from east to west through the southern portion of the project area. The hilly terrain is drained by various intermittent drainages and seasonal wetland swales. There are two former quarries in the northern portion of the project area. Portions of the project area have been used for grazing. Figure 2-3 shows the proposed project area and existing conditions.

The project area's past use for limestone mining has created some significant topographic features, including the large soil stockpiles in the north-central portion of the project area, as noted in the Youngdahl & Associates 1994 geotechnical engineering slope stability study and the Wallace Kuhl & Associates 2000 preliminary engineering geology report. These stockpiles are present along the east side of the North Quarry pit. The North Quarry pit is filled with water and is approximately 200 feet deep (Marble Valley Lake in Figure 2-4).

The remnants of an older and smaller limestone pit (as well as a stone structure associated with the mining operations) are approximately 1,300 feet south-southeast of the larger pit. There is a 25-foot-high limestone pillar in the middle of the former 2-acre quarry, an area proposed as the Monolith Event Center (Chapter 2, *Project Description*). This older, smaller pit, which is cut into the hillside, is significantly shallower (approximately 25–35 feet deep) than the North Quarry pit. Within the excavation is a cave that at the time of investigation (2012) was filled with water (Youngdahl Consulting Group 2012a). At the time of the 2012 investigation, the pit was filled nearly to the surface with soil and other material of unknown stability and likely contains voids. Rainwater occasionally ponds on the surface, typically no more than a few inches deep but up to several feet deep in some places. Slopes, percentage of coverage, and approximate acreage are listed below in Table 3.5-1 and are shown in Figure 3.5-1.

Table 3.5-1. Project Area Slope Information

Percent Slope (%)	Percent Coverage (%)	Approximate Acreage (acre)
0–5	4.5	104.0
5–10	13.4	313.5
10–15	20.6	480.0
15–20	20.2	470.6
20–30	26.8	625.8
>30	14.5	337.8
Total	100	2,331.7

Source: Marble Valley Company, LLC 2021.

County General Plan Policy 7.1.2.1 discourages development in areas where the slope is steeper than 30%. Specific Plan Policy 6-3 states that no development would occur on slopes greater than 30%.

Project Area Geology

The project area has been mapped by a number of geologists at a regional scale (Jennings 1977; California Division of Mines and Geology 1984; California Geological Survey 2001, 2011; Wagner et al. 1981). According to these maps, there are four main geologic units in the project area: Quaternary alluvium, metavolcanic rocks, ultramafic bedrock, and limestone. Metavolcanic rocks underlie the majority of the project area. The northern and eastern portions of the project area are underlain by ultramafic bedrock, and two limestone deposits occur in the north-central portion of the project area. In addition, limestone may underlie other rock units in the project area. Alluvial, or stream deposits, of Quaternary age exist within drainages in the project area. These units are not depicted on regional maps because of their narrow width.

The description of these units is from the California Geological Survey (2001) and Wagner et al. (1981). The locations of these units are shown in Figure 3.5-2.

- Limestone (ls): likely Paleozoic age; the metavolcanic rock in the area typically consists of a chaotic mixture of metasedimentary and volcanic units with lesser amounts of gabbroic and ultramafic crystalline intrusive rocks, slates, cherts and moderate to thin limestone lenses.
- Ultramafic Rocks (um): Paleozoic to Mesozoic age; partly to completely serpentinized; locally includes gabbroic and other rocks; intrusive igneous rock formation.
- Metavolcanic (mv): likely Paleozoic age; metamorphosed mafic pyroclastic and flow rock; referred to as Foothill Melange Ophiolite Terrane.
- Quaternary Alluvium (Qal): alluvial or stream deposits of Quaternary age (either Pleistocene age [i.e., greater than 11,000 years old] or Holocene age [i.e., younger than 11,000 years old]) that occur within drainages.

Soils

Surface Soils

The soils[1] in the project area have been mapped by the U.S. Department of Agriculture, Soil Conservation Service (now the NRCS) and are described in both the *Soil Survey of El Dorado, California* (Rogers 1974) and NRCS's online soil mapping tool, Web Soil Survey (U.S. Department of Agriculture, Natural Resources Conservation Service 2012). Soils in the project area are shown on Figure 3.5-3.

According to the soil survey, there are six individual soil map units in the project area. These include the Auburn silt loam, 2–30% slopes (which covers roughly 6% of the project area and has small occurrences in the northern and central portion of the project area); the Auburn very rocky silt loam, 2–30% slopes (which covers roughly 72% of the project area and is the dominant soil map unit); the Auburn very rocky silt loam, 30–50% slopes (which covers roughly 1% of the project area and has one small occurrence in the northern portion of the project area); the Auburn extremely rocky silt loam, 3–70% slopes (which covers roughly 7% of the project area and has two small occurrences in the southern portion of the project area); serpentine rock land (which covers roughly 11% of the project area and has small occurrences in the eastern and northwestern portions of the project area); and Sobrante silt loam, 3–15% slopes (which covers roughly 3% of the project area and has one small occurrence in the southern portion of the project area).

Table 3.5-2 summarizes the soil characteristics for the project area.

[1] In context of this analysis, *soil* and *topsoil* are synonymous. *Topsoil* is typically referred to as the soil on the surface (the surface layer, or A horizon). In this analysis, topsoil should not be conflated with Williamson Act or agricultural discussions, thresholds and impacts. No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance are present on the project site. Refer to Section 3.9, *Land Use Planning and Agricultural Resources*, for additional information.

Table 3.5-2. Detailed Soil Characteristics of the Project Area

Soil Map Unit	Shrink-Swell Potential	Erosion Hazard (Factor K)[a]	Runoff Rate
Auburn silt loam, 2–30% slopes	Low	0.49	Slow to medium
Auburn very rocky silt loam, 2–30% slopes	Low	0.49	Slow to medium
Auburn very rocky silt loam, 30–50% slopes	Low	0.49	Medium to rapid
Auburn extremely rocky silt loam, 3–70% slopes	Low	0.49	Medium
Serpentine rock land	n/a[b]	n/a[c]	Very rapid
Sobrante silt loam, 3–15% slopes	Low to moderate	0.43	Slow to medium

Sources: Rogers 1974; U.S. Department of Agriculture, Natural Resources Conservation Service 2012.

[a] Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation and the Revised Universal Soil Loss Equation to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

[b] Properties too variable to be determined.

[c] Serpentine rock land is highly resistant to erosion. Factor K has not been determined by the U.S. Department of Agriculture, Natural Resources Conservation Service (2012).

The Auburn soils are relatively shallow (14–18 inches to lithic bedrock) and well drained. Their parent material is Amphibolite schist. Typically, the surface layer in these soils is silt loam about 14 inches thick. Unweathered bedrock (typically metabasic rock) occurs at depth below 14 inches (U.S. Department of Agriculture, Natural Resources Conservation Service 2012).

Serpentine rock land consists of highly resistant serpentine and other ultrabasic rock formations. The parent material is Serpentinite. The depth of the soil material is only about 4 inches, below which is lithic bedrock (Rogers 1974:31).

Sobrante silt loam soils are well-drained soils that are underlain by fine-grained metamorphic rocks at a depth of 22–36 inches. The parent material is residual materials weathered from metamorphic rock. Typically, the surface layer is silt loam about 5 inches thick. The subsoil, about 19 inches thick, is silt loam and clay loam (U.S. Department of Agriculture, Natural Resources Conservation Service 2012).

According to the *Soil Survey of El Dorado, California* (Rogers 1974), the Sobrante silt loam, 3–15% slopes soil map unit has low to moderate shrink-swell potential. However, the materials encountered in Youngdahl Consulting Group's explorations were generally non-plastic (rock, sand, and non-plastic silt) (Youngdahl Consulting Group 2012a). The non-plastic materials are generally considered to be non-expansive. However, Wallace Kuhl & Associates' (2000) field reconnaissance and test pits indicate the presence of localized occurrences of high-plasticity clay. Such materials are indicated to be moderately to highly expansive.

Subsurface Conditions

A subsurface exploration program conducted by Youngdahl Consulting Group (2012a) included the excavation of 45 exploratory test pits. Test Pits TP-8 through TP-10, TP-29, and TP-32 through TP-34 encountered fill soils comprised predominantly of silty sands and silts with gravel in a loose/soft and dry to damp condition from the surface to depths approaching 3–12 feet. The remaining test pits generally encountered surface soils consisting of sandy silts in a soft to stiff and dry to moist condition from the surface to depths approaching 0.25–9 feet. Underlying the native soils in Test Pits TP-1, TP-12, TP-24, TP-31, TP-41, TP-42, and TP-44, a 0.5- to 3-foot-thick layer of clay in a soft to stiff and dry to moist condition was encountered. The clay soils were present as a rind layer over the underlying bedrock materials. These underlying bedrock materials were encountered to the maximum depth explored in each test pit not excavated within the existing fill materials.

A previous study (Wallace Kuhl & Associates 2000) reported similar results. The natural soil profile encountered below the fill typically consists of 1–2 feet of red sandy to locally clayey silt with scattered gravel and occasional cobble size rock fragments. Localized deposits of moderate- to high-plasticity clays (bedrock residual soils) were occasionally encountered below surface soils and directly above highly weathered bedrock. Below the residual soils was bedrock either in a weathered or highly fractured condition. Test pits using an ordinary backhoe were terminated at depths ranging from 2 to 10 feet, at which medium-hard to hard bedrock materials were encountered.

Soil Corrosion Potential

Corrosivity testing suites consisting of soil pH, resistivity, sulfate, and chloride content tests were performed on selected soil samples collected by Youngdahl Consulting Group (2012a). According to *California Department of Transportation Corrosion Guidelines Version 1.0*, September 2003, the test results appear to indicate a non-corrosive environment. According to the ACI 318-11 Table 4.2.1, the test results indicate the onsite soils have a negligible potential for sulfide attack of concrete. Accordingly, Type I/II Portland cement is appropriate for use in concrete construction.

Naturally Occurring Asbestos

Naturally occurring asbestos (NOA) has been identified in several areas in the general vicinity of the project area. NOA is addressed in Section 3.2, *Air Quality*.

Soil Contaminants from Historic Mining

According to information available to Wallace Kuhl & Associates at the time of their 2000 study, approximately 42,750 cubic yards of soil and rock containing petroleum constituents have been delineated in the project area. Section 3.7, *Hazards and Hazardous Materials*, discusses petroleum hydrocarbons in the project area.

Seismicity and Faults

Primary Seismic Hazards

Surface Rupture and Faulting

The purpose of the Alquist-Priolo Act is to regulate development near active faults to mitigate the hazard of surface rupture. Faults in an Alquist-Priolo Earthquake Fault Zone are typically active

faults. As defined under the Alquist-Priolo Act, an *active fault*[2] is one that has had surface displacement within the Holocene epoch (the last 11,000 years); a *late Quaternary fault* is a fault that has undergone displacement during the past 700,000 years; a *Quaternary fault (age undifferentiated)* is one that has had surface displacement at some point during Quaternary time (the last 1.6 million years); and a *pre-Quaternary fault* is one that has had surface displacement before the Quaternary period.

The project area is not identified as being located in an Alquist-Priolo Earthquake Fault Zone (Bryant and Hart 2007). There is no evidence of recent (i.e., Holocene) faulting within the project area, and no active faults are mapped to cut at or near the project area (California Geological Survey 2015; El Dorado County 2004c; U.S. Geological Survey 2010; Wallace Kuhl & Associates 2000; Youngdahl Consulting Group 2012a). Furthermore, review of aerial photographs does not indicate the presence of lineations or other features that would suggest the presence of recent faulting on or trending toward the project area.[3] The nearest mapped active and early Quaternary faults pertinent to the project area are summarized in Table 3.5-3.

Table 3.5-3. Active/Early Quaternary Faults within a 100-Kilometer Radius of the Project Area

Fault Name	Status	Distance/Direction
Dunnigan Hills Fault	Late Quaternary	75 km W
North Tahoe Fault	Active	98 km E
West Tahoe Fault	Active	85 km E
Bear Mountains Fault Zone–East	Late Quaternary	5 km E
Bear Mountains Fault Zone–West	Late Quaternary	2 km W
Maidu Fault	Quaternary (age undifferentiated)	9 km NE
Melones Fault–West	Late Quaternary	10 km E
Melones Fault–East	Late Quaternary	15 km E

Source: Youngdahl Consulting Group 2012a.
km = kilometer.
W = west.
E = east.
NE = northeast.

A total of eight faults and/or fault zones were identified as potential seismic sources within a 100-kilometer (km) (approximately 62 miles) radius of the project area. Those expected to have the greatest impact due to their proximity to the project area are faults associated with the Foothills fault system (Bear Mountains Fault Zone–East, Bear Mountains Fault Zone–West, Maidu Fault, Melones Fault–West, and Melones Fault–East). The Foothills fault system is located along the western flank of the Sierra Nevada. Many areas of late Cenozoic faulting and some areas of

[2] Two types of active faults are recognized—active faults along which historic (last 200 years) displacement has occurred, and active faults exhibiting Holocene fault displacement (during past 11,700 years) without historic record.

[3] No evidence has been found that would indicate the presence of a fault through the project area. The shears associated with the Bass Lake lineament of the Bear Mountain fault zone are related to the initial intrusion of the serpentinite along bedding planes of the intruded rocks (sediments, originally). Continuous crystalline limestone and metavolcanics and their gradational contact at the northeast corner of the main quarry appear to negate the fault mapped by EBASCO Services, Inc. (Bailey Scientific 1991b).

Quaternary faulting have been identified along this system. The most recent event on the Foothills fault system was the 1975 Oroville earthquake (magnitude 5.6 on the Richter Magnitude Scale, described below under *Ground-Shaking Hazard*).

The closest Foothills system fault is the western branch of the Bear Mountain fault zone trending nearly north–south, passing through the west side of the community of El Dorado Hills to the west of the VMVSP project area (Figure 3.5-4). The majority of the Bear Mountain fault zone is considered pre-Quaternary, due to the lack of evidence supporting Quaternary displacement. The closest potentially active portion of the Bear Mountain fault zone is approximately 8 km to the northeast, a distance unlikely to affect the project area with respect to surface fault rupture. Consequently, the project area is not likely to be affected by surface fault rupture.

Ground-Shaking Hazard

The intensity of ground shaking that occurs as a result of an earthquake is partly related to the size of the earthquake, its distance from the subject location, and the response of the geologic materials in the area. As a rule, the greater the energy released from the fault rupture (the earthquake magnitude) and the closer the fault rupture (epicenter) to the site, the greater the intensity of ground shaking. Geologic and soil units comprising unconsolidated, clay-free sands and silts can reach unstable conditions during ground shaking, which can result in extensive damage to structures built on such soils (see *Liquefaction and Associated Hazards*). When various earthquake scenarios are considered, ground-shaking intensities will reflect both the effects of strong ground accelerations and the consequences of ground failure.

Earthquake magnitude is generally expressed in the Richter Magnitude Scale or as moment magnitude. The scale used in the Richter Magnitude Scale is logarithmic so that each successively higher Richter magnitude reflects an increase in the energy of an earthquake of about 31.5 times. Moment magnitude is the estimation of an earthquake magnitude by using seismic moment, which is a measure of an earthquake size utilizing rock rigidity, amount of slip, and area of rupture. Earthquake energy is most intense at the fault epicenter; the farther an area from an earthquake epicenter, the less likely that ground shaking will occur there.

Ground shaking is described using two methods: ground acceleration as a fraction of the acceleration of gravity, expressed in units of "g," and the Modified Mercalli scale, which is a more descriptive method involving 12 levels of intensity denoted by roman numerals. Modified Mercalli intensities range from I (shaking that is not felt) to XII (total damage).

The project area is in a region of California characterized by low historical seismic activity and low ground-shaking hazard. The *El Dorado County Multi-Jurisdiction Hazard Mitigation Plan* (El Dorado County 2004c) shows the project area as occurring in a low severity zone for shaking intensity. Farther to the east and west, the ground-shaking hazard increases, coinciding with the increase in abundance of associated faults and fault complexes (California Geological Survey 2008). The most severe ground motion would be expected to occur if there were to be significant activity along the Foothills fault system (Fugro West 2008).

Secondary Seismic Hazards

Liquefaction and Associated Hazards

Liquefaction is a phenomenon in which the strength and stiffness of unconsolidated sediments are reduced by earthquake shaking or other rapid loading. Poorly consolidated, water-saturated fine sands and silts having low plasticity and, when located within 40 feet of the ground surface, are typically considered to be the most susceptible to liquefaction. Soils and sediments that are not water-saturated and that consist of coarser or finer materials are generally less susceptible to liquefaction. Geologic age also influences the potential for liquefaction. Sediments deposited within the most recent millennia are generally more susceptible to liquefaction than older Holocene sediments; Pleistocene sediments are even more resistant; and pre-Pleistocene sediments are generally immune to liquefaction (California Geological Survey 2008).

Two potential ground failure types associated with liquefaction in the region are lateral spreading and differential settlement (Association of Bay Area Governments 2001). Lateral spreading involves a layer of ground at the surface being carried on an underlying layer of liquefied material over a gently sloping surface toward a river channel or other open face. Differential settlement (also called ground settlement and, in extreme cases, ground collapse) occurs as soil compacts and consolidates after the ground shaking ceases, when the layers that liquefy are not of uniform thickness, which is a common problem when the liquefaction occurs in artificial fills. Settlement can range from 1 to 5%, depending on the cohesiveness of the sediments (Tokimatsu and Seed 1984).

Based on the geologic age of the earth materials, average relative density of the subsurface material, the relatively shallow depth to rock, the absence of a permanently elevated groundwater table, (see Section 3.8, *Hydrology, Water Quality, and Water Resources*), and low anticipated ground-shaking hazard for the project area, the potential for liquefaction, dynamic compaction, or seismically induced settlement or bearing loss is considered low.

Seismically Induced and Static Slope Failures

Youngdahl & Associates (1994) conducted a slope stability study of the native slopes, talus slopes, and excavated rock surrounding the North Quarry pit. The Youngdahl & Associates study found that the quarry walls are composed of limestone and metavolcanic rock. The contact between the limestone and the metavolcanic rocks is an inactive fault. Loose mine tailings have been placed along the east and southeast portions of the quarry pond. Fill is also indicated at the northeast corner of the pond and was probably placed within a previous drainage swale. Fill depths have been measured or estimated to be 10–50 feet thick. Youngdahl & Associates estimates that 530,000 to 600,000 cubic yards of fill are located along the east and southeast slopes of the quarry.

According to Youngdahl & Associates (1994) and Wallace Kuhl & Associates (2000), the existing non-engineered fill slopes (stockpiles) along the east side of the North Quarry pit are only marginally stable under static and seismic load conditions. Due to the absence of permanently elevated groundwater table, the relatively low seismicity of the area, and the relatively shallow depth to rock, the potential for seismically induced slope instability (of engineered slopes) for the remainder of the project area is considered negligible.

A more recent study (Youngdahl Consulting Group 2013) reevaluated the need to establish setbacks around the North Quarry pit. According to Youngdahl Consulting Group (2013), the slope stability analyses based on the available data found the east and north slopes of the North Quarry pit to be stable above a factor of safety of 1.5 for static conditions and 1.12 for dynamic conditions.[4] Very little data was available for the south side of the North Quarry pit, and no significant potential planar or wedge failures were identified. No data was available to directly analyze slope stability conditions on the west side of the North Quarry pit. The west slopes are steeper than on the east side and exhibited a past history of slope failure. Previous geologic studies (Bailey Scientific 1991a, 1991b; EBASCO Services 1989a; Lowry & Associates 1991a, 1991b) surmised that the main source of slope instability was the metasedimentary and/or metavolcanic rocks adjoining the limestone; the limestone was considered to be stable in a vertical configuration. However, further study (Bailey Scientific 1991b) suggested the landslide appears to have been caused by excavation through the westerly wall of the marble at this location. The underlying support having been removed, the overlying rock moved downward and outward into the quarry. The landslide was described as being evidenced in a haul road at the rim by a vertical drop of about 0.5 foot over a few days. Following this movement, the ground surface dropped vertically another 15–20 feet over a 7-hour interval. Approximately 1 year later the landslide moved laterally into the quarry. Mining stopped in the late 1980s. Youngdahl is unaware of any documented slope failures since then (Youngdahl Consulting Group 2013, 2014).

Other Geologic Hazards

Most of the project area consists of metavolcanic rocks surrounding the two elongated limestone rock units (Figure 3.5-2). However, limestone may underlie other rock units in the project area. Under certain conditions, infiltration of rainwater through carbonate rock, such as limestone, can create voids in the rock as the limestone dissolves. This can result in small solution cavities or larger features such as caverns. However, no significant solution cavities or caverns have been identified at the site (Lowry & Associates 1991b; EIP Associates 1997; Youngdahl Consulting Group 2013).

Several other geologic and seismic hazards (volcanic activity, tsunami, seiche, and mudflow) that could be experienced in the larger region are unlikely to affect the project area because the conditions are not conducive (no active volcano, no ocean or large body of water) to those hazards. Therefore, they are not discussed further in this environmental impact report. Radon and NOA are discussed in Section 3.2, *Air Quality*.

Minerals

The information in this section is based on ECORP Consulting (2013), except where noted. El Dorado County contains and has produced a wide variety of mineral resources because of its diverse geology. These mineral resources include gold, limestone, crushed rock, sand and gravel, chromite, copper, diamonds, mercury, slate, talc and soapstone, asbestos, clay, silica, tungsten, and other minerals in minor amounts.

[4] Factor of safety is a term used to address the potential for a failure. A rock block that is stable within a slope can be said to be at a factor of safety greater than 1.0. When conditions change, such as the addition of water pressure into supporting joints and the block fails, the point of failure can be described as being just under a factor of safety of 1.0. Slopes supporting or above structures are typically required to be at a static factor of safety of 1.5. Other slopes not adjacent to structures are typically required to be stable at a factor of safety from 1.3 to 1.5. The standard for slopes under dynamic conditions, such as loading from an earthquake, is that the slope needs to be at a factor of safety of at least 1.12 during dynamic conditions (Youngdahl Consulting Group 2013:10).

Gold occurs within bedrock and as placer in river deposits (*alluvium*). There are no bedrock-associated gold deposits in the project area or in the vicinity. *Placer gold* is gold that has weathered out of the underlying bedrock and then been transported by streams or rivers. This transported gold (placer) may then be found within river deposits (alluvium) either within an active streambed or in river terraces. Extensive placer gold deposits associated with large Tertiary age rivers are found in El Dorado County to the north of, but not in proximity to, the project area. Deer Creek, which flows in a southwesterly direction about 1 mile from the project area's southern boundary, contains potential placer gold deposits. As noted in Section 3.4, *Cultural Resources*, the current project area was extensively placer mined during the gold rush. Prospectors dug ditches and canals to divert water from nearby streams or rivers to the dry diggings to facilitate the extraction of gold. Hundreds of these water conveyance systems were constructed throughout the Sierra Nevada foothills, including some portions of the current project area in Marble Valley. Placer mining also occurred in Carson Creek in El Dorado Hills. A minor amount of diamonds has been found in placer gold deposits in western El Dorado County, but their bedrock origin has not been located.

Limestone is a marine sedimentary rock and occurs in linear bands or small linear outcrops throughout western El Dorado County. These marine rocks are associated with the terranes moved there by oceanic plates. This limestone has been mined for a wide variety of uses. There are two narrow limestone rock units in the main project area, and each of these previously had limestone mines within them. There are also two former mines within offsite improvement areas along the El Dorado Irrigation District (EID) sewer and water line (see Figure 2-9). One of these was a limestone mine and the other was a copper mine. Copper mines are excavated along the narrow copper-bearing veins and, while they can be deep and long, they did not create large tunnels because the adjacent rock had no value. Consequently, copper mines have little potential to allow collapse of overlying bedrock and the obstruction or closure of mine entries is the common safety procedure.

Chromite is a metal associated with ultramafic rocks or contact zones of intrusive igneous rocks. Historically El Dorado County ranks third in the state for chromite production, primarily from mines near Folsom Lake. There are three closed chromite mines on the west side of Cameron Park to the north of U.S. Highway 50, and there are three closed chromite mines on the north side of El Dorado Hills. No chromite mines were located within the project area. No chromite is currently produced in California (California Geological Survey 2014). These mines were active in the early part of the 20th century and then briefly during World War II. They have not been active since.

Mercury, slate, talc, soapstone, asbestos, silica, and tungsten occur in minor amounts and none occur within the vicinity of the project area. There are no crushed rock, sand, or gravel resources mapped in the project area, and there are no local quarries or mines for these materials. Though copper was historically produced in El Dorado County, and a historic copper mine is located immediately east of the project area, no copper is currently produced in California (California Geological Survey 2014).

The project site is mapped as MRZ-1 for limestone and construction materials, indicating that there are no significant mineral resources present. It is mapped as MRZ-3a for volcanogenic processes, indicating that there are known mineral deposits that may qualify as mineral resources but require further exploration and analysis to be reclassified. The project site is mapped as MRZ-4 for gold deposits (hydrothermal) and primarily MRZ-4 for gold deposits (metasomatic), indicating that information is inadequate for assignment to any other MRZ. A small portion of the project site is mapped as MRZ-3b for gold deposits (metasomatic), indicating that the site may contain mineral deposits. The project site is mapped as MRZ-3a for gold deposits (placer) along Deer Creek,

indicating that the site contains known mineral resources, but they would require further exploration to be reclassified.

Mine Shafts and Prospecting Pits

Historic topographic maps and Mines and Prospects in El Dorado County, California (California Geological Survey 2001:Plate 2) were examined to determine what mines and/or mining features were located on or near the project site. Two narrow limestone rock units were identified in the project area, each of which was previously mined, resulting in the two quarry pits. There are also two former mines within offsite improvement areas along the EID sewer and water line (see Figure 2-9). One of these was a limestone mine and the other was a copper mine.

The cultural resources investigation for the proposed project identified several locations in the project area with mine shafts and prospecting pits (see Table 3.4-1 in Section 3.4, *Cultural Resources*). Such features were also identified in the offsite improvement areas. Because these features are known to be present in the project area and offsite improvement locations, it is possible there may be other small, undocumented shafts or pits that have not yet been identified.

Paleontological Resources

Paleontological Sensitivity

Paleontological sensitivity is a qualitative assessment that takes into account the paleontological potential of the stratigraphic units present, the local geology and geomorphology, and any other local factors that may be germane to fossil preservation and potential yield. According to the Society of Vertebrate Paleontology (SVP) (2010:2), paleontological sensitivity is based on two factors: (1) the potential for a geological unit to yield abundant or significant vertebrate fossils or to yield significant invertebrate, plant, or trace fossils; and (2) the potential importance of the data to contribute to further understanding of paleontology. Table 3.5-4 defines paleontological sensitivity ratings.

Table 3.5-4. Paleontological Sensitivity Ratings

Potential	Definition
High	Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have a high potential for containing additional significant paleontological resources…Paleontological potential consists of both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, plant, or trace fossils and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, paleoecologic, taphonomic, biochronologic, or stratigraphic data.
Undetermined	Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment are considered to have undetermined potential. Further study is necessary to determine if these rock units have high or low potential to contain significant paleontological resources.
Low	Reports in the paleontological literature or field surveys by a qualified professional paleontologist may allow determination that some rock units have low potential for yielding significant fossils. Such rock units will be poorly represented by fossil specimens in institutional collections, or based on general scientific consensus only preserve fossils in rare circumstances and the presence of fossils is the exception not the rule.
No	Some rock units have no potential to contain significant paleontological resources, for instance high-grade metamorphic rocks (such as gneisses and schists) and plutonic igneous rocks (such as granites and diorites). Rock units with no potential require neither protection nor impact mitigation measures relative to paleontological resources.

Source: Society of Vertebrate Paleontology 2010.

Paleontological Sensitivity of Potentially Affected Units

The paleontological sensitivity of geologic units in the project area ranges from high to none. Although the two main geologic units in the project area (metavolcanic and ultramafic rocks) are unlikely to contain paleontological resources, El Dorado County is well known for abundant fossils found at two limestone cave localities, Hawver Cave and Cool Cave (University of California Museum of Paleontology 2013a). More recently, as part of its work identifying and cataloging fossils from the California Pleistocene, the University of California Museum of Paleontology curated a wealth of fossils from a third location called Crystal Cavern 1 (University of California Museum of Paleontology 2014; Werning 2013). In addition, Quaternary alluvium, which occurs in drainages in the project area, may also contain fossils. The description of these units below, as it relates to their paleontological sensitivity, is from the California Geological Survey (2001) and location of each unit is shown in Figure 3.5-2.

Metavolcanic

Metavolcanic rock of likely Paleozoic age occurs over much of the project area. This unit is a metamorphosed volcanic rock. Because the degree of metamorphism is not known, the paleontological sensitivity of this unit is unknown. There are no records of fossils from this unit (University of California Museum of Paleontology 2013b).

Ultramafic Rocks

Ultramafic rocks of Paleozoic to Mesozoic age occur in the northern and eastern portions of the project area. This unit is an intrusive igneous rock and, therefore, has no potential to contain fossils.

Limestone

There are two limestone deposits in the north-central portion of the project area. In addition, limestone may underlie other rock units in the project area.

Limestone deposits are the main fossil-bearing units in El Dorado County; Hawver and Cool Quarry limestone caves near Cool have yielded abundant and diverse fossils. More recently, the University of California Museum of Paleontology began curating fossils from a third cave location called Crystal Cavern 1. With the addition of these fossils, the museum now has records of more than 3,500 fossils from these localities, including several species of ground sloth and rodents, rabbit, cougar, birds, deer, bison, coyote, lizard, frog, and toad (University of California Museum of Paleontology 2013a).

There are two general types of cave fossils: fossils formed in the rock itself (i.e., deposited while the rock was forming, such as fish fossils found in limestone) and fossils that formed as a result of accumulation in the cave (Santucci et al. 2001). Examples of the latter include fossils of animals that used the cave, such as bats and bears; animals that were killed by predators and then brought to the cave, such as deer; or animals that fell into the cave and were unable to escape.

In El Dorado County, most limestone deposits are generally isolated, lens-shaped bodies that are less than a few thousand feet long and a few hundred feet wide (California Geological Survey 2001:18). Although many of these deposits likely do not contain caves, there is at least one cave in the project area, located on the edge of a former mine pit and now filled with water (Youngdahl Consulting Group 2012a:2).

Given the wealth of fossils found in limestone caves in El Dorado County, this unit is considered sensitive for paleontological resources.

Quaternary Alluvium

Alluvial, or stream deposits, of Quaternary age occur within drainages in the project area.

Alluvial deposits of Pleistocene age (i.e., greater than 11,000 years old, deposited during the early Quaternary) are considered to have high sensitivity for paleontological resources because California's Pleistocene nonmarine strata have yielded a wealth of stratigraphically important vertebrate fossils. There is at least one record of a mastodon fossils found in Quaternary alluvium (gravel) in El Dorado County (University of California Museum of Paleontology 2013a).

Alluvial deposits of early to middle Holocene age (i.e., 11,000 to 5,000 years old) may be considered sensitive for paleontological resources, while deposits that are of late Holocene age (i.e., less than 5,000 years old) are not considered sensitive for paleontological resources because of their young age. However, given the difficulty in distinguishing Pleistocene and Holocene deposits and the absence of detailed mapping of Quaternary deposits in the project area, all Quaternary alluvial deposits should be considered sensitive for paleontological resources.

Metasedimentary

The metasedimentary rock of Paleozoic age occurs just outside the project area in the area of the Cambridge Road extension along the northeast edge of the project area. This unit is a metamorphosed sedimentary rock. Because the degree of metamorphism is not known, the paleontological sensitivity of this unit is unknown. There are no records of fossils from this unit (University of California Museum of Paleontology 2013c).

3.5.2 Environmental Impacts

Methods of Analysis

Geology, Soils, and Seismicity

Impacts related to geology, soils, and seismicity were assessed based on technical reports prepared for the proposed project, other available data (maps, soil surveys), and professional judgment. This analysis focuses on the proposed project's potential to result in the risk of personal injury, loss of life, and damage to property as a result of existing geologic conditions within the project area.

The geology, soils, and seismicity impact analysis assumes that the project applicant would conform to the latest NPDES requirements, County and other plan policies, standards, and ordinances. The analysis also assumes that, pursuant to direction of the County, as noted under *Regulatory Setting* in Section 3.5.1, *Existing Conditions*, geotechnical analyses would be performed in the project area. Site-specific, design-level geotechnical investigations were performed to evaluate the potential for the presence of soft and/or loose soils, unstable slopes, surface fault rupture, ground shaking, liquefaction hazard, slope stability, and expansive soils. Additional site-specific analysis would occur prior to final design, as required by County standards and the CBSC.

Minerals

For mineral resources, the proposed project's potential to affect access to mineral resources was evaluated by examining the project footprint in comparison to resource locations as mapped by the California Geological Survey (2001).

Paleontological Resources

To analyze paleontological resources, the primary source of information used was the paleontological database at the University of California, Berkeley. Effects on paleontological resources were analyzed qualitatively on a large-scale level, based on professional judgment and the SVP guidelines below.

SVP's *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources* provides standard guidelines that are widely followed to analyze paleontological resources (Society of Vertebrate Paleontology 2010). These guidelines reflect the accepted standard of care for paleontological resources. The SVP guidelines identify two key phases in the process for protecting paleontological resources from project impacts.

- Assess the likelihood that the project area contains significant nonrenewable paleontological resources that could be directly or indirectly affected, damaged, or destroyed as a result of the project.

- Formulate and implement measures to mitigate potential adverse impacts.

An important strength of SVP's approach to assessing potential impacts on paleontological resources is that the SVP guidelines provide some standardization in evaluating a project area's paleontological sensitivity. Table 3.5-5 summarizes SVP's recommended treatments to avoid adverse effects in each paleontological sensitivity category.

Table 3.5-5. Society of Vertebrate Paleontology's Recommended Treatment for Paleontological Resources

Sensitivity Category	Mitigation Treatment
High or Undetermined	• An intensive field survey and surface salvage prior to earth moving, if applicable. • Monitoring by a qualified paleontological resource monitor of excavations. • Salvage of unearthed fossil remains and/or traces (e.g., tracks, trails, burrows). • Screen washing to recover small specimens, if applicable. • Preliminary survey and surface salvage before construction begins. • Preparation of salvaged fossils to a point of being ready for curation (i.e., removal of enclosing matrix, stabilization and repair of specimens, and construction of reinforced support cradles where appropriate). • Identification, cataloging, curation, and provision for repository storage of prepared fossil specimens. • A final report of the finds and their significance.
Low or No	Rock units with low or no potential typically will not require impact mitigation measures to protect fossils.

Source: Society of Vertebrate Paleontology 2010.

Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the proposed project would be considered to have a significant effect if it would result in any of the conditions listed below.

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: (1) 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; (2) strong seismic ground shaking; (3) seismic-related ground failure, including liquefaction; and (4) landslides.
- Result in substantial soil erosion or the loss of topsoil.
- 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 an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse.
- Result in fracturing and/or erosion from special construction methods that could result in unstable geologic or soil conditions.

- Be located on expansive soil, as defined in Section 1803.5.3 of the CBSC, creating substantial direct or indirect risks to life or property.
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater.
- 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.
- 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.
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Impacts and Mitigation Measures

Impact GEO-1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: (1) 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; (2) strong seismic ground shaking; (3) seismic-related ground failure, including liquefaction; and (4) landslides (less than significant with mitigation)

The project area is not identified as being located in an Alquist-Priolo Fault Zone (Bryant and Hart 2007). There is no evidence of recent (i.e., Holocene) faulting within the project area and no active faults are mapped to cut at or near the project area (California Geological Survey 2015; El Dorado County 2004c; U.S. Geological Survey 2010; Youngdahl Consulting Group 2012a). Furthermore, review of aerial photographs does not indicate the presence of lineations or other features that would suggest the presence of recent faulting on or trending toward the project area. Accordingly, the project area is not subject to surface rupture hazard. The impact related to potential fault rupture would be less than significant.

The ground-shaking hazard in the project area is low. Nonetheless, a large earthquake on a nearby fault could cause minor ground shaking in the vicinity of the project area, potentially resulting in the risk of structural loss, injury, or death. Liquefaction and related hazards, such as lateral spreading and differential settlement, have the potential to compromise the structural integrity of proposed new facilities and cause injury to construction workers and residents. However, based on the geologic age of the earth materials, average relative density of the subsurface material, groundwater conditions, and anticipated ground-shaking hazard for the project site, the potential for liquefaction, dynamic compaction, or seismically induced settlement or bearing loss is considered less than significant. In addition to the low hazard of surface fault rupture and ground shaking and related hazards, these impacts are considered less than significant because the project applicant is required to implement IBC and CBSC standards into the project design for applicable features to minimize the potential fault rupture and ground-shaking hazards on associated project features. Structures must be designed to meet the regulations and standards associated with the most current CBSC at the time of development, and compliance would need to be demonstrated to the satisfaction of the County before building permits are issued. Because the proposed project would be phased over several years, the geotechnical studies will be updated, as necessary, prior to construction activities

and the seismic design parameters will be based on the building codes in effect at that time. This will ensure that these impacts remain less than significant.

Due to the absence of permanently elevated groundwater table, the relatively low seismicity of the area, and the relatively shallow depth to rock, the potential for seismically induced damage due to liquefaction, surface ruptures, settlement, and slope instability (of engineered slopes) is considered negligible (Youngdahl Consulting Group 2012a).

North Quarry Pit and Fill Slopes

A geotechnical evaluation of the potential for seismically induced slope instability in the North Quarry pit and surrounding fill slopes was prepared to determine whether the slopes are susceptible to static or dynamic (i.e., seismic) slope failure (Youngdahl Consulting Group 2013). It was determined the potential for seismically induced slope instability in the North Quarry pit is higher than in other areas within the project site because the existing non-engineered fill slopes along the east and north sides of the quarry are only marginally stable under seismic load conditions. In addition, fills are present around the entire quarry, and Youngdahl Consulting Group (2013) has no indications that any of these fills were placed as engineered fills. Consequently, development of the proposed project could result in a significant impact and present a hazard to workers and residents associated with the presence of non-engineered fill slopes around the North Quarry that could fail during seismic activity. Mitigation Measure GEO-1 would reduce the risk posed by seismically induced slope instability in the quarry to workers and residents to a less-than-significant level by ensuring the fill material is stabilized.

Mitigation Measure GEO-1: Incorporate mitigation measures identified in geotechnical reports and use standard engineering practices to mitigate for non-engineered fill slope instability around the North Quarry

Prior to approving improvement and/or grading plans, the County shall ensure the applicant has submitted geotechnical studies and engineering drawings that identify how the slopes around the North Quarry will be stabilized. This shall include, but not be limited to, the following or equally effective measures identified in current and previous geotechnical studies.

Recommendations from Current Studies

- The Youngdahl Consulting Group (2013) *Village of Marble Valley Specific Plan, El Dorado Hills, El Dorado County, California, Marble Valley Quarry Development Setbacks* letter report dated September 17, 2013, established setbacks around the North Quarry pit at a minimum of 40 feet in every direction and up to 100 feet near the center of the southwestern side of the North Quarry. Construction within these setbacks will require additional slope stability assessment and slope stabilization measures, as required in Mitigation Measure GEO-3b. The setbacks are considered preliminary and will be refined, as necessary based on the final geotechnical evaluation, prior to submitting final improvement plans, in accordance with Mitigation Measure GEO-3b.
- All fills meant to support critical improvements, (i.e., structures, road, or utilities) will be removed. In accordance with the Youngdahl Consulting Group (2013) *Village of Marble Valley Specific Plan, El Dorado Hills, El Dorado County, California, Marble Valley Quarry Development Setbacks* letter report dated September 17, 2013, if any fills are to be replaced, they should be placed as engineered fills (i.e., a material used to fill in a depression or hole in

the ground or create mounds or otherwise artificially change the elevation of the ground). Any fills placed within the recommended development setbacks may require special engineering to key into stable materials.

Recommendations from Previous Studies

- For the tailing piles surrounding the North Quarry pit, excavation and reconstruction as an engineered fill with appropriate keys and benches to resist slope failure under earthquake loading will be implemented. Alternatively, the tailings will be removed, and the underlying ground graded to a stable slope configuration. Engineered fill slopes, or excavation slopes into the native soil and rock could be graded to a 2H:1V inclination (Wallace Kuhl & Associates 2000).

For additional recommendations pertaining to the stability the North Quarry pit, see Impact GEO-3.

Impact GEO-2: Result in substantial soil erosion or the loss of topsoil (less than significant)

Grading, excavation, removal of vegetation cover, and loading activities associated with construction, relocation, and potential screening/sorting of fill (spoils) materials deposited around the quarry could temporarily increase erosion, runoff, and sedimentation. Construction activities also could result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at the construction sites.

However, as required by Section 402 of the CWA, a SWPPP would be developed by a qualified engineer or erosion control specialist before construction and BMPs would be implemented throughout and following construction, as appropriate. The SWPPP would be kept onsite during construction activity and made available upon request to representatives of the Central Valley Water Board. The SWPPP would identify pollutant sources that may affect the quality of stormwater associated with construction activity and identify, construct, and implement stormwater pollution prevention measures to reduce pollutants in stormwater discharges during and after construction. The SWPPP would include a description of potential pollutants, the management of dredged sediments, and hazardous materials present on the site during construction (including vehicle and equipment fuels). The SWPPP also would include details of how the sediment and erosion control practices (i.e., BMPs) would be implemented. Implementation of the SWPPP would comply with state and federal water quality regulations.

In addition to the SWPPP, adherence to the NPDES MS4 Order and applicable El Dorado County Grading Ordinance, Subdivision Ordinance, Design and Improvement Standards Manual, and Drainage Manual would all minimize any effects from erosion, runoff, and sedimentation by implementing BMPs (e.g., vegetation, geotextiles, mulch and retaining walls) to prevent or reduce soil erosion.

Finally, recommendations in the Youngdahl Consulting Group (2012a) *Preliminary Geotechnical Engineering Study for Marble Valley, El Dorado Hills, California* pertaining to general site preparation (including recommendations concerning site drainage controls, dust control, clearing and stripping, overexcavation and recompaction of existing fills/loose native soils, and exposed grade compaction considerations) would be implemented as required by the County, further reducing impacts. This impact would be less than significant.

Impact GEO-3 provides an evaluation of the potential erosion effects associated with operation of the proposed detention basin on Marble Creek at the southernmost road crossing.

Impact GEO-3: 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 an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse (less than significant with mitigation)

Seismic-Related Impacts

The project is not highly susceptible to seismic hazards such as liquefaction, settlement, and lateral spreading, as noted in Impact GEO-1. However, as described above, the potential for seismically induced slope instability in the North Quarry pit is high, and the existing non-engineered fill slopes along the east side of the quarry are only marginally stable under static and seismic load conditions. Therefore, this impact would be significant. Mitigation Measure GEO-1, discussed under Impact GEO-1, would lessen the risk for seismically induced slope instability in the quarry and reduce the impact to a less-than-significant level.

Non-Seismic Geologic/Soil Stability Impacts

West Side North Quarry Pit (Marble Lake Boulevard)

The proposed Marble Lake Boulevard alignment runs along the west side of Marble Lake (North Quarry pit), through the 100-foot development setback recommended by Youngdahl Consulting Group (see Mitigation Measure GEO-1). The current proposed roadway alignment location along Marble Valley Lake is preliminary. The pit slopes are steeper on the west side than on the east side and have exhibited a history of slope failure. The west side is also completely obscured by fill to below the surface elevation of the water in the quarry. Previous geologic studies surmised that the main source of slope instability was the metasedimentary rocks and/or metavolcanic rocks adjoining the limestone; the limestone itself was considered to be stable in a vertical configuration (Youngdahl Consulting Group 2013, 2014). In addition, fills are present around the entire quarry, which may include the area of the roadway alignment. As noted above, there is no evidence these fills were placed as engineered fills. If the west slope and/or subsurface materials are unstable and have not been engineered to applicable safety standards prior to constructing the roadway, there is the potential the roadway could collapse or otherwise be damaged, posing a safety risk. This is a potentially significant impact.

This impact can be reduced to a less-than-significant level through implementation of Mitigation Measure GEO-3a and measures identified by Youngdahl Consulting Group (2014), which could include extending support for the road to below any projected theoretical slip failure surfaces or through subsurface exploration. Alternatively, the road alignment could be moved further west to be completely out of recommended development setbacks (see discussion of development setbacks below).

Development Setbacks around North Quarry

The slope stability analysis based on available data found the east and north slopes around the North Quarry to be stable above a factor of safety of 1.5 for static conditions and 1.12 for dynamic conditions. Although little data are available for the south side of the quarry, no significant slope failures have been identified (Youngdahl Consulting Group 2013). West slopes, including the roadway alignment, were described above. The slopes at the water's edge are planned to be reconstructed into sloping benches at gradients of 4H:1V or flatter where feasible, and to be fenced to restrict access where steeper and/or infeasible for reconstruction (Youngdahl Consulting Group 2014). The existing non-engineered fills that contribute to some of the unstable characteristics of

the upper portions of the slope within the setbacks would be entirely removed and/or reworked as engineered fill with benching at the shoreline and gentler slopes at the point of entry into the water (see Impact GEO-1 and Mitigation Measure GEO-1).

The project applicant has identified development setbacks around the quarry. The setback lines on the west side extend approximately 100 feet. A 40-foot development setback was established for the north, east, and south end of the North Quarry. The area immediately around the quarry within the setback on the north, east, and south sides, and between the roadway and the quarry on the west side is proposed as a park. Landscaping and trails constructed within the development setbacks may be susceptible to slope failures, which could pose a risk to the public using the park.

Youngdahl Consulting Group (2014) performed a qualitative risk assessment to evaluate the risk of the slopes failing within the recommended setbacks. The planned slope mitigation above the water line would reduce risks from rock fall and/or slope failure onto a shoreline user to a number too low to be realistically quantifiable. The planned slope mitigation would also provide an early opportunity to mitigate risks from potential slope failures at the waterline and into the lake. The only documentation for a moderate-sized slope failure at the quarry indicated that the rate of failure was slow enough (a drop of 0.5 foot over a few days followed by a 15- to 20-foot drop over a 7-hour period followed by about 1 year to move laterally into the quarry) for a person to easily escape. Therefore, the risks to human health and life would be negligible.

The consequences for structures would be for a moderate- to large-scale slope failure to destroy property. The only property at risk would be any facilities within the setbacks, which might include park facilities. Therefore, minimal property would be at risk and might easily be replaced. The portion of the road inside the development setbacks on the west side would have to be designed to be resistant from a potential failure, which was described above (Youngdahl Consulting Group 2014).

Although the qualitative risk assessment indicated that risks to property and people would be low, a detailed quantitative risk assessment and additional geotechnical evaluation for property will be necessary when detailed site design is developed. An evaluation of conditions around the quarry after implementation of Mitigation Measure GEO-1 would also provide additional information and the opportunity to re-evaluate conditions and risks associated with the improved conditions. Until this information is available, the impact regarding stability around the North Quarry in the proposed development setback area is conservatively considered potentially significant. Implementation of Mitigation Measure GEO-3b would reduce this impact to a less-than-significant level.

Old (South) Quarry—Proposed Monolith Event Center

The proposed location of the Monolith Event Center is the smaller quarry pit south of Marble Lake. As proposed in the VMVSP, the monolith and the surrounding quarry floor would be preserved and may serve as a private event and activity complex. This former pit is filled with soil and other material and there are likely voids in the material, which may be unstable, posing a risk to people attending events or visiting the site. This is a potentially significant impact. This impact can be reduced to a less-than-significant level through completion of a geotechnical investigation of the former pit fill materials and monolith and implementation of measures to ensure pit floor stability for intended uses as described in Mitigation Measure GEO-3c. Such measures could include compacting the existing fill and placing additional fill to meet appropriate engineering standards or removing fill material and placing engineered fill to create a stable quarry floor. If existing fill materials are removed, they could be re-used elsewhere onsite, to the extent feasible. Adherence to

CCR Sections 3502(b)(4) and 3704(a), American Society for Testing and Materials (ASTM) geotechnical engineering standards, and CBC Section 1803A.7 as described in Mitigation Measure GEO-3c would ensure the proper compaction and treatment of fill to allow the development of the proposed Monolith Event Center.

Detention Basin Roadway Embankment Stability

The project would include a storm drain system to ensure project flows offsite (downstream) would not be greater than existing conditions. This would be accomplished with the use of a detention basin at the southernmost road crossing over Marble Creek within the project area, where sufficient storage is available along Marble Creek to attenuate flows. As currently proposed, 53 acre-feet of storage would be provided, which would include attenuation for flows from development of the proposed Lime Rock Valley Specific Plan adjacent to the project. Although the project applicant has indicated the roadway would be privately maintained, the County would require the roadway to be designed and constructed in accordance with applicable County standards. Although the depth of water and temporary storage are within the State Division of Safety of Dams (DOSD) standards for determining whether the impoundment would be under its jurisdiction, the project applicant has confirmed with DOSD staff that the roadway embankment would be exempt from regulation (Appendix J, *Drainage Analysis*).

The main features of the detention basin at the downstream crossing would be a single box culvert, 5 feet high and 7.2 feet wide. There would also be a second culvert incorporated into the embankment for each crossing, located at the 100-year water level at the upstream side of the embankment. This would act as an emergency spillway in an extreme event (e.g., larger than a 100-year storm) or if debris restricts high flow. Culvert outlets would also include erosion control features (e.g., riprap) to control flow velocity. Culvert design would be refined as more detailed site plans are developed (Appendix J). As currently proposed, the embankment would include rock riprap, which is effective for erosion control and to reduce the potential for downstream scour and bank erosion in the channel from high-velocity flows through the emergency culverts. However, although the features were identified to address the hydrology and hydraulics of a 100-year event, the preliminary design incorporating rock riprap may not provide a stable embankment during 100-year or greater events (e.g., the roadway could be overtopped, which could erode the embankment, resulting in failure of the embankment to contain large amounts of water). In addition, if the ends of the roadway embankment are not properly keyed into the adjacent slopes, the embankment could become unstable, or seepage may affect the integrity of the embankment.

This is a potentially significant impact, which can be mitigated to a less-than-significant level through implementation of Mitigation Measure GEO-3d. This mitigation measure requires a geotechnical study to determine whether the proposed location of the roadway embankment/detention basin is appropriate from a geotechnical perspective and to identify recommendations for design features (e.g., reinforced concrete structure) for the roadway embankment impounding stormwater runoff that can withstand a maximum flood event.

Mitigation Measure GEO-1: Incorporate mitigation measures identified in geotechnical reports and use standard engineering practices to mitigate for non-engineered fill slope instability around the North Quarry

Mitigation Measure GEO-3a: Protect Marble Lake Boulevard from unstable geologic conditions

Prior to submitting final improvement plans, the project applicant's geotechnical engineers shall implement the recommendations in the *Marble Valley Quarry Slopes Risk Assessment* (Youngdahl Consulting Group 2014) to identify design and construction measures that must be implemented to protect the roadway on the west side of the North Quarry (Marble Lake Boulevard) from unstable geologic conditions. Such measures could include, but would not be limited to, extending support for the road to below any projected theoretical slip failure surfaces identified in the Youngdahl Consulting Group (2014) study or through geotechnical subsurface exploration. Alternatively, the road could be moved further to the west to be completely outside the recommended development setback.

Mitigation Measure GEO-3b: Implement development setbacks around Marble Valley Lake

Following implementation of Mitigation Measures GEO-1 and GEO-3a, and prior to approving site plans for the proposed park around the North Quarry, the County shall ensure the project applicant has completed a geotechnical study and quantitative risk assessment as described in the *Marble Valley Quarry Slopes Risk Assessment* (Youngdahl Consulting Group 2014). Any proposed fills, structures, or utilities within the setback require further analysis and/or engineering at that specific location. If additional measures are required to stabilize the area in the development setbacks, the measures shall be implemented prior to development of the park facilities. Ongoing risk assessment and management shall be incorporated into designs for improvements around Marble Valley Lake to keep risks below acceptable levels, as identified in the *Marble Valley Quarry Slopes Risk Assessment* (Youngdahl Consulting Group 2014). Improvements constructed within the development setback shall be periodically inspected by the property owner or their contractor for signs of settlement or displacement for a period of 20 years, and the results reported to the County. This provision shall be incorporated into the Development Agreement. If settlement or displacement is observed, a geotechnical engineer shall be consulted to identify recommendations to correct problems, if any. The County shall review and approve any remedial measures.

Mitigation Measure GEO-3c: Ensure stability of South Quarry pit (Monolith Event Center)

Prior to submitting final improvement plans, the project applicant's geotechnical engineers shall complete a geotechnical investigation of the South Quarry pit to identify design and construction measures that must be implemented to ensure the stability of the quarry floor with respect to anticipated uses of that location. Such measures could include, but would not be limited to, compacting the existing fill and placing additional fill to meet appropriate engineering standards for removing fill material and placing engineered fill to create a stable quarry floor. The specific performance standard(s) to be achieved to ensure a stable quarry floor shall be determined by the geotechnical engineer as part of the investigation, and onsite testing of fill materials and stability will be performed by the geotechnical engineer to document the specified level of safety has been achieved. The performance standards shall adhere to CCR Sections 3502(b)(4) and 3704(a), ASTM geotechnical engineering standards, and CBC Section 1803A.7. The County shall not allow use of the South Quarry pit as the Monolith Event Center until it has reviewed and approved the study and has confirmed all recommendations of the geotechnical engineer have

been implemented and that the geotechnical engineer has confirmed the final configuration is stable.

Mitigation Measure GEO-3d: Evaluate and implement appropriate detention basin roadway embankment design to address geotechnical stability and flood protection

Prior to submitting final improvement plans, the project applicant's geotechnical engineers shall complete a geotechnical investigation of the currently proposed detention basin roadway embankment to confirm the location is appropriate from a geotechnical perspective (i.e., would not be subject to slope instability or seepage that could compromise the structure) and to identify specific design (e.g., reinforced concrete emergency spillway or as determined by the hydraulic engineer) to withstand the maximum flood event. In addition, the geotechnical investigation shall evaluate whether the proposed stormwater facility will cause or increase channel and/or slope instability, increase downstream channel scour, or trap sediment within the temporary impoundment. If such impacts could occur, the study shall identify recommendations to reduce potential impacts. If in-stream work is necessary in Marble Creek or Deer Creek, all necessary biological resources studies shall be completed, and all necessary permits and approvals obtained prior to construction. During operation, the road shall be maintained by the project applicant or Master Owners Association, and it shall be inspected following large storm events and periodically during other times, at the project applicant's or Master Owners Association's expense, for signs of settlement or displacement, and the results reported to the County. If settlement or displacement are observed, a geotechnical engineer shall be consulted to identify recommendations to correct problem(s), if any are discovered. Proposed methods to remedy any problems shall be submitted to the County for review and approval.

In the event the geotechnical study determines the location is not appropriate, the project applicant shall update the drainage study to identify other location(s) for detention storage in the project area and to provide the results of updated hydrologic and hydraulic calculations to the County to demonstrate how the new location(s) meet County standards for controlling runoff. If a new location is identified, the following shall be implemented with draft final improvement plans: (1) a geotechnical report shall be submitted indicating how features would be designed and constructed to withstand a maximum flood event; (2) if the new location is not a roadway crossing, a determination shall be made whether the facility is subject to DOSD jurisdiction; (3) appropriate biological and cultural resources studies shall be performed, and mitigation identified and implemented prior to construction, as necessary, including obtaining all necessary permits and approvals, to reduce impacts.

Impact GEO-4: Result in fracturing and/or erosion from construction methods that could result in unstable geologic or soil conditions (less than significant with mitigation)

According to Youngdahl Consulting Group (2012a), the depth to bedrock in the project area is shallow. Shallow depth to bedrock and the presence of steeper slopes could require special construction methods, such as blasting, that could result in fracturing and/or erosion which could increase sedimentation during construction and could result in the need for additional use of engineered materials to retain local stability and to provide adequate foundation for construction activities. The underlying bedrock materials can likely be excavated to depths of several feet using dozers equipped with rippers. Youngdahl Consulting Group expects that the upper, weathered portion of the rock would require use of a Caterpillar D9 equipped with a single or multiple shank

rippers, or similar equipment. Youngdahl Consulting Group anticipates that a ripper-equipped D9 can penetrate at least as deep as the test pits at most locations with moderate effort. However, blasting cannot be ruled out in areas of resistant rock. Blasting could result in fracturing and/or erosion, which could result in unstable geologic or soil conditions on the project site or adjacent properties if not properly managed. This would be a significant impact. In addition to complying with applicable state and federal agency blasting regulations,[5] implementation of Mitigation Measure GEO-4 would ensure that this impact would be less than significant.

Mitigation Measure GEO-4: Implement recommendations developed by qualified geotechnical engineers for excavation in hard rock

Where hard rock cuts in fractured rock are anticipated, the orientation and direction of ripping will likely play a large role in the rippability of the material. If blasting is proposed instead of excavation using heavy equipment, the project applicant's geotechnical engineer shall be responsible for conducting a final geotechnical evaluation of hard rock areas where blasting is being proposed. The geotechnical engineer's evaluation shall include specific measures to be implemented during excavation/blasting to minimize potential impacts on or adjacent to the project area. The project applicant's construction contractor shall consult with a qualified engineer before excavation/blasting activities begin to finalize the specific method(s) to be used. The project applicant's geotechnical engineer shall be onsite during blasting activities to ensure that excavation/blasting activities are done in accordance with the final geotechnical evaluation.

Impact GEO-5: Be located on expansive soil, as defined in Section 1803.5.3 of the CBSC, creating substantial direct or indirect risks to life or property (less than significant)

The materials encountered in Youngdahl Consulting Group's explorations were generally non-plastic (rock, sand, and non-plastic silt). The non-plastic materials are generally considered to be non-expansive. Therefore, no special recommendations have been provided for expansive soil conditions in the Youngdahl Consulting Group (2012a) *Preliminary Geotechnical Engineering Study for Marble Valley, El Dorado Hills, California*. Wallace Kuhl & Associates (2000) field reconnaissance and test pits indicate the presence of localized occurrences of high-plasticity clay—such materials are indicated to be moderately to highly expansive. Furthermore, according to the *Soil Survey of El Dorado, California* (Rogers 1974), the Sobrante silt loam, 3–15% slopes soil map unit has low to moderate shrink-swell potential. Expansive soils have the potential to compromise the structural integrity of project features.

Pursuant to CBSC requirements and County standards, the project applicant's engineers would be responsible for conducting a final geotechnical evaluation of unconsolidated sediments of the project area to determine whether they are susceptible to shrink-swell behavior prior to grading and construction activities. Subsurface borings at regular intervals within the project footprint or other methods determined by a geotechnical engineer are recommended. Based on subsurface conditions, the project applicant's engineers would design the specific project elements to accommodate the effects of expansive soils. If expansive soils are determined to be present at any location where project activities would occur, corrective actions would be taken. Corrective actions

[5] The following is a partial list of agencies that have regulations pertaining to blasting: California Department of Industrial Relations, Occupational Safety and Health Division for use of explosives; the U.S. Department of Transportation and California Highway Patrol for transport of explosives; the U.S. Bureau of Alcohol, Tobacco, and Firearms for storage of explosives; conditions of a permit issued by the El Dorado County Sheriff's Office.

may include excavation of potentially problematic soils during construction and replacement with engineered backfill, ground treatment processes, and direction of surface water and drainage away from foundation soils. The project applicants would select one or more of these measures in consultation with a qualified engineer before grading activities begin, ensuring that this impact would be less than significant.

Impact GEO-6: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater (no impact)

The project would be connected to EID sewer lines, not septic systems. Therefore, there would be no impact. No mitigation is required.

Impact GEO-7: Be located on a subterranean mine that has a shaft, vent, or adit open to the surface (significant and unavoidable)

There are two narrow limestone rock units in the project area, and each of these were previously mined, resulting in the two quarry pits located within the project area. There are also two former mines within offsite improvement areas along the EID sewer and water line (see Figure 2-9). One of these was a limestone mine and the other was a copper mine. If these or other mine features are located within the project area and/or offsite improvement areas and have shafts, large vents, or adits open to the surface that have not been previously identified, they could pose a hazard such as people falling in and/or becoming trapped during construction. This would be a significant impact. Implementation of Mitigation Measure GEO-7a would ensure that, if this or any other mine feature is discovered within the proposed project's construction area, it would be appropriately closed. The closure of mine shafts, vents, or adits would reduce this construction impact to less than significant.

Because mine features have been previously identified within the project area as well as the offsite improvement areas, it is possible that other small, undocumented unidentified mine features may be present elsewhere, most likely in areas where prospectors believed the potential for gold-ore-forming processes was greater. Also, based on lithology, various locales have the potential to possess these unidentified mine features. The possibility of people falling in and/or becoming trapped in these features after project construction exists. Although Mitigation Measures GEO-7a and GEO-7b would reduce this post-construction impact, the possibility remains, and mitigation would not reduce this impact to a less-than-significant level. Therefore, this impact is considered significant and unavoidable.

Mitigation Measure GEO-7a: Incorporate standard practice for abandoning small hard rock mining features

Construction contracts and grading plan notes shall include a statement that shafts, vents, adits, caves, voids, or other features associated with hard rock mining may be present in the project area. If a shaft, vent, adit, cave, or void is encountered during field surveying, grading, or construction, work shall stop immediately, and the site shall be flagged and fenced. A qualified archaeologist shall be retained to record the feature, assess the significance of the feature and determine if it is associated with a historic district. If the feature is associated with a known historic district or cultural resources site it shall be treated in accordance with treatment plans prepared for that site. If the feature is not associated with a known cultural resource, Mitigation Measure CUL-1e shall be implemented. Resources that pose a hazard may be closed or sealed

after they have been recorded. The project applicant shall implement standard practice for abandoning small hard rock mine features, including the design and construction of a structural concrete (or other appropriate sealing materials) cap of the feature. If such rock mine features are detected, the project applicants shall implement this measure in consultation with a qualified engineer before ground-disturbing activities continue. If features are discovered post-construction by the developer/homeowner, the features shall be properly closed to prevent entry according to a plan prepared by a qualified engineer.

Mitigation Measure GEO-7b: Develop and implement reporting process for mine features discovered by residents, visitors, and employees

The Marble Valley Homeowners Association shall develop a mechanism that would allow Marble Valley occupants and visitors to report findings of unidentified mine pits, shafts, adits, or related features. These reported features would be closed as indicated in Mitigation Measure GEO-7a.

Impact GEO-8: 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 (less than significant)

Table 3.5-6 displays the MRZs identified by the California Geological Survey (2001). The project area is mapped as MRZ-1 for limestone and construction materials, indicating that there are no significant mineral resources present. It is mapped as MRZ-3a for volcanogenic processes, indicating that there are known mineral deposits that may qualify as mineral resources but require further exploration and analysis to be reclassified. The project area is mapped as MRZ-4 for gold deposits (hydrothermal) and primarily MRZ-4 for gold deposits (metasomatic), indicating that information is inadequate for assignment to any other MRZ. A small area is mapped as MRZ-3b for gold deposits (metasomatic), indicating that the area may contain mineral deposits. The area is mapped as MRZ-3a for gold deposits (placer) along Deer Creek, indicating that the area contains known mineral resources, but they would require further exploration to be reclassified. Finally, there are no aggregate sources mapped in the project area.

There are two former limestone mines in the project area that have been closed for many years (since approximately 1918 [ECORP Consulting 2013] and the 1980s [Archeo-Tec 1990]). Additionally, there is little production of these minerals (e.g., copper, chromite) in the entire state, indicating minimal economic viability for these types of resources. With respect to gold, there is no known information that would suggest the project area has recently been under consideration for gold exploration or gold mining development that would cause a reconsideration of its MRZ classification or mine development. The current owners of the project area have not sought this MRZ reclassification. Consequently, there are no existing or potential resources that would be of value to the region or residents of the state, and the impact would be less than significant.

Table 3.5-6. Mineral Resources for the Project Area

Mines and Prospects	Limestone	Construction Materials	Gold Deposits (Hydrothermal)	Volcanogenic Processes	Gold Deposits (Placer)	Gold Deposits (Metasomatic)	Aggregate Resource Areas
Marble Valley – limestone (156)	MRZ-1	MRZ-1	MRZ-4	MRZ-3a	MRZ-4	MRZ-4	None
Marble Valley – limestone (157)					MRZ-3a (p-1) along Deer Creek	MRZ-3b along NE portion of project area	

Source: California Geological Survey 2001: Plates 2–9, Appendix A.

Impact GEO-9: 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)

The County General Plan does not identify any locally important mineral resources, and there is no -MR zoning overlay at the project area. Also, the project area does not contain any mineral resources that have not been considered in the general plan (see discussion under Impact GEO-7). Since there are no locally important mineral resources or recovery sites identified in these plans, there would be no impact.

Impact GEO-10: Directly or indirectly destroy a unique paleontological resource or unique geologic feature (less than significant with mitigation)

Geologic units with potential to contain paleontological resources are the limestone deposits and the Quaternary alluvium (high sensitivity for paleontological resources) and the volcanic units (unknown to low sensitivity for paleontological resources). If fossils are present in the project area, they could be damaged during earth-disturbing construction activities, such as excavation for foundations, fills, and road work. Substantial damage to or destruction of significant paleontological resources as defined by the SVP (2010) would be a significant impact. Implementation of Mitigation Measures GEO-10a, GEO-10b, and GEO-10c, which require construction worker training to recognize paleontological resources and work stoppage if resources or caves are encountered, and evaluation by a qualified professional would reduce paleontological resource impacts to a less-than-significant level.

The limestone monolith in the small quarry pit south of Marble Lake is approximately 25 feet tall. Although the rock itself is not unique, the feature is a unique geologic and visual attribute in the project area. It would be integrated into the proposed Monolith Event Center. The stability of the monolith would be investigated to ensure public safety (see Impact GEO-4 and Mitigation Measure GEO-3c).

Mitigation Measure GEO-10a: Educate construction personnel in recognizing fossil material

Prior to construction, the project applicant shall ensure that all construction personnel involved in grading/excavation or similar activities receive training provided by a qualified professional paleontologist who is experienced in teaching non-specialists to ensure that construction personnel can recognize fossil materials in the event any are discovered during construction.

Mitigation Measure GEO-10b: Stop work if fossil remains are encountered during construction

If fossil remains are discovered during earth-disturbing activities, activities shall stop immediately until a state-registered professional geologist or qualified professional paleontologist can assess the nature and importance of the find and a qualified professional paleontologist can recommend appropriate treatment. Treatment may include preparation and recovery of fossil materials so that they can be housed in an appropriate museum or university collection and may also include preparation of a report for publication describing the finds. The project applicant shall be responsible for ensuring that recommendations regarding treatment and reporting are implemented.

Mitigation Measure GEO-10c: Stop work if a cave or void is encountered during construction

If a cave or void is encountered during earth-disturbing activities such as excavation, activities shall stop immediately. The cave or void shall be assessed for potential safety hazards by a registered geologist or engineering geologist. If the cave or void is deemed safe a state-registered professional geologist or qualified professional paleontologist shall assess whether fossils are present and recommend appropriate treatment if fossils are found. Treatment may include preparation and recovery of fossil materials so that they can be housed in an appropriate museum or university collection and may also include preparation of a report for publication describing the finds. The project applicant shall be responsible for ensuring that recommendations regarding treatment and reporting are implemented.

Impact GEO-11: Impacts on geological, mineral, and paleontological resources resulting from offsite improvements, and General Plan Policy TC-Xf traffic improvements (less than significant with mitigation)

Offsite improvements, as described in Chapter 2, *Project Description*, include offsite infrastructure necessary to serve the project and traffic improvements required under General Plan Policy TC-Xf. There would be no impacts on geological resources, including minerals and paleontological resources, resulting from implementation of offsite improvements. Impacts on geological resources resulting from offsite improvements would be identical to those described above for the project area only. All relevant IBC and CBSC standards would be incorporated into offsite improvements project design for applicable features to minimize the potential fault rupture and ground-shaking hazards on associated project features. The most recent CBSC seismic design parameters at the time of construction would also be implemented. A SWPPP, adherence to the applicable El Dorado County Grading Ordinance, Subdivision Ordinance, Design and Improvement Standards Manual, and Drainage Manual would all minimize any effects from erosion, runoff, and sedimentation. If special

construction methods, such as blasting, are necessary, Mitigation Measure GEO-4 would be implemented.

The MRZs within the offsite improvement areas, including the General Plan Policy TC-Xf traffic improvement areas, are the same as within the main project area as listed in Table 3.5-6. There are two former mines within the offsite improvement areas (one limestone and one copper). Both mines have been closed since at least the 1980s and have no known potential of reopening. Consequently, there would be no existing or potential resources that would be of value to the region or residents of the state, and the impact would be less than significant. Similarly, the County General Plan does not identify any locally important mineral resources within the offsite improvement areas. Because there are no locally important mineral resources or recovery sites identified for the offsite improvement areas in these plans there would be no impact.

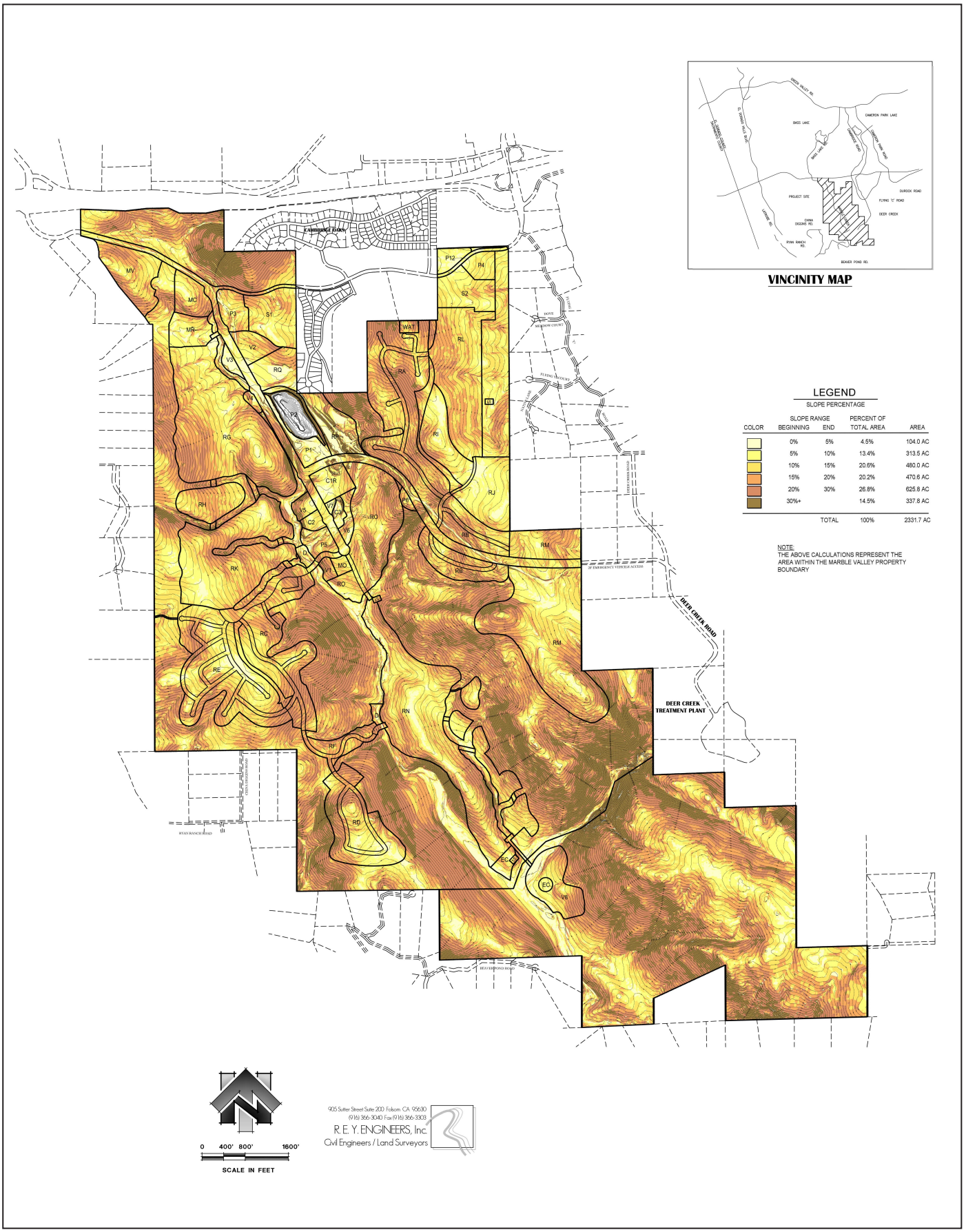
If fossils are present in the offsite improvement areas or General Plan Policy TC-Xf traffic improvement areas, the fossils could be damaged during earth-disturbing construction activities related to offsite improvements, such as grading, fills, and road work associated with the Bass Lake interchange, the Cambridge Road extension, and the Beasley Road/Marble Valley Road improvements and grading and trenching associated with installation of EID sewer and water lines. Units with potential to contain paleontological resources in the offsite improvement areas are the Quaternary alluvium (high sensitivity for paleontological resources), the metavolcanic unit (low sensitivity for paleontological resources), the metasedimentary unit (unknown sensitivity for paleontological resources) and, possibly, the limestone deposits (high sensitivity for paleontological resources). Substantial damage to or destruction of significant paleontological resources as defined by the SVP (2010) would be a significant impact. Implementation of Mitigation Measures GEO-10a, GEO-10b, and GEO-10c would reduce this impact to a less-than-significant level.

Mitigation Measure GEO-4: Implement recommendations developed by qualified geotechnical engineers for excavation in hard rock

Mitigation Measure GEO-10a: Educate construction personnel in recognizing fossil material

Mitigation Measure GEO-10b: Stop work if fossil remains are encountered during construction

Mitigation Measure GEO-10c: Stop work if a cave or void is encountered during construction



ICF Graphics... 00667.12 (7-5-2018)

Figure 3.5-1
Slope Map

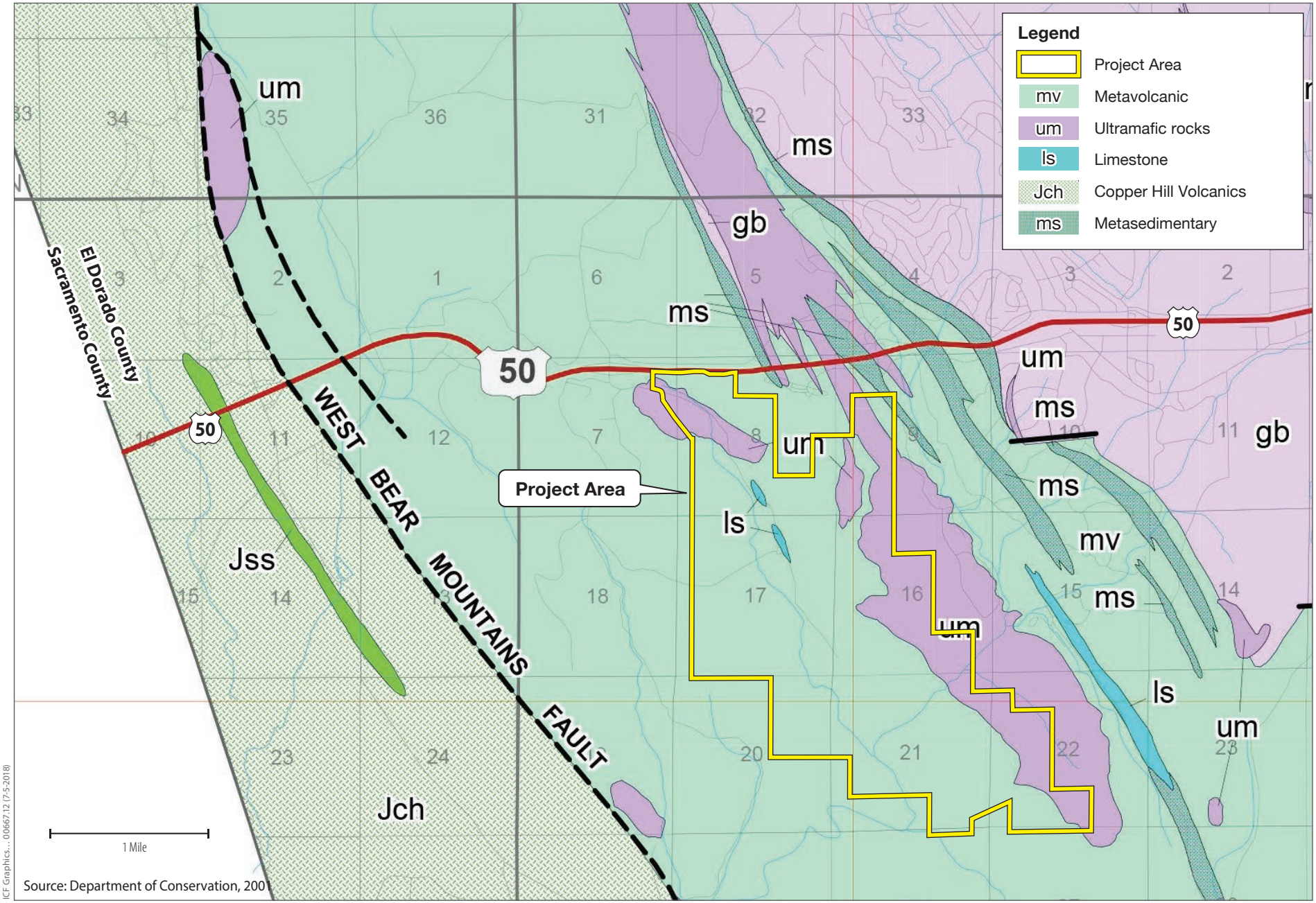
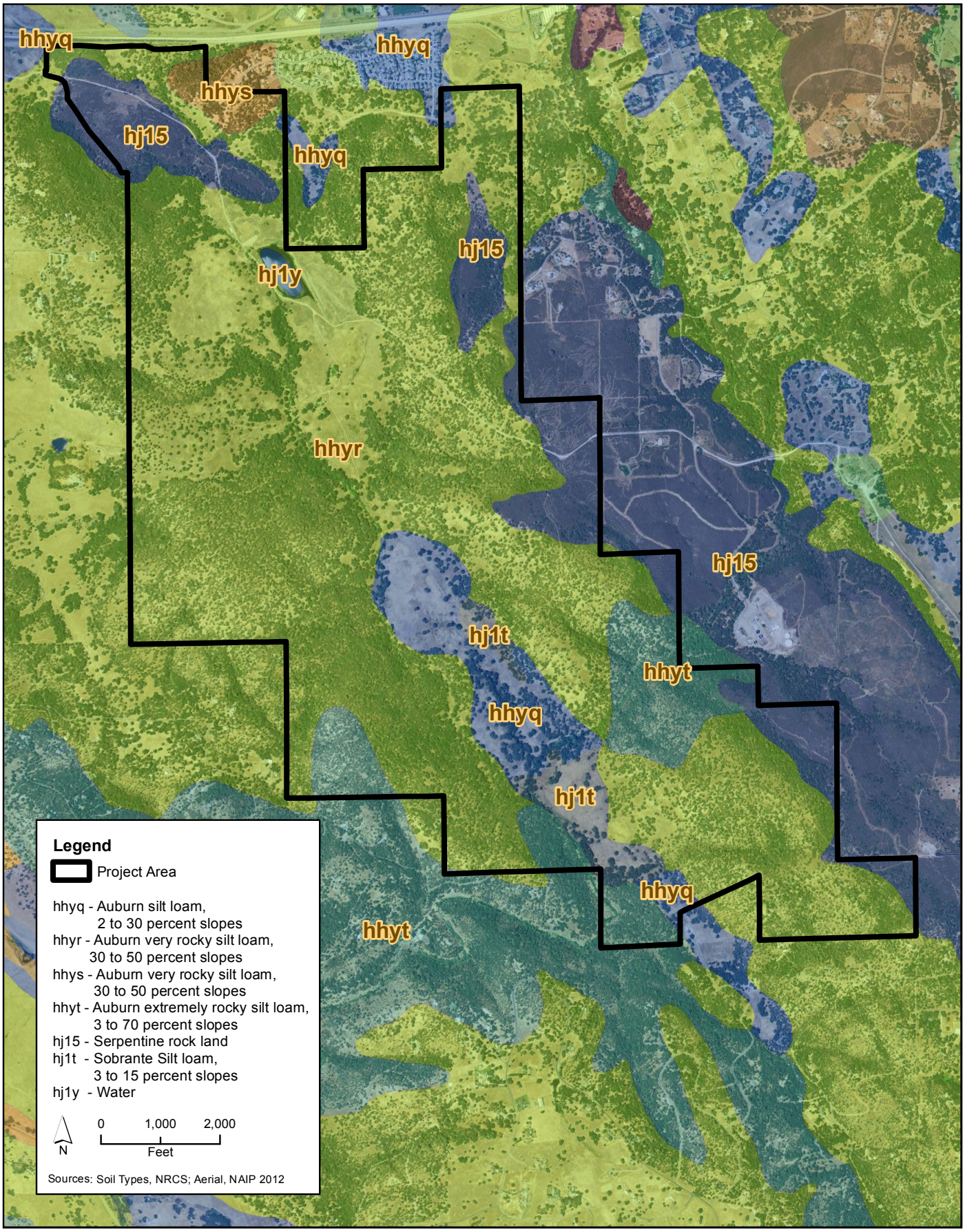
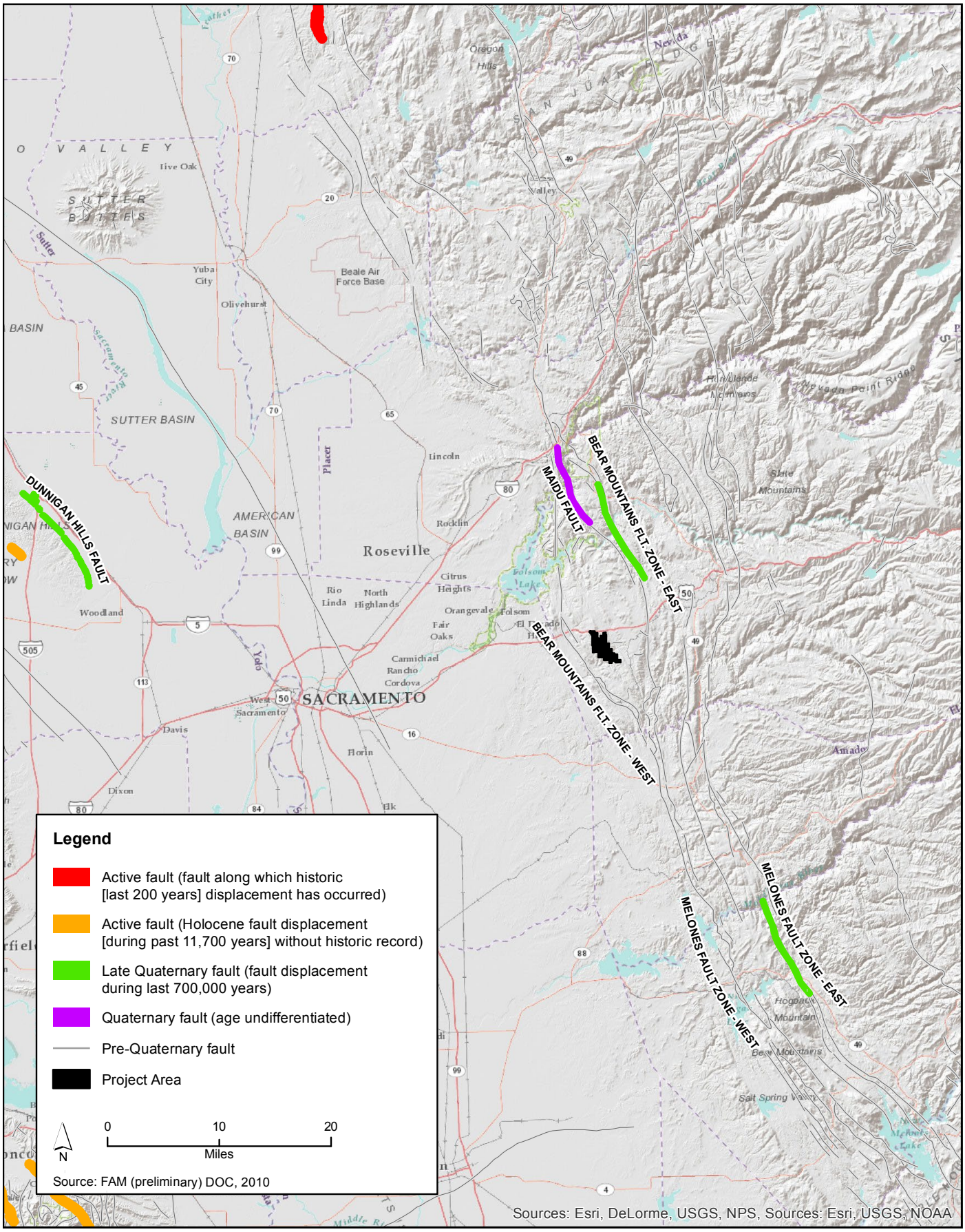


Figure 3.5-2
Geologic Map of the Project Area
Marble Valley



ICF Graphics... 00667.12 (7-6-2018)

Figure 3.5-3
Soils in the Project Area



ICF Graphics... 00667.12 (7-6-2018)

Figure 3.5-4
Faults in the Project Area

3.6 Greenhouse Gas Emissions

GHGs are gaseous compounds that limit the transmission of Earth's radiated heat out to space. GHGs are an important consideration for construction of the VMVSP because these emissions can contribute to global climate change. Climate change is a global problem, and GHGs are global pollutants, unlike criteria air pollutants (e.g., ozone precursors), which are primarily pollutants of regional and local concern. Given the long atmospheric lifetimes of GHGs, GHGs emitted by many sources worldwide accumulate in the atmosphere. No single emitter of GHGs is large enough to trigger global climate change on its own. Rather, climate change is the result of the individual contributions of countless past, present, and future sources. Thus, GHG impacts are inherently cumulative, and the study area for impacts on GHGs includes the entire global sand state atmospheres.

This section discusses applicable GHG regulations as they pertain to the VMVSP and defines key GHG emissions and their current concentrations within the study area. It describes the GHG impacts, if any, that would result from implementation of the VMVSP and provides mitigation for significant impacts, where feasible. Impacts related to air quality are described in Section 3.2, *Air Quality*.

3.6.1 Existing Conditions

Regulatory Setting

This section summarizes international, federal, state, and local regulations related to GHG emissions and climate change that are applicable to the VMVSP.

International

In 2015, the 21st session of the Conference of Parties (COP21) took place in Paris, France. The session included representatives from 196 parties to the United Nations Framework Convention on Climate Change. The outcomes from the Paris Agreement at COP21 include, but are not limited to, limiting global temperature increase well below 2 degrees Celsius (°C), establishing binding commitments by all parties to make nationally determined contributions (NDC), pursuing domestic policies aimed at achieving NDCs, and requiring regular reporting by all countries on their emissions and progress made toward implementing and achieving their NDCs. At the 27th session of the Conference of Parties (COP27) in November 2022, parties in the Paris Agreement agreed to revisit and strengthen their NDCs by the end of 2023.

The Under2 Coalition is an international coalition of jurisdictions that signed the Global Climate Leadership Memorandum of Understanding (Under2 MOU), which aims to limit global warming to 2°C, limit GHGs to below 80–95% below 1990 levels, and/or achieve a per-capita annual emissions goal of less than 2 metric tons by 2050. The Under2 MOU has been signed or endorsed by 135 jurisdictions (including California) that represent 32 countries and 6 continents.

Federal

President Joe Biden recently signed several federal Executive Orders (EO) related to GHG emissions and climate resiliency. EO 13990, signed in January 2021, set a national goal of achieving a 50 to

52% reduction from 2005 levels in economy-wide net GHG pollution by 2030. EO 14057, signed in December 2021, requires federal agencies to develop strategic processes for achieving, among other things, carbon-free electricity by 2030 and 100% zero-emission vehicle acquisitions by 2035. President Joe Biden has also signed two bills—the Infrastructure Investment and Jobs Act (2021) and Inflation Reduction Act (2022)—that provide funding for infrastructure improvements that will reduce GHG emissions and bolster resilience to climate change. Despite these actions, there is currently no federal law or legislatively mandated national GHG-reduction target.

State

California has adopted statewide legislation addressing various aspects of climate change and GHG-emissions mitigation. The legislation establishes a broad framework for the state's long-term GHG-reduction and climate change–adaptation program. Various California Governors have also issued several EOs related to the state's evolving climate-change policy. Summaries of key policies, regulations, and legislation at the state level that are relevant to the VMVSP are described below.

Statewide GHG-Emission Targets and the Climate Change Scoping Plan

Executive Order S-03-05

California EO S-3-05 set forth a series of target dates by which statewide emissions of GHGs need to be progressively reduced, as follows.

- By 2010, reduce GHG emissions to 2000 levels (approximately 457 million metric tons of carbon dioxide [CO_2] equivalent [CO_2e]).
- By 2020, reduce emissions to 1990 levels (approximately 427 million metric tons CO_2e).
- By 2050, reduce emissions to 80% below 1990 levels (approximately 85 million metric tons CO_2e).

State EOs are binding only on state agencies. Accordingly, California EO S-3-05 guides state-agency efforts to control and regulate GHG emissions but has no direct binding effect on local government or private actions. The Secretary of the California Environmental Protection Agency is required to report to the Governor and California State Legislature biannually on the impacts of global warming on California, mitigation and adaptation plans, and progress made toward reducing GHG emissions to meet the targets established in EO S-3-05.

Assembly Bill 32

AB 32 (Health and Safety Code § 38500 *et seq*.) codified the state's 2020 GHG-emissions target by requiring that the state's global warming emissions be reduced to 1990 levels by 2020. Since adoption of the act, CARB, the California Public Utilities Commission (CPUC), California Energy Commission (CEC), and the Building Standards Commission have been developing regulations that will help meet the goals of AB 32 and EO S-03-05. The 2008 *Climate Change Scoping Plan for AB 32* (2008 Scoping Plan) identified specific measures to reduce GHG emissions to 1990 levels by 2020 and required CARB and other state agencies to develop and enforce regulations and other initiatives for reducing GHGs. Specifically, the 2008 Scoping Plan articulates a key role for local governments, recommending that they establish GHG-reduction goals for both their municipal operations and the community consistent with those of the state. The *First Update to the AB 32 Scoping Plan* (2014 First Update) was released in February 2014 and includes revised GHG-reduction estimates based on

updated statewide GHG inventories. The update also discusses the need for continued GHG-reduction progress post-2020 (CARB 2014).

Senate Bill 32 and Assembly Bill 197

Senate Bill (SB) 32 required CARB to ensure that statewide GHG emissions are reduced to at least 40% below 1990 levels by 2030. The companion bill, AB 197, created requirements to form a Joint Legislative Committee on Climate Change Policies, required CARB to prioritize direct emission reductions and consider social costs when adopting regulations to reduce GHG emissions beyond the 2020 statewide limit, required CARB to prepare reports on sources of GHGs and other pollutants, established 6-year terms for voting members of CARB, and added two legislators to CARB as nonvoting members.

Pursuant to SB 32, CARB updated the 2008 Scoping Plan to address implementation of GHG-reduction strategies to meet the 2030 reduction target. The *2017 Scoping Plan Update* (2017 Scoping Plan), approved in December 2017, continued the discussion from the 2008 Scoping Plan and 2014 First Update of identifying scientifically backed policies within six of the state's economic sectors to reduce GHGs. The 2017 Scoping Plan included various elements, such as doubling energy-efficiency savings, increasing the low-carbon fuel standard (LCFS) from 10 to 18%, adding 4.2 million zero-emission vehicles on the road, implementing the Sustainable Freight Strategy, implementing a post-2020 Cap-and-Trade program, creating walkable communities with expanded mass transit and other alternatives to traveling by car, and developing an Integrated Natural and Working Lands Action Plan to protect land-based carbon sinks.

Executive Order B-55-18

EO B-55-18 acknowledged the environmental, community, and public health risks posed by future climate change and further recognized the climate stabilization goal that 196 parties adopted under the Paris Agreement. Based on the worldwide scientific agreement that carbon neutrality must be achieved by the mid-twenty-first century, EO B-55-18 established a new state goal to achieve carbon neutrality as soon as possible, and no later than 2045, and to achieve and maintain net-negative emissions thereafter. The EO charged CARB with developing a framework for implementing and tracking progress toward these goals. This EO extended EO S-3-05 but is only binding on state agencies.

Assembly Bill 1279

AB 1279 (Health and Safety Code Section 38562.2) codified the state's 2045 GHG-emissions target expressed under EO B-55-18. The bill required California to achieve net-zero GHG emissions (i.e., reach a balance between the GHGs emitted and removed from the atmosphere) no later than 2045 and to achieve and maintain net-negative GHG emissions from then on. It also mandated an 85% reduction in statewide anthropogenic (i.e., human-made) GHG emissions (from 1990 levels) by 2045. AB 1279 recognized that meeting these targets would require direct GHG-emission reductions and removal of CO_2 from the atmosphere, as well as a nearly complete transition from fossil fuels. As such, the bill directed CARB to work with relevant state agencies to ensure that Scoping Plan updates include measures that put California on a trajectory to achieve these targets. It also tasked CARB with implementing strategies that facilitate CO_2-removal solutions and carbon capture, utilization, and storage technologies. To evaluate the state's progress, AB 1279 required that CARB report progress toward these targets annually to the California State Legislature. The bill directed that CARB, by 2035, must assess the feasibility and tradeoffs of reducing statewide anthropogenic

GHG emissions to 85% below 1990 levels by 2045 and report its findings to the California State Legislature.

Pursuant to EO B-55-18 and AB 1279, CARB updated the 2017 Scoping Plan to address implementation of GHG-reduction strategies to meet the 2045 reduction target. The *2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan), approved in November 2022, built on GHG-reduction measures detailed in the previous Scoping Plans and included additional measures to capture and store atmospheric carbon through the state's natural and working lands, using a variety of mechanical approaches. By incorporating GHG-emissions reduction and carbon-capture methods, the 2022 Scoping Plan identified a technologically feasible, cost-effective path to achieve carbon neutrality by 2045 (CARB 2022a).

Vehicle Efficiency, Vehicle Miles Traveled, and Zero-Emissions/Low-Carbon Vehicle Standards

Executive Order S-01-07, Low-Carbon Fuel Standard

California EO S-01-07 mandated: (1) that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020 (achieved); and (2) that a LCFS for transportation fuels be established in California. The EO initiated a research and regulatory process at CARB. In 2018, CARB passed amendments to the LCFS that set a target of reducing fuel-carbon intensity by 20% by 2030, compared to a 2010 baseline.

Assembly Bill 1493

With the passage of AB 1493, also known as Pavley I, in 2002, California launched an innovative and proactive approach to dealing with GHG emissions and climate change at the state level. AB 1493 required CARB to develop and implement regulations to reduce automobile and light-truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with model year 2009. Although litigation challenged these regulations, and USEPA initially denied California's related request for a waiver, the waiver request was granted. In 2012, additional strengthening of the Pavley I standards (referred to as the Advanced Clean Cars measure) was adopted for vehicle model years 2017–2025. Together, the two standards are expected to increase average fuel economy to roughly 54.5 miles per gallon in 2025.

Advanced Clean Cars II

In August 2022, CARB voted to approve the Advanced Clean Cars II proposal, which would dramatically reduce emissions from passenger cars for model years 2026 through 2035. This goal requires an increasing proportion of new vehicles to be zero-emission vehicles, with the goal of 100% zero-emissions for new vehicles sold by 2035 (CARB 2022b).

Advanced Clean Truck Regulation

As discussed in Section 3.2, *Air Quality*, CARB adopted the Advanced Clean Truck Regulation in October 2020 to accelerate a large-scale transition of zero-emission medium- and heavy-duty vehicles. The regulation requires the sale of zero-emission medium- and heavy-duty vehicles as an increasing percentage of total annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales would need to be 55% of Class 2b–3 truck sales, 75% of Class 4–8 straight truck sales, and 40% of truck tractor sales. By 2045, every new medium- and heavy-duty truck sold in California will be zero-emission.

Senate Bill 375, Sustainable Communities Strategy

SB 375[1] (September 2008) provided a planning process that coordinated land use planning, regional transportation plans (RTP), and funding priorities to help California meet the GHG-reduction goals established in AB 32. SB 375 required that RTPs developed by MPOs include an SCS. The goal of the SCS is to reduce regional VMT through land use planning and consequent transportation patterns. CARB first released the regional targets in September 2010 and updated them in March 2018.

SACOG is the MPO for the Sacramento region, including the County's western slope. SACOG adopted its SB 375–compliant 2020 MTP/SCS in November 2019 (SACOG 2019a). SB 375 also includes provisions for streamlined CEQA review for certain types of mixed-use and transit priority projects that meet the specific criteria that SB 375 established. Per State CEQA Guidelines Section 15183.5, quantified plans, such as the MTP/SCS EIR, "may be used in the cumulative impacts analysis of later projects." More specifically, "later project-specific environmental documents may tier from and/or incorporate by reference" the "programmatic review" conducted for the GHG-reduction plan. Section 15183.5 also states

> An environmental document that relies on a greenhouse gas reduction plan for a cumulative impacts analysis must identify those requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures applicable to the project.

Environmental documents prepared for projects that are consistent with the MTP/SCS EIR are not required to reference, describe, or discuss the following in their GHG impact analysis.

1. Growth-inducing impacts
2. A reduced-density alternative to address impacts on transportation or climate change of increased car and truck VMT induced by the project
3. Any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network

No areas within the County have sufficient transit service to qualify for transit priority project streamlining introduced under SB 375 (SACOG 2019a). However, mixed-use projects consistent with the MTP/SCS may qualify for CEQA streamlining and tier from the MTP/SCS EIR for their project-level GHG-emissions analysis.

Senate Bill 743

SB 743 (July 2020) required revisions to the CEQA Guidelines that establish new impact-analysis criteria for the assessment of a project's transportation impacts. The intent behind SB 743 and revising the CEQA Guidelines was to integrate and better balance the needs of congestion management, infill development, active transportation, and GHG-emissions reduction. OPR recommends that VMT serve as the primary analysis metric, replacing the existing criteria of delay and level of service. In 2018, OPR released a technical advisory outlining potential VMT significance thresholds for different project types. For example, it would be reasonable to conclude that residential and office projects demonstrate a VMT level that is 15% less than existing (i.e., 2015–

[1] California Government Code Sections 14522.1, 14522.2, 65080, 65080, 65080.01, 65400, 65583, 65584.01, 65584.02, 65584.04, 65587, and 65588, and Public Resources Code Sections 2161.3, 21155, and 21159.28.

2018 average) conditions. With respect to retail land uses, any net increase of VMT may indicate a significant transportation impact.

Electricity Generation and Building Efficiency

Senate Bills 1078, 107, 100, and 1020

SB 1078 (2002) and SB 107 (2022),[2] *California's Renewables Portfolio Standard* (RPS), obligated investor-owned utilities, energy service providers, and community choice aggregations to procure an additional 1% of retail sales per year from eligible renewable sources until 20% is reached, no later than 2010 (achieved). CPUC and CEC are jointly responsible for implementing the program. SB X1-2 (2011)[3] set forth a target of procuring 33% of retail sales by 2020 (achieved).

SB 100[4] (2008) and SB 1020 (2022)[5] strengthened and extended California's RPS. Specifically, California utilities are required to generate 44% of their electricity from renewables by 2024 (SB 100), 50% by 2026 (SB 100), 52% by 2027 (SB 100), 60% by 2030 (SB 100), 90% by 2035 (SB 1020), 95% by 2040 (SB 1020), and 100% by 2045 (SB 100/SB 1020). SB 1020 also requires state agencies to rely on 100% renewable energy and zero-carbon resources to serve their own facilities by 2035.

California Energy Efficiency Standards for Residential and Non-Residential Buildings, Green Building Code, Title 24 Update

California has adopted aggressive energy-efficiency standards for new buildings and is continuously updating its standards. In 2008, the California Building Standards Commission adopted the nation's first "green" building standards, which included standards for many aspects of the built environment apart from energy efficiency. The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code (24 CCR). Part 11 established voluntary standards that became mandatory under the 2010 edition of the Code. These standards involved sustainable site development, energy efficiency (in excess of California Energy Code requirements), water conservation, material conservation, and internal air contaminants.

On May 9, 2018, CEC adopted the 2019 Building Energy Efficiency Standards, which took effect on January 1, 2020. The 2019 standards mandate higher efficiency levels and rooftop solar-photovoltaic (PV) systems for all new residential buildings constructed in 2020 and beyond. The 2019 standards will result in residential buildings that are, on average, 7% more energy efficient than residential buildings built under the 2016 standards (i.e., 53% of solar-PV systems are included). Nonresidential buildings will be 30% more energy efficient because the standards will update indoor and outdoor lighting to make maximum use of light-emitting diode (LED) technology.

[2] Public Resources Code Sections 25620.1, 25740, 25470.5, 25741, 25742, 25743, 25744.5, 25746, and 25751 and Public Utilities Code Sections 387, 399.11, 399.12, 399.13, 399.14, 399.15, 399.16, 635, and 2854.

[3] Fish and Game Code Section 705; Public Resources Code Sections 25519.5, 25740, 25740.5, 25741, 25741.5, 25742, 25746, 25747, and 25751; and Public Utilities Code Sections 399.11, 399.12, 399.13, 399.14, 399.15, 399.16, 399.17, 399.18, 399.19, 399.20, 399.26, 399.30, 399.31, 454.5, 910, 911, and 1005.1.

[4] De León, Statutes of 2018, Public Utilities Code Sections 399.11, 399.15, and 399.30.

[5] Clean Energy, Jobs, and Affordability Act of 2022, Statutes of 2022, Public Utilities Code Sections 454.59 and 739.13.

The 2022 Building Energy Efficiency Standards, adopted on August 1, 2022, and effective January 1, 2023, strengthened and expanded the prior standards. Among other things, the 2022 standards established "electric-ready" requirements for new homes, expanded solar-PV and battery-storage requirements, strengthened ventilation standards, and encouraged the use of electric heat pumps.

Senate Bill 350, De Leon (Clean Energy and Pollution Reduction Act of 2015)

SB 350 was approved by the California State Legislature in September 2015 and signed by Governor Brown in October 2015. Its key provisions are to require the following by 2030: (1) an RPS of 50% (superseded by SB 100, as described above); and (2) a doubling of energy efficiency (i.e., electrical and natural gas) by 2030, including improvements to the efficiency of existing buildings. These mandates will be implemented by future CPUC and CEC actions.

Resource Conservation

Assembly Bill 939 and Assembly Bill 341

To minimize the amount of solid waste that must be disposed of in landfills, the California State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all counties and cities were required to divert 25% of all solid waste from landfill facilities by January 1, 1995, and 50% by January 1, 2000. Through other statutes and regulations, this 50% diversion rate also applies to state agencies. In order of priority, waste-reduction efforts must promote source reduction, recycling and composting, and environmentally safe transformation and land disposal.

In 2011, AB 341 modified the California Integrated Waste Management Act and directed the California Department of Resources Recycling and Recovery (CalRecycle) to develop and adopt regulations for mandatory commercial recycling. The resulting Mandatory Commercial Recycling Regulation required that, on and after July 1, 2012, certain businesses that generate 4 cubic yards or more of commercial solid waste per week must arrange for recycling services. To comply with this requirement, businesses may either separate recyclables and self-haul them, or subscribe to a recycling service that includes mixed-waste processing. AB 341 also established a statewide recycling goal of 75%; under AB 939, the 50% disposal reduction mandate still applies for counties and cities.

Assembly Bill 1826

AB 1826 (2014) required businesses and public entities that generate 4 cubic yards or more of commercial solid waste and multifamily residential buildings of five units or more to arrange for organic-waste (e.g., food and lawncare waste) recycling services and for local jurisdictions to implement organic-waste recycling programs. AB 1826 targeted the organic-waste stream to reduce GHGs and use the waste for more beneficial purposes, such as compost, mulch, and biofuel production. The law phased in requirements over time and exempted rural counties. In 2020, CalRecycle reduced the threshold to 2 cubic yards of solid waste.

Senate Bill X7-7

SB X7-7, the Water Conservation Act of 2009, set an overall goal of reducing per-capita urban-water use by 20% by December 31, 2020 (achieved). The state was required to make progress toward this goal by reducing per-capita water use by at least 10% by December 31, 2015 (achieved). SB X7-7 was an implementing measure of the AB 32 Scoping Plan Water Sector, which will continue to be

implemented beyond 2020. Reduction in water consumption reduces the energy necessary and the associated emissions to convey, treat, and distribute the water; it also reduces emissions from wastewater treatment.

Senate Bill 1386

SB 1386 (2003) declared it to be state policy that the protection and management of natural and working lands, as defined, is an important strategy in meeting the state's GHG-reduction goals and required all state agencies, departments, boards, and commissions to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands.

Short-Lived Climate Pollutants

Senate Bill 605 and Senate Bill 1383

SB 605 (2003) directed CARB, in coordination with other state agencies and local air districts, to develop a comprehensive Short-Lived Climate Pollutant (SLCP) Reduction Strategy. SB 1383 (2016) directed CARB to approve and implement the SLCP Reduction Strategy to achieve the following reductions in SLCPs.

- 40% reduction in methane (CH_4) below 2013 levels by 2030.
- 40% reduction in hydrofluorocarbon (HFC) gases below 2013 levels by 2030.
- 50% reduction in anthropogenic black carbon below 2013 levels by 2030.

The bill also established the following targets for reducing organic waste in landfills and CH_4 emissions from dairy and livestock operations.

- 50% reduction in organic-waste disposal from the 2014 level by 2020.
- 75% reduction in organic-waste disposal from the 2014 level by 2025.
- 40% reduction in CH_4 emissions from livestock manure management operations and dairy manure management operations below the dairy sector's and livestock sector's 2013 levels by 2030.
- Final regulations to achieve the GHG-reduction goals expressed in SB 1383 were codified under CCR Title 14, Division 7, Chapter 3, and CCR Title 27, Division 2, Chapters 2, 3, and 4, in November 2020. The regulation went into effect on January 1, 2022.

Short-Lived Climate Pollutant Reduction Strategy

CARB adopted the SLCP Reduction Strategy in March 2017 as a framework for achieving the CH_4, HFC, and anthropogenic black carbon-reduction targets set by SB 1383. The SLCP Reduction Strategy included 10 measures to reduce SLCPs, which fit within a wide range of ongoing planning efforts throughout the state, including CARB's and CalRecycle's rulemaking on organic-waste diversion (discussed above).

Cap-and-Trade Program

CARB adopted the Cap-and-Trade program in October 2011. The California Cap-and-Trade program is a market-based system with an overall emissions limit for affected emission sources. Affected sources include in-state electricity generators, hydrogen production, petroleum refining, and other

large-scale manufacturers, suppliers, and distributors of fuel. The original Cap-and-Trade program set a compliance schedule through 2020. AB 398 (2017) extended the program through 2030 and required CARB to make refinements, including establishing a price ceiling. Revenue generated from the Cap-and-Trade program is used to fund various programs. AB 398 established post-2020 funding priorities to include: (1) air toxics and criteria pollutants; (2) low- and zero-carbon transportation; (3) sustainable agricultural practices; (4) healthy forests and urban greening; (5) short-lived climate pollutants; (6) climate adaptation and resiliency; and (7) climate and clean energy research.

Local

California's Scoping Plans do not provide an explicit role for local air districts in implementing AB 32, SB 32, and AB 1279, but they do state that CARB will work actively with air districts in coordinating emissions reporting, encouraging and coordinating GHG reductions, and providing technical assistance in quantifying reductions. The ability of air districts to control emissions (both criteria pollutants and GHGs) is provided primarily through permitting, but also through CARB's role as CEQA lead or commenting agency, the establishment of CEQA thresholds, and the development of analytical requirements for CEQA documents. EDCAQMD currently has not adopted rules, regulations, or significance thresholds for GHGs in accordance with the State CEQA Guidelines.

Environmental Setting

The unique chemical properties of GHGs enable them to become well-mixed within the atmosphere and transported over long distances. Consequently, unlike other resource areas that are primarily concerned with localized project impacts (e.g., within 1,000 feet of the project site), the global nature of climate change requires a broader analysis approach. The following subsections provide background information about global climate change and principal GHGs associated with implementation of the VMVSP. Potential impacts of climate change on the study area are also identified.

Climate Change

The process known as the *greenhouse effect* keeps the atmosphere near Earth's surface warm enough for the successful habitation of humans and other life forms. The greenhouse effect is created by sunlight that passes through the atmosphere. Some of the sunlight striking Earth is absorbed and converted to heat, which warms the surface. The surface emits a portion of this heat as infrared radiation, some of which is re-emitted toward the surface by GHGs. Human activities that generate GHGs increase the amount of infrared radiation absorbed by the atmosphere, thus enhancing the greenhouse effect and amplifying the warming of Earth.

Increases in fossil-fuel combustion and deforestation have exponentially increased concentrations of GHGs in the atmosphere since the Industrial Revolution. Rising atmospheric concentrations of GHGs in excess of natural levels result in increasing global surface temperatures—a phenomenon commonly referred to as *global warming*. Higher global surface temperatures, in turn, result in changes to Earth's climate system, including increased ocean temperature and acidity, reduced sea ice, sea level rise, variable precipitation, and increased frequency and intensity of extreme weather events (IPCC 2007). Large-scale changes to Earth's system are collectively referred to as *climate change.*

The World Meteorological Organization and United Nations Environment Programme established the Intergovernmental Panel on Climate Change (IPCC) to assess scientific, technical, and socioeconomic information relevant to the understanding of climate change, its potential impacts, and options for adaptation and mitigation. The IPCC estimates that human-induced warming reached approximately 1°C above pre-industrial levels in 2017, increasing at 0.2°C per decade. Under the current NDCs of mitigation from each country until 2030, global warming is expected to rise to 3°C by 2100, with warming to continue afterward (IPCC 2018a). Large increases in global temperatures could have substantial adverse effects on the natural and human environments worldwide and in California.

Greenhouse Gas Emissions

The principle anthropogenic (i.e., human-made) GHGs contributing to global warming are CO_2, CH_4, nitrous oxide (N_2O), and fluorinated compounds, including sulfur hexafluoride (SF_6), HFCs, and perfluorocarbons (PFCs). Water vapor, the most abundant GHG, is not included in this list because its natural concentrations and fluctuations far outweigh its anthropogenic sources.

The primary GHGs of concern associated with the project are CO_2, CH_4, and N_2O. Minor amounts of HFCs, which are considered high global warming potential (GWP) GHGs, may also be generated by leaking air conditioners and refrigerators. Principal characteristics of these pollutants are discussed below.

- **Carbon dioxide** enters the atmosphere through fossil-fuel (i.e., oil, natural gas, and coal) combustion, solid-waste decomposition, plant and animal respiration, and chemical reactions (e.g., cement manufacturing). CO_2 is also removed from the atmosphere (or *sequestered*) when plants absorb it as part of their biological carbon cycle.
- **Methane** is emitted during the production and transport of coal, natural gas, and oil. CH_4 emissions also result from livestock and other agricultural practices and from the decay of organic waste in municipal solid-waste landfills.
- **Nitrous oxide** is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.
- **Hydrofluorocarbons** are human-made chemicals used in commercial, industrial, and consumer products and have high GWPs. HFCs are generally used as substitutes for ozone-depleting substances in automobile air conditioners and refrigerants.

Methods have been set forth to describe emissions of GHGs in terms of a single gas to simplify reporting and analysis. The most commonly accepted method of comparing GHG emissions is the GWP methodology defined in the IPCC (2007) reference documents. IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of CO_2e, which compares the gas in question to that of the same mass of CO_2 (CO_2 has a global warming potential of 1 by definition).

Table 3.6-1 lists the GWP of CO_2, CH_4, N_2O, and HFCs and their lifetimes in the atmosphere.

Table 3.6-1. Lifetimes and Global Warming Potentials of Key Greenhouse Gases

Greenhouse Gas	Global Warming Potential (100 years)	Lifetime (years)
CO_2	1	–
CH_4	25	12
N_2O	298	114
HFCs	124 to 14,800	1–270

Source: CARB 2019a.
CH_4 = methane; CO_2 = carbon dioxide; HFCs = hydrofluorocarbons; N_2O = nitrous oxide.

All GWPs used for CARB's GHG inventory and to assess attainment of the state's 2020 and 2030 reduction targets are considered over a 100-year timeframe (as shown in Table 3.6-1). However, CARB recognizes the importance of SLCPs and reducing these emissions to achieve the state's overall climate-change goals. SLCPs have atmospheric lifetimes on the order of a few days to a few decades, and their relative climate-forcing impacts, when measured in terms of how they heat the atmosphere, can be tens, hundreds, or even thousands of times greater than that of CO_2 (CARB 2017a). In recognition of their short-term lifespan and warming impact, SLCPs are measured in terms of CO_2e using a 20-year time period. The use of GWPs with a time horizon of 20 years better captures the importance of the SLCPs and provides a clearer perspective on the speed at which SLCP-emission controls will affect the atmosphere relative to CO_2-emission controls. The SLCP Reduction Strategy, discussed in Section 3.3.1.1., *Regulatory Setting*, addresses the three primary SLCPs: CH_4, HFC gases, and anthropogenic black carbon. CH_4 has a lifetime of 12 years and a 20-year GWP of 72. HFC gases have lifetimes of 1.4 to 52 years and a 20-year GWP of 437 to 6,350. Anthropogenic black carbon has a lifetime of a few days to weeks and a 20-year GWP of 3,200 (CARB 2017a).

Greenhouse Gas Reporting

A *GHG inventory* is a quantification of all GHG emissions and sinks[6] within a selected physical and/or economic boundary. GHG inventories can be performed on a large scale (e.g., for global and national entities) or on a small scale (e.g., for a building or person). Although many processes are difficult to evaluate, several agencies have developed tools to quantify emissions from certain sources. Table 3.6-2 outlines the most recent global, national, and statewide GHG inventories to help contextualize the magnitude of potential project-related emissions.

Table 3.6-2. Global, National, and State Greenhouse Gas Emission Inventories

Emissions Inventory	CO_2e (metric tons)
2017 IPCC Global GHG Emissions Inventory	53,500,000,000
2020 USEPA National GHG Emissions Inventory	5,222,000,000
2020 CARB State GHG Emissions Inventory	369,200,000

Sources: IPCC 2018b; USEPA 2022; CARB 2023.
CARB = California Air Resources Board; CO_2e = carbon dioxide equivalent; GHG = greenhouse gas; IPCC = Intergovernmental Panel on Climate Change; USEPA = U.S. Environmental Protection Agency.

[6] A *GHG sink* is a process, activity, or mechanism that removes a GHG from the atmosphere.

3.6.2 Environmental Impacts

This section describes the impact analysis related to GHG emissions for the VMVSP, the methods used to quantify GHG emissions, and the thresholds used to evaluate whether an impact would be significant. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion, when necessary.

Methods of Analysis

This section is partially based on the Air Quality and GHG Technical Report (Ascent 2023) provided in Appendix C. Please refer to Appendix A for further information about the emissions quantification and analysis method.

Construction

Construction of the proposed project would generate short-term emissions of CO_2, CH_4, N_2O from mobile and stationary construction-equipment, employee-vehicle, and haul-truck exhaust. Water consumption for dust control would also generate indirect GHG emissions associated with water pumping and conveyance. HFCs may be generated by leaking air conditioners in on-road vehicles.

GHG emissions from construction were estimated using CalEEMod, version 2022.1. Modeling inputs included project-specific land use types and sizes and construction phasing, timing and activities included in Chapter 2, *Project Description*, and summarized in the Air Quality and GHG Technical Report (Appendix C-2). Model defaults for all other assumptions were used for construction-emissions modeling. Buildout of the project was assumed to occur over an extended period, beginning in 2025, with full buildout anticipated around 2045.

Construction of the proposed project would result in the permanent conversion of oak woodlands, riparian woodland, white-leaf chaparral, grasslands, and wetlands. Removal of this vegetation would reduce the carbon-sequestrating capacity of the land and permeant losses of carbon stored in soil and aboveground and belowground biomass. The resulting CO_2 loss was quantified using CalEEMod, as described in the Air Quality and GHG Technical Report (Appendix C-2).

Operation

Operation of the proposed project would generate long-term emissions of GHGs. Primary sources of emissions would include vehicle exhaust, energy usage, water consumption, waste and wastewater generation, and area sources. Landscaping equipment and hearths are also area sources of GHG emissions. Energy sources include the combustion of natural gas, as well as the use and generation of electricity. Waste generation results in fugitive CH_4 and N_2O emissions from the decomposition of organic matter. Water consumption results in indirect GHG emissions from the conveyance and treatment of water. The new vineyards could result in N_2O emissions if nitrogen-based fertilizers are used. HFCs would be generated by leaking air conditioners and refrigerators.

Operational CO_2, CH_4, N_2O, and HFC emissions from all sources except vineyards were estimated using CalEEMod, version 2022.1, and a combination of project-specific information and model defaults. Modeling inputs included land use types, sizes, and other project details (e.g., VMT), as described in the Air Quality and GHG Technical Report (Appendix C). Potential emissions resulting from vineyard fertilizer use were calculated using emission factors from IPCC and California Department of Food and Agriculture, as described in the Air Quality and GHG Technical Report

(Appendix C). It was conservatively assumed nitrogen-based fertilizers would be used on all 55 acres of new vineyards. For purposes of analysis, full buildout is assumed to occur by 2045. Additionally, operational modeling was conducted for project operations in 2030 to align with the statewide milestone year in SB 32 (discussed further in the *Thresholds of Significance*).

Pursuant to the County's General Plan and County Code of Ordinance, the proposed project is required to mitigate all native oak tree impacts at a 1:1-inch ratio and all heritage oak trees at a 3:1-inch ratio. Sequestered CO_2 resulting from tree replanting was quantified using i-Tree and the methods described in the Air Quality and GHG Technical Report (Appendix C).

Thresholds of Significance

CEQA Guidelines

In accordance with Appendix G of the State CEQA Guidelines, the proposed project would be considered to have a significant effect if it would result in any of the conditions listed below.

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

State CEQA Guidelines do not indicate what amount of GHG emissions would constitute a significant impact on the environment. Instead, they authorize the lead agency to consider thresholds of significance that other public agencies have previously adopted or recommended or that experts recommend, provided that the decision of the lead agency to adopt such thresholds is supported by substantial evidence (State CEQA Guidelines Section 15064.4(a) and 15064.7(c)). A summary of the CEQA guidance regarding the analysis of GHG emissions is provided below.

CEQA Guidelines Section 15064.4(a)

State CEQA Guidelines Section 15064.4(a) indicates that CEQA requires a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project, compare estimated emissions to a threshold that the lead agency deems appropriate (with evidence to support this threshold), and assess the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. This guideline gives the lead agency discretion about whether to quantify GHG emissions resulting from a project and/or rely on a qualitative analysis or performance-based standards.

State CEQA Guidelines Section 15064.4(a) does not indicate what amount of GHG emissions would constitute a significant impact on the environment. Instead, it authorizes the lead agency to consider thresholds of significance that other public agencies have previously adopted or recommended or that experts recommend, provided that the decision of the lead agency to adopt such thresholds is supported by substantial evidence.

CEQA Guidelines Section 15064.4(b)

State CEQA Guidelines Section 15064.4(b) requires a lead agency to consider the following factors.

- The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting.
- Whether the project GHG emissions exceed a threshold of significance that the lead agency determines applies to the project.
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. The lead agency must include substantial evidence linking statewide goals, strategies, and plans to the project's findings and significance of impacts (added in response to *Center for Biological Diversity et al. vs. California Department of Fish and Wildlife, the Newhall Land and Farming Company*; see below).

CEQA Guidelines Section 15064.4(c)

State CEQA Guidelines Section 15064.4(c) states that a lead agency may choose a model or methodology to estimate GHG emissions that it considers most appropriate. The lead agency must support its selection of a model or methodology with substantial evidence and explain the limitations of the model or methodology.

CEQA Guidelines Section 15183.5

State CEQA Guidelines Section 15183.5 outlines measures that lead agencies can take to analyze and mitigate the significant effects of GHG emissions at a programmatic level, such as in a General Plan, Long-Range Development Plan, or in a separate plan (e.g., a climate action plan [CAP]) to reduce GHG emissions, so that later, project-specific environmental documents may tier from the prior analysis to determine significance.

Summary of Relevant Court Decisions

The Courts have ruled on various matters related to GHG analyses in CEQA documents, which has helped define acceptable practices for adequate analysis of GHG emissions under CEQA, including setting thresholds, properly defining level of significances, and identifying mitigation measures. The Courts' decisions highlight that, depending on the circumstances of a given project, there are multiple ways to evaluate GHG-emissions impacts in CEQA documents. CEQA gives the lead agency discretion to quantify GHG emissions resulting from a project and/or rely on a qualitative analysis or performance-based standards, but the lead agency must support its decisions with substantial evidence and explain any limitations associated with the analysis. In addition, a lead agency's analysis should consider a timeframe that is appropriate for the project and must reasonably reflect evolving scientific knowledge and the current state regulatory schemes.

In the 2015 California Supreme Court decision in the Center for Biological Diversity et al. vs. California Department of Fish and Wildlife, the Newhall Land and Farming Company (November 30, 2015, Case No. S217763) (hereafter Newhall Ranch) the Court identified several potential approaches for determining significance of project-level GHG emissions. The decision affirmed that "thresholds only define the level at which an environmental effect 'normally' is considered significant; they do not relieve the lead agency of its duty to determine the significance of an impact independently." In the 2018 Court of Appeals decision in Golden Door Properties/Sierra Club vs.

County of San Diego (September 28, 2018, 27 Cal.App.5th 892) (hereafter Golden Door I), the Court reinforced the message from the Newhall Ranch decision that analyses need to provide substantial evidence to support significance thresholds selected for use in the CEQA analysis. Both the Newhall Ranch and Golden Door I decisions demonstrated that use of statewide emission-reduction goals is one of the various potential thresholds and methodologies for evaluating project- or plan-level GHG emissions consistent with CEQA, use of statewide emission-reduction goals is a "permissible criterion of significance" so long as substantial evidence and reasoned explanation is provided to close the analytical gap between the level of effort required at one scale (e.g., state level) to the level of effort required at another scale (e.g., proposed plan level). Other relevant cases have reinforced the discretion of lead agencies to select thresholds, provided they stay in line with the state of the science.

With respect to GHG mitigation, *Golden Door Properties, LLC v. County of San Diego* 50 Cal. App. 5th 467 (2020) (henceforth referred to as Golden Door II) added a level of increased rigor for the use of GHG credits as CEQA mitigation. In its decision, the California Fourth District Court of Appeal found that the Supplemental EIR prepared by San Diego County for its CAP violated CEQA because it relied on a mitigation measure that was improperly deferred and lacked enforceable performance criteria. San Diego County's mitigation measure for its CAP would reduce GHG emissions associated with its proposed General Plan amendment to net zero. The Court specifically questioned the use of GHG credits not approved by CARB and, in particular, those that could originate outside of California. The Court also criticized the measure's sole reliance on San Diego County staff to assess future GHG credit feasibility and enforcement. Although the Court's Golden Door II decision did not object to the use of GHG credits as CEQA mitigation, it underscored the need for such mitigation to include enforceable performance standards and objective criteria to ensure that the GHG reductions from GHG credits are achieved.

Following are some of the Court's suggested approaches for analyzing GHG impacts under CEQA.

- **Consistency with a Qualified GHG-Emissions Reduction Plan.** Use of a GHG-emission reduction plan is consistent with State CEQA Guidelines Sections 15183.5 or 15064.4 for a geographic area.
- **Performance Based.** Performance-based thresholds relate the required level of reduction at the project level to the statewide burden required to meet California's GHG goals.
- **Quantitative Thresholds.** Use of a quantitative threshold (e.g., the Bay Area Air Quality Management District's Bright Line threshold) identifies the level above which a project may contribute a significant amount of GHG emissions.
- **CEQA Streamlining.** Certain land use projects (e.g., residential, mixed-use, transit priority projects) could use SB 375's expressed allowance for tiering GHG emissions generated by light-duty vehicles from the environmental analysis conducted for the regional RTP/SCS.
- **Compliance with Regulatory Programs**. This approach would include an assessment of the project's compliance with regulatory programs designed to reduce GHGs from emissions-generating activities (e.g., energy consumption, transportation, water usage). To the extent that a project's design features comply with or exceed the regulations outlined in the Scoping Plans and adopted by CARB or other state agencies, the lead agency could appropriately rely on their use as showing that the project is reducing emissions consistently with state reduction targets and, thus, that emissions are less than significant.

Under any methodology, if GHG-emission impacts were still significant after the adoption of all feasible mitigation measures and consideration of project alternatives, then the lead agency may adopt a statement of overriding considerations with the appropriate findings.

Applicability of Available Thresholds

The following sections discuss the threshold approaches that the Courts recommended and CEQA supports and analyze their applicability to the operational-emissions analysis for the proposed project.

Compliance with a Qualified Greenhouse Gas Reduction Strategy

OPR acknowledges that the California State Legislature encourages lead agencies to tier or streamline their environmental documents whenever feasible and that GHG emissions may be best analyzed and mitigated at the programmatic level (OPR 2018a). A qualified plan may be used in the cumulative-impact analysis for later projects when the analysis "identifies those requirements specified in the plan that apply to the project." For a GHG-reduction plan to be considered a qualified plan, it must meet certain criteria established under State CEQA Guidelines Sections 15183.5(b) and 15064.4, also specified above. Consequently, if a project is consistent with a local CAP that was created to meet that area's fair-share reductions toward the AB 32 GHG target for 2020, then the project would be considered consistent with statewide GHG-reduction goals for 2020. Additionally, if a CAP were adopted that was consistent with the state's overall goals for post-2020, including the downward trajectory as clarified in SB 32 and EO S-03-05, and a project is consistent with that CAP, then the project would be considered consistent with the state's post-2020 GHG-emission strategy. State CEQA Guidelines Section 15183.5 also specifies that the project's CEQA analysis "must identify those requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures applicable to the project."

The County does not have an adopted CAP or similar program-level GHG-reduction document. Therefore, compliance with a qualified GHG-reduction strategy, such as a CAP, is not appropriate for evaluating GHG impacts from the VMVSP.

Performance Based

Performance-based thresholds are based on a percentage reduction from a projected future condition; for example, reducing future business-as-usual (BAU) emissions to meet the SB 32 target (40% below 1990 levels) through a combination of state measures, project design features (e.g., renewable energy), or mitigation.

Based on the Court's reasoning in the Newhall Ranch decision, relating a given project to the achievement of state reduction targets may require adjustments to CARB's statewide BAU model to not only isolate new development emissions, but also consider unique geographic conditions and operational characteristics that may affect the performance of reduction measures in certain locations. To date, this type of adjustment to the statewide BAU target has not been performed and, therefore, is not appropriate for the proposed project's analysis. The primary value of a performance-based target, as indicated in the Newhall Ranch decision, is that it can provide a scenario by which to evaluate the effectiveness of a project's reduction efficiency relative to an unmitigated condition. As such, future-year targets can be used to benchmark performance, using

either statewide or regional emission targets, to determine a project's fair share of mitigation. Accordingly, use of a BAU threshold is not appropriate for evaluating GHG impacts from the VMVSP.

Quantitative Thresholds

Numerical Bright Line

Numerical Bright Line thresholds identify the point at which additional analysis and mitigation of project-related GHG-emission impacts is necessary. Currently, Bright Line thresholds have been developed for commercial projects, residential projects, and stationary source projects. Commercial and residential Bright Line thresholds are typically based on a market-capture rate or a gap analysis,[7] which is tied back to statewide-reduction targets. These Bright Line thresholds reflect regional or local land use conditions, particularly residential and commercial density and access to transit. For example, SMAQMD's adopted Bright Line threshold for 2020 of 1,100 metric tons of CO_2e and their post-2020 operational threshold, which is also 1,100 metric tons of CO_2e, captures land use conditions present in Sacramento County. It does not reflect conditions in other areas of the state, including the County.

A numerical Bright Line value based solely on County emissions sources does not exist. Although development conditions in Sacramento County may be similar to those in the County, SMAQMD's adopted thresholds identify projects that would result in sufficiently low GHG emissions to be less than cumulatively considerable without mitigation. These thresholds, albeit potentially appropriate for a single project-level analysis, were not devised to include emissions associated with an entire specific plan (e.g., the proposed project). Consequently, SMAQMD's numeric thresholds are not appropriate for evaluating GHG impacts from the VMVSP.

Efficiency Based

Another type of quantitative threshold is an efficiency-based threshold. Efficiency-based thresholds represent the GHG efficiency needed for development to achieve California's GHG-emissions targets. Although the Newhall Ranch decision did not specifically recommend the efficiency-based approach, the ruling did note that numerical threshold approaches may be appropriate for determining significance of GHG emissions and emphasized the consideration of GHG efficiency. Efficiency-based thresholds allow lead agencies to analyze projects of various types, sizes, and locations equally and determine whether a project is consistent with the state's reduction goals. Efficiency-based thresholds for a residential project can be expressed on a per-capita basis, for an office project on a per-employee basis, or for a mixed-use project on a per service population (i.e., the sum of jobs and residents) basis.

CARB (2017b) recommends statewide efficiency targets of no more than 6 metric tons of CO_2e per capita by 2030 and no more than 2 metric tons of CO_2e per capita by 2050. These targets were derived based on total statewide emissions from all emission categories (including emissions from stationary and industrial sources) and the reductions needed to achieve California's 2030 statewide target under SB 32 and the EO S-3-05 reduction goal of 80% below 1990 levels by 2050. CARB's 2050 efficiency target is consistent with the Under2 MOU, which commits signatories to reducing

[7] A *gap analysis* demonstrates the reductions needed at the residential and commercial land use levels to achieve state targets. *Capture* is the process of estimating the portion of projects that would result in emissions that exceed a significance threshold and would be subject to mitigation.

their GHG emissions to 2 metric tons CO_2e per capita by 2050. CARB's per-capita efficiency metrics are useful benchmarks for assessing the proposed project's consistency with the emissions levels defined by California, as needed to achieve the state's fair share–reduction contribution to limit global warming to below 2°C (i.e., the Paris Agreement).

Because CARB's per-capita efficiency targets are based on statewide emissions, they represent an average efficiency that does not specifically consider the unique geographic and project-specific features that could influence emissions reductions achieved by the VMVSP. The targets also do not isolate the required emissions reductions from new development only, which are needed to meet state goals. Tailoring CARB's per-capita targets to local project conditions is not possible with the available data published in the 2017 Scoping Plan or the 2022 Scoping Plan. Accordingly, per the Court's guidance provided in the Newhall Ranch ruling, CARB's efficiency targets are not appropriate thresholds for independently evaluating the significance of project-generated GHG emissions. However, as noted above, the targets are useful benchmarks for assessing the proposed project's consistency with the state's overall reduction trajectory and CARB's efficiency thresholds, and therefore are presented for informational purposes.

CEQA Streamlining

SB 375 included provisions for streamlined CEQA review for certain types of mixed-use and transit priority projects that meet the bill's specific criteria. According to State CEQA Guidelines Section 15183.5, quantified plans, such as the RTP/SCS EIR, "may be used in the cumulative impacts analysis of later projects."

Projects eligible for CEQA streamlining under SB 375 must be consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in the SCS. The proposed project is not included in the growth scenario for the MTP/SCS (SACOG 2019b). However, the project is identified within a "Potential Developing Communities" area under SACOG's 2025 Blueprint Pathway, which will inform the next iteration of the MTP/SCS, known as the 2025 Blueprint. The 2025 Blueprint Pathway currently includes a potential buildout of 2,670 housing units and 1,200 jobs for the proposed project (SACOG 2024). The project includes up to 3,236 housing units and is thus not eligible for CEQA streamlining under SB 375.

Compliance with Regulatory Programs

If the project complies with or exceeds those programs adopted by CARB or other state agencies, then a lead agency could rely on regulatory compliance to show less-than-significant GHG impacts. However, such analysis is only applicable within the area governed by the regulations. For example, consistency with regulations addressing building efficiency would not suffice to determine that the project would not have significant GHG emissions from transportation.

The Newhall Ranch decision specifically mentioned consistency with both the SCS (per SB 375) and AB 32 as potential mechanisms for evaluating significance. A lead agency could assess project-level consistency with AB 32 in whole or part by evaluating whether the project complies with applicable policies in the 2008 Scoping Plan, which did not consider deeper reductions needed to meet the state's 2030 target under SB 32 or 2045 target under AB 1279. Accordingly, exclusively relying on consistency with the 2008 Scoping Plan and related programs to evaluate emissions generated by land use development projects constructed after 2020 would not fully consider a project's potential GHG impacts on the state's long-term reduction trajectory.

Additional guidance on GHG-reduction strategies and thresholds for operational emissions has been provided at the state level through the 2017 and 2022 Scoping Plans, OPR, and CARB. The 2017 and 2022 Scoping Plans outlined GHG-reduction strategies by the emission sector (i.e., water, transportation, and energy) required to meet the state's 2030 and 2045 targets, respectively. OPR (2018a) guidance specifies that a "land use development project that produces low VMT, achieves applicable building energy efficiency standards, uses no natural gas or other fossil fuels, and includes Energy Star appliances where available, may be able to demonstrate a less-than-significant greenhouse gas impact associated with project operation." Furthermore, CARB (2019b) guidance specified per-capita VMT reduction targets that would be needed statewide to meet long-term mobile-source GHG-reduction targets, considering increased vehicle efficiency and reduced carbon content in vehicle fuels.

To the extent the VMVSP policies comply with or exceed applicable policies outlined in the 2017 and 2022 Scoping Plans and other regulations adopted by CARB or other state agencies, the proposed project could appropriately rely on their use as showing compliance with performance-based standards adopted to fulfill the statewide goal for reducing GHG emissions. The project's compliance with regulatory programs was therefore used to evaluate the significance of GHG emissions.

VMVSP Threshold Approach

Based on the available threshold concepts recommended by air districts and the Courts, GHG emissions from the project are evaluated on a sector-by-sector (e.g., energy, water) basis using the most-applicable regulatory programs, policies, and thresholds that EDCAQMD, CARB, and OPR recommend, as described above (in the subsection *Compliance with Regulatory Programs*). The buildout year for the proposed project is assumed to be 2045. Accordingly, the analysis focuses on the state's 2030 and 2045 GHG-reduction targets and the plans, policies, and regulations adopted pursuant to achieving the necessary reductions. Emissions generated at full buildout are used as an indicator for long-term emissions-reduction progress and evaluated as they relate to the proposed project's impacts on the state's long-term goal under AB 1279. Where applicable, guidance from CARB, OPR, and other agencies related to long-term emissions-reduction requirements is incorporated into the analysis.

- **Mobile sources**. CARB's 2017 and 2022 Scoping Plans recognized that although vehicle technologies and low-carbon fuels will continue to reduce transportation-sector emissions, VMT reductions are necessary to achieve California's long-term GHG-reduction target. As discussed in Section 3.14, *Transportation and Circulation*, of the Second Recirculated Draft EIR, the County's Board of Supervisors adopted VMT thresholds of significance for purposes of analyzing transportation impacts under CEQA. The County's VMT thresholds consider the VMT performance of residential and office components of a project separately, using the efficiency metrics of VMT per capita and VMT per employee, respectively. The County VMT thresholds of significance are summarized below for each of these components.
    - **Residential**: 15% below baseline unincorporated countywide VMT per capita
    - **Commercial Office**: 15% below baseline unincorporated countywide VMT per employee
    - **Commercial Retail**: No-net increase in VMT
- The County's VMT thresholds are consistent with CARB's per-capita VMT reduction target needed statewide to meet long-term climate change planning goals. Accordingly, use of County's VMT thresholds are applicable to the project. The 2022 Scoping Plan also outlined project

attributes related to transportation electrification and VMT reduction. Projects that incorporate these attributes "are considered to be consistent with the Scoping Plan or other plans, policies, or regulations adopted for the purposes of reducing GHGs" (CARB 2022a). Mobile-source emissions would therefore be considered less than significant if the project: (1) achieves the County's VMT thresholds; and (2) meets 2022 Scoping Plan criteria for transportation electrification and VMT reduction.

- **Energy, Water, Waste, Area, High-GWP GHG, and Construction/Land Use Sources.** CARB's 2017 and 2022 Scoping Plans, which rely heavily on state programs (e.g., Title 24 and SB 100), outlined strategies required to reduce statewide GHG emissions in order to achieve California's SB 32 and AB 1279 reduction targets. Projects that implement applicable strategies from the 2017 and 2022 Scoping Plans would be consistent with the state's GHG-reduction framework and requirements for these sectors. Accordingly, a sector-by-sector review of the respective project features and sustainability measures included in the VMVSP is provided to evaluate consistency with the 2017 and 2022 Scoping Plans. This assessment also considers OPR (2018a) guidance related to the long-term reduction of statewide emissions. Accordingly, energy, water, waste, area, high-GWP GHG, and construction/land use source emissions would be considered less than significant if the project is consistent with all applicable 2017 and 2022 Scoping Plan strategies and supporting regulations and guidance.

- Analyzing the proposed project's consistency with regulatory requirements and agency expectations for new development on a sector-by-sector basis is consistent with SMAQMD's published GHG threshold guidance (Ramboll 2020). CARB also recommends this approach as a pathway for analyzing project-level GHG-emission impacts of new residential and mixed-use development projects (CARB 2022a). The 2022 Scoping Plan specifically notes,

- absent consistency with an adequate, geographically specific GHG-reduction plan…the first approach the State recommends for determining whether a proposed residential or mixed-use residential development would align with the State's climate goals is to examine whether the project includes key project attributes that reduce operational GHG emissions while simultaneously advancing fair housing (CARB 2022a).

- Project consistency with applicable project attributes noted in the 2022 Scoping Plan has been incorporated into the sector-by-sector regulatory analysis, as noted above.

Although SMAQMD's guidance is specific to Sacramento County, it identifies BMPs that new development must implement to avoid conflicting with long-term state GHG-reduction goals. These BMPs are consistent with guidance from other agencies, such as CARB (2019b) and OPR (2018a), and include prohibiting natural-gas infrastructure, ensuring projects are electric-vehicle ready, and achieving VMT reductions consistent with SB 743. SMAQMD's GHG guidance and recommended BMPs have been incorporated into the sector-by-sector regulatory analysis, to extent that they are applicable to the VMVSP.

As discussed above, operational emissions are also evaluated against CARB's per-capita targets. This analysis assesses the project's consistency with the state's overall reduction trajectory and is presented for informational purposes and is not the basis for the CEQA impact conclusion, which is compliance with regulatory programs. The informational benchmarks are shown in Table 3.6-3.

Table 3.6-3. Informational Greenhouse Gas Efficiency Benchmarks

Type	Unit	Source Data	Project Benchmarks	
			Partial Build (2030)	Full Build (2045)
CARB Statewide	Metric tons CO_2e per person	6.0 (2030)	6.0	N/A
AB 1279 Carbon Neutrality Goal	Metric tons per any unit	0.0 (2045)	N/A	0.0

Source: California Air Resources Board 2017b.

Impacts and Mitigation Measures

Impact GHG-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment (significant and unavoidable)

Construction of the proposed project would generate direct emissions of CO_2, CH_4, and N_2O from mobile and stationary construction-equipment exhaust, as well as from employee-vehicle and haul-truck exhaust. Indirect emissions would also be generated by electricity used to pump and convey water to the project site for dust control. Permanent conversion of natural lands would result in a one-time loss of carbon-sequestration capacity. A small amount of HFCs may be generated by leaking air conditioners in on-road vehicles. Emissions from these sources were quantified using the methods described above in *Methods for Analysis*, and in the Air Quality and GHG Technical Report (Appendix C-2) (Ascent 2023).

Table 3.6-4 presents estimated construction emissions. The emissions results do not account for potential GHG benefits of air quality mitigation (see Section 3.2, *Air Quality*). For example, Mitigation Measure AQ-2b would likely result in GHG-emissions benefits. However, because the measure outlines a performance standard for NO_X reduction, as opposed to identifying specific equipment controls, GHG-emission reductions cannot currently be quantified.

Table 3.6-4. Estimated Construction Greenhouse Gas Emissions (metric tons per year)

Year	CO_2e
Year 1	1,606
Year 2	1,164
Year 3	1,364
Year 4	434
Year 5	456
Year 6	428
Year 7	497
Year 8	520
Year 9	1,067
Year 10	521
Year 11	1,107
Year 12	707
Year 13	1,205
Year 14	392
Year 15	1,001

Year	CO_2e
Year 16	382
Year 17	1,004
Year 18	684
Total Construction Emissions	14,538
One-Time Sequestration Loss	(+)15,436
Total Construction Emissions with One-Time Sequestration Loss	29,974

Source: Ascent 2024.
Notes: CO_2e = carbon dioxide equivalent.

As shown in Table 3.6-4, construction of the VMVSP would generate 14,538 metric tons of CO_2e during the construction period. Permanent land conversion would result in an additional one-time loss of 15,436 metric tons CO_2e. Total construction-generated emissions inclusive of land-use change related emissions would be 29,974 metric tons CO_2e.

Operation of the VMVSP would generate direct and indirect GHG emissions. Sources of direct emissions include motor-vehicle trips, natural-gas combustion, and landscaping activities. Electricity generation and consumption, waste and wastewater generation, water use, refrigeration and air conditioning units, agricultural fertilizers would generate indirect emissions. Conversely, tree planting would reduce GHG emissions through carbon sequestration.

Operational emissions were quantified for two analysis years, 2030 and 2045. Emissions in 2030 were modeled to align with CARB milestone years for GHG-reduction planning efforts at the state level. Emissions in 2045 were modeled because that is the assumed the first operational year at full buildout. Table 3.6-5 presents the modeled operational emissions for all two analysis years. The table does not include emissions benefits achieved by VMVSP polices, but does reflect adopted state regulations, to the extent that they were included in the models used to estimate emissions and designed to reduce GHG emissions (see Appendix C-2).

Table 3.6-5. Estimated Operational GHG Emissions (metric tons per year, unless otherwise stated)

Operational Year	CO_2 [a]	CH_4	N_2O	HFCs	CO_2e
Emissions [b]					
2030 (Partial Operation)	6,116	8	<1	8	6,445
2045 (Full Build)	27,222	34	1	10	28,498
Emissions per Capita [c]					
2030 (Partial Operation)	–	–	–	–	2.1
2045 (Full Build)	–	–	–	–	3.1
Informational Statewide Benchmarks					
2030 (Partial Operation)	–	–	–	–	6.0
2045 (Full Build)	–	–	–	–	0.0

Source: Ascent 2024.
[a] Accounts for average annual sequestration benefits from tree planting (see Appendix C-2).
[b] Accounts for reductions achieved by the Renewables Portfolio Standard.
[c] Assumes a partial 2030 population of 3,106 residents and a full-build population of 9,227 residents.
CH_4 = methane; CO_2 = carbon dioxide; CO_2e = carbon dioxide equivalents; GHG = greenhouse gas; N_2O = nitrous oxide; HFCs = hydrofluorocarbons.

Partial operational emissions in 2030 are estimated to be 6,445 metric tons CO_2e, which equates to 2.1 metric tons CO_2e per capita. Estimated operational emissions at full build in 2045 are 28,498 metric tons CO_2e. These emissions equate to 3.1 metric tons CO_2e per capita. These emissions at full build exceed CARB's statewide per-capita benchmark. As noted above, the emissions analysis presented in Table 3.6-5 do not include benefits achieved by VMVSP policies. The VMVSP includes a comprehensive set of strategies that will improve energy efficiency, reduce water consumption and waste generation, and encourage alternative transportation. Although several policies encourage voluntary adoption of actions that will reduce GHG emissions, others identify mandatory targets that will be incorporated into the project design and achieved as a condition of project approval.

Table 3.6-6 summarizes emissions with implementation of the following mandatory VMVSP policies, as described in Appendix C-2.[8]

- **Policy 9.16**, Install Energy Star appliances.
- **Policy 9.36**, Reduce residential indoor water use.
- **Policy 9.42**, Outdoor water conservation.
- **Policy 9.45**, Reduce turf.
- **Policy 9.50**, Prohibit wood-burning stoves.
- **Policy 9.51**, Prohibit wood-burning fireplaces.

Table 3.6-6. Estimated Operational GHG Emissions with Implementation of Quantified Mandatory VMVSP Policies (metric tons per year, unless otherwise stated)

Operational Year	CO_2 [a]	CH_4	N_2O	HFCs	CO_2e
Emissions [b]					
2030 (Partial Operation)	5,429	8	<1	8	5,762
2045 (Full Build)	24,798	35	1	10	26,033
Emissions per Capita [c]					
2030 (Partial Operation)	–	–	–	–	1.9
2045 (Full Build)	–	–	–	–	2.8
Informational Statewide Benchmarks					
2030 (Partial Operation)	–	–	–	–	6.0
2045 (Full Build)	–	–	–	–	0.0

Source: Ascent 2024

[a] Accounts for average annual sequestration benefits from tree planting (see Appendix C-2).

[b] Emissions account for reductions achieved by the Renewables Portfolio Standard and VMVSP Policies 9.16, 9.36, 9.42, 9.45, 9.50, and 9.51.

[c] Assumes a partial 2030 population of 3,106 residents and a full-build population of 9,227 residents.

CH_4 = methane; CO_2 = carbon dioxide; CO_2e = carbon dioxide equivalents; GHG = greenhouse gas; N_2O = nitrous oxide; HFCs = hydrofluorocarbons.

Partial operational emissions in 2030 with quantifiable mandatory VMVSP policies are estimated to be 5,762 metric tons CO_2e, which equates to 1.9 metric tons CO_2e per capita. Estimated operational emissions at full build in 2045 with quantifiable mandatory VMVSP policies are 26,033 metric tons

[8] Additional mandatory policies outlined in the VMVSP would be implemented, but to avoid potential double-counting with the quantified policies identified above, emissions benefits were not quantified.

CO_2e. These emissions equate to 2.8 metric tons CO_2e per capita. The analysis demonstrates that the quantified mandatory VMVSP policies would improve the average GHG efficiency of developed land uses. The VMVSP would achieve additional GHG reductions by incorporating voluntary policies that encourage renewable energy, alternative transportation, and passive heating and cooling. However, these strategies were not quantified because the exact number of installed systems and affected structures are currently unknown. Operational emissions would, therefore, likely be lower than those presented in Table 3.6-6. Although VMVSP policies would reduce emissions, GHGs would exceed the informational efficiency benchmarks at full build.

The following sections present the sector-by-sector analysis of GHG impacts, consistent with OPR and CARB guidance.

Area Sources

Area source GHG emissions from the VMVSP would be generated by landscaping-related fuel-combustion sources, such as lawn mowers, and hearths (e.g., fireplaces).

CARB has not developed any relevant measures in its Scoping Plans or other regulations related to area source emissions. CARB adopted emissions standards for small off-road engines (i.e., landscape equipment) in 1990. EO N-79-20 set a goal to transition off-road engines to 100% zero-carbon by 2035. CARB intends to consider specific standards for small engines, including regulatory and incentive approaches and a major shift to zero-emission equipment. However, to date, adopted CARB emission standards are aimed at reducing smog-forming pollutants. No standards have been adopted pursuant to reducing GHG emissions from small off-road engines.

Under SB 563, CARB has developed the Woodsmoke Reduction Program, which offers incentives toward the voluntary replacement of existing uncertified residential wood-burning devices used for space heating with cleaner and more efficient alternatives. Replacement options include stoves that are natural gas, propane, electric, ductless mini-split heat pumps, and wood (with emissions controls). The program is maintained through the Greenhouse Gas Reduction Fund.

The VMVSP includes policies that will directly reduce GHG emissions and fossil-fuel consumption from area sources. For example, VMVSP Policy 9.6 requires electrical outlets be provided along the front and rear exterior walls in all residential land use designations to allow for the use of electric landscaping tools. VMVSP Policies 9.50 and 9.51 prohibit wood-burning fireplaces and requires all stoves and fireplaces be natural-gas fired. Although the emissions benefits achieved by VMVSP Policy 9.6 cannot be quantified because it is unknown how many people will elect to use electric landscaping equipment, VMVSP Policy 9.51 is estimated to reduce operational area source emissions by 2,602 metric tons CO_2e (i.e., 53%) per year at full build (Ascent 2024).

Achieving the state's long-term climate change target under AB 1279 will inevitably require the transition away from fossil-fuel-powered energy sources, including, but not limited to, landscaping equipment and hearths. Recognizing this, OPR (2018a) guidance recommends that land use development projects strive to avoid fossil fuels. SMAQMD's GHG guidance for Sacramento County also includes a BMP for projects to be designed and construction without natural-gas infrastructure (Ramboll 2020). To avoid conflicting with the state's 2030 GHG target and longer-term goals,

SMAQMD recommends this BMP for all new developments in Sacramento County.[9] Finally, the 2022 Scoping Plan identifies the use of all-electric appliances without any natural-gas connections or use of fossil fuels for space heating, water heating, or indoor cooking as a key project attribute for consistency with the state's climate goals (CARB 2022a). Use of fossil-fueled landscaping equipment and natural-gas hearths on the project site would generate GHG emissions and may, therefore, conflict with the state's emission-reduction trajectory.

Energy Sources

GHGs are emitted directly from buildings through the combustion of any type of fuel (e.g., natural gas for cooking). GHGs can also be emitted indirectly from the generation of electricity.

The 2017 and 2022 Scoping Plans outlined strategies to reduce energy demand and fossil-fuel use, while increasing energy efficiency and renewable-energy generation. These strategies include transitioning to cleaner fuels, implementing greater efficiency in existing buildings, and electrifying end uses. Several of these strategies are reflected in state laws and regulatory programs. For example, SB 100 requires a doubling of energy efficiency by 2030. SB 100 and SB 1020 also set a target of 100% carbon-free electricity by 2045. The 2019 Title 24 standards mandated higher efficiency levels and rooftop solar-PV systems for all new residential buildings constructed in 2020 and beyond. The 2022 Title 24 standards established "electric-ready" requirements for new homes. Future standards are expected to result in zero-net energy for newly constructed commercial buildings. The CEC also enforces the Appliance Efficiency Regulations contained in Title 20 of the CCR. The regulations establish water- and energy-efficiency standards for both federally regulated and non-federally regulated appliances.

Objective 9.4 in the VMVSP requires all development within the plan area be energy efficient and encourages the onsite generation of renewable energy. The VMVSP includes 13 policies to achieve this objective through a mix of voluntary and mandatory strategies. For example, VMVSP Policy 9.12 encourages all buildings to be oriented to reduce heating and cooling needs, whereas VMVSP Policies 9.13 and 9.14 encourage cool roofing and energy-efficient glazing. VMVSP Policies 9.20 and 9.21 target high-efficiency lighting throughout the plan area, and VMVSP Policy 9.22 encourages onsite renewable-energy generation by requiring that buildings be prewired for future solar-PV systems and removing any restrictions on future installations. VMVSP Policy 9.23 requires solar water-heating systems in commercial and multifamily buildings and encourages their installation in single-family homes and swimming pools.

The VMVSP's robust energy efficiency and renewable-energy policies are consistent with the 2017 Scoping Plan's overall goal of reducing building energy emissions to meet the state's 2030 GHG-reduction target. To meet the state's 2045 climate-neutrality goal (i.e., AB 1279), OPR (2018a) recommends all-electric buildings. Similarly, as noted above, SMAQMD's GHG guidance shows that for Sacramento County to meet its 2030 GHG target for the building energy sector, new development must be constructed without natural-gas infrastructure (Ramboll 2020). Because SB 100 obligates

[9] Based on Sacramento County's 2030 GHG target and estimated 2030 GHG emissions for the residential and commercial sectors, there is "no remaining emissions budget for natural gas from new development." In other words, for Sacramento County to achieve its 2030 GHG target for the residential and commercial sectors, new development must be constructed without natural gas infrastructure and "existing developments will need to reduce their natural gas use" (Ramboll 2020). This conclusion is specific to Sacramento County; a similar analysis has not been conducted for El Dorado County.

utilities to supply 100% carbon-free electricity by 2045, all-electric buildings that do not consume any natural gas would not generate any emissions. The 2022 Scoping Plan identifies no natural-gas connections or fossil-fuel consumption for space heating, water heating, or indoor cooking as key project attributes for consistency with the state's climate goals (CARB 2022a). Although the VMVSP encourages energy efficiency and onsite renewable energy, not all buildings will be designed without natural-gas appliances. The continued consumption of fossil fuels by VMVSP buildings would generate energy emissions and could conflict with the state's long-term emissions-reduction trajectory.

Mobile Sources

GHG emissions associated with on-road mobile sources would be generated from worker, visitor, and delivery vehicles accessing the project area.

Federal, state, and local regulatory efforts target three elements of emissions reduction from mobile sources: vehicle fuel efficiency, the carbon content of fuels, and VMT. Most adopted programs and regulations focus on fuel efficiency (e.g., Pavley I Standard, Advanced Clean Cars) and reducing the carbon intensity of transportation fuels (e.g., LCFS). Vehicle electrification is also rapidly becoming part of the state's approach to reducing mobile source emissions (e.g., Title 24). The proposed project does not include any features that would conflict with these programs. Rather, VMVSP Policy 9.4 requires dedicated parking for plug-in electric vehicles (PEV) and installation of Level 2 PEV-charging stations in all Village Residential Medium, Village Residential High, Office Park, Commercial, and Public Facilities designations. VMVSP Policy 9.3 also requires dedicated parking for low-emitting and fuel-efficiency vehicles within these designations. Finally, VMVSP Policy 9.5 encourages PEV pre-wiring in private garages and other enclosed off-street parking spaces in all Village Residential Low and Village Residential Medium designations.

As discussed in *Existing Conditions*, California adopted SB 375 to integrate transportation planning, regional housing allocation, and GHG reduction through reductions in VMT. The GHG-reduction targets that CARB adopted and that MPOs incorporated into their RTP/SCS were expected to achieve much of the required VMT reduction needed for the state to meet its long-term GHG-reduction targets. However, additional GHG reduction, specifically through further reductions in VMT, is needed to meet the state's climate-change objectives (CARB 2019b).

SB 743 was intended to help close the VMT- and emissions-reduction gap. There is a nexus between SB 743 and the state's goals to reduce mobile source GHG emissions; one of the criteria under SB 743 for determining the significance of the transportation impacts of a project is a reduction in GHG emissions. In response to SB 743 and the related changes to the State CEQA Guidelines, OPR released its *Technical Advisory on Evaluating Transportation Impacts in CEQA* (SB 743 Technical Advisory) (OPR 2018b). The advisory indicates that "achieving 15% lower per capita (residential) or per employee (office) VMT than existing development is both generally achievable and is supported by evidence that connects this level of reduction to the State's emissions goals" (OPR 2018b). This reduction goal is consistent with CARB (2019b) analysis, which demonstrated that a 14.3% reduction of VMT per capita by 2050 (compared to a 2015–2018 average) would be needed statewide to meet their GHG-planning goals. SMAQMD's GHG guidance for Sacramento County also recognizes that, to show consistency with SB 743, large projects should reduce their VMT according to the SB 743 Technical Advisory targets (Ramboll 2020).

As discussed above and in Chapter 3.14, *Transportation and Circulation*, EDCTC completed the *El Dorado County and City of Placerville SB 743 Implementation Plan* (July 19, 2019) to support the

County and the City of Placerville with implementation of SB 743, including setting thresholds of significance. These thresholds are described above in *Thresholds of Significance* and are consistent with OPR and CARB recommendations for analyzing transportation impacts and mobile source GHG emissions. Tables 3.14-3 through 3.14-5 in Chapter 3.14 compare the results of the VMT analysis for the VMVSP to the County's thresholds. The tables indicate that the project's VMT per capita for the residential component would exceed the County's VMT thresholds.

VMVSP objectives and policies are consistent with state goals to reduce VMT and promote alternative forms of transportation. For example, Objective 9.3 seeks to reduce trips and VMT by promoting enhanced mobility options for residents and employees. VMVSP Policy 9.10 requires the Master Owners' Association create or participate in a Transportation Management Association and prepare a multi-strategy Transportation Management Plan (TMP) for the plan area. The TMP will provide employees of local retail, office, and other commercial businesses and the residents within the plan area with programs and direct assistance in using alternative modes of travel. VMVSP Section 9.4.2 identifies example strategies that may be incorporated into the TMP, including carpooling encouragement, ride-matching assistance, telecommuting, flexible scheduling, bicycle and end-trip facilities, discounted transit passes, and school ridesharing or enhanced bus programs. Because the exact suite of strategies for the TMP have not been finalized, VMT and emissions benefits from VMVSP Policy 9.10 cannot be quantified at this time. However, research shows that providing commuter trip-reduction programs can reduce VMT by 4 to 26%, depending on the program details (CAPCOA 2021).

Additional VMT reductions may also be achieved by VMVSP Policies 9.1 and 9.2, which encourage minimum off-street parking requirements and require bicycle parking in all Village Residential Medium, Village Residential High, Office Park, Commercial, and Public Facilities designations. Similarly, VMVSP Policy 4.6 and VMVSP design guidelines promote an internally linked pedestrian and bicycle network and traffic calming measures to encourage people to walk and bike instead of using a vehicle. For example, the project includes the following measures.

- Development of a network of Class I bike paths along the public collector streets.
- Creation of a bikeway system south of U.S. Highway 50, between Bass Lake Road and Cambridge Road, providing connectivity to the planned schools and joint-use parks in the northern portion of the plan area, and into the valley along Marble Lake Boulevard.
- Creation of a trail network for passive enjoyment, including walking, jogging, and cycling.
- Inclusion of sidewalks on at least one side of most public and private streets, with the exception of cul-de-sac streets, alleys, and emergency vehicle access roads.
- Use of traffic circles and all other traffic calming techniques within the private streets where appropriate.
- Use of intersection and midblock controls, such as street intersection neckdowns, midblock bulb-outs, and center islands along roadways with high pedestrian activity.
- Use of special pavement markings and textured paving to serve as a visual reference for motorists of the likely presence of pedestrians and cyclists in the area.

According to CAPCOA (2021), pedestrian sidewalk enhancements can reduce VMT by up to 6.4%, relative to conditions without these improvements. While the exact benefits of these policies and practices for the VMVSP cannot be precisely quantified, it is unlikely they will reduce residential per-capita VMT to levels that would be below the County's threshold. Moreover, as shown in Table 3.6-7,

the VMVSP is not consistent with all project attributes identified in the state's 2022 Scoping Plan that aim to reduce mobile source GHG emissions. Accordingly, mobile source emissions associated with the VMVSP could conflict with the state's long-term emission-reduction trajectory.

Table 3.6-7. Consistency of the VMVSP with the 2022 Scoping Plan Key Project Attributes for Transportation Electrification and VMT Reduction

Priority Area	Key Project Attribute	Project Consistency Analysis (prior to mitigation)
Transportation Electrification	Provides EV charging infrastructure that, at a minimum, meets the most ambitious voluntary standard in the California Green Building Standards Code at the time of project approval	**Not Consistent.** VMVSP Policy 9.4 requires dedicated off-street parking for PEVs and installation of Level 2 PEV-charging stations in each dedicated PEV-parking space, in accordance with CALGreen Nonresidential Tier 1 Voluntary Measures. However, the policy does not include a complementary PEV requirement for residential land uses.
VMT Reduction	Is located on infill sites that are surrounded by existing urban uses and reuses or redeveloped previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer)	**Consistent.** The project area is underutilized land that is presently served by existing utilities and essential public services.
	Does not result in the loss or conversion of natural and working lands	**Not Consistent.** The VMVSP would result in permanent losses of riparian woodland, white-leaf chaparral, grasslands, and wetlands.
	Consists of transit-supportive densities (minimum of 20 residential dwelling units per acre), or Is in proximity to existing transit stops (within a half mile), or Satisfies more detailed and stringent criteria specified in the region's Sustainable Communities Strategy (SCS)	**Not Consistent.** The VMVSP only partially meets the SB 375 SCS criteria for a "Mixed-Use Residential Project." While at least 75% of total building square footage is residential use, the VMVSP is not expressly consistent with building intensity (i.e., growth scenario) of the MTP/SCS (refer to the *CEQA Streamlining* section for additional information).
	Reduces parking requirements by: Eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet); or Providing residential parking supply at a ratio of less than one parking space per dwelling unit; or For multifamily residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit.	**Not Consistent.** The VMVSP does not meet the parking requirements.

Priority Area	Key Project Attribute	Project Consistency Analysis (prior to mitigation)
	At least 20% of units included are affordable to lower-income residents	**Not Consistent.** The VMVSP does not include any affordable units.
	Results in no-net loss of existing affordable units	**Consistent.** The VMVSP will develop underutilized open space and does not result in a net loss of existing affordable units.

Waste

Solid-waste emissions result from CH_4 associated with the decomposition of the waste and CO_2 emissions associated with the combustion or flaring of CH_4. Solid waste may be disposed of in landfills or diverted for recycling, composting, reuse, or other means to avoid landfilling.

The 2017 and 2022 Scoping Plans aimed to reduce waste emissions by diverting waste away from landfills through waste reduction, reuse, composting (i.e., organics diversion), and material recovery. SB 1383 established minimum standards for organic-waste collection, hauling, and composting. The bill also sets a statewide target of 75% organic-waste diversion from landfills by 2025.

SMAQMD's GHG guidance notes that existing and new development must comply with all applicable CalRecycle requirements. Therefore, "through regulatory compliance, new developments are assumed to achieve their 'fair share' of reductions for the solid waste sector" (Ramboll 2020). VMVSP Objective 9.5 encourages recycling and composting in both private residences and public spaces. VMVSP Policies 9.32 through 9.34 encourage onsite compositing, and VMVSP Policy 9.35 requires recycling and composting services be provided in the plan area. The emphasis on composting and the provision of composting services is consistent with the 2017 and 2022 Scoping Plans and would support the overall goals of AB 341 and SB 1383 in reducing landfilled waste and associated CH_4 emissions.

Water and Wastewater

Indirect GHG emissions result from the production of electricity used to convey, treat, and distribute water and wastewater. The amount of electricity required for these processes depends on the volume and sources of water. Additional wastewater emissions include CH_4 and N_2O, although these are generated by wastewater treatment at individual WWTPs. The project does not include any new WWTPs.

The 2017 and 2022 Scoping Plans outlined objectives and goals to reduce GHGs in the water sector, including using and reusing water more efficiently through greater water conservation, drought-tolerant landscaping, stormwater capture, and water recycling. Regulations have further targeted water supply and water conservation through building and landscaping efficiency (e.g., CCR Title 24). The Water Conservation Act of 2009 sets an overall goal of reducing per-capita urban-water use by 20% by December 31, 2020, which has been achieved.

The VMVSP does not include any features that would conflict with state measures and programs. The VMVSP includes twelve policies directly related to water conservation. For example, VMVSP Policy 9.36 requires indoor residential water use be reduced by 20% from the current Plumbing Code in effect at the time of construction, and VMVSP Policy 9.37 encourages nonresidential indoor water use be reduced by 30%. VMVSP Policies 9.38 and 9.39 require low-flow faucets and encourage

waterless urinals and toilets. VMVSP Policies 9.40 and 9.41 support recycled-water use, whereas VMVSP Policies 9.42 through 9.47 target outdoor water use through hydrozoning techniques, native plantings, reductions in turf, and installation of efficient irrigation controls. These policies are consistent with the 2017 and 2022 Scoping Plans' water measures and the state's regulatory programs within the water sector.

High Global Warming Potential Greenhouse Gases (HFCs)

HFCs are synthetic gases that may be used in residential refrigeration and air conditioning units, as well as in on-road vehicle air conditioning units. Emissions of HFCs occur as a result of wear, faulty maintenance, and leakage at the end of a product's lifetime.

The 2017 and 2022 Scoping Plans assume implementation of the SLCP Reduction Strategy and attainment of the state's SLCP reduction targets for HFCs. The SLCP Reduction Strategy identifies four state strategies that will develop grants and incentives for alternatives to HFCs, as well as evaluate the feasibility of a new ban on HFCs in new nonresidential refrigeration units, air conditioning (nonresidential and residential) units, and residential refrigerators and freezers. Both existing and new development, including development in the VMVSP, would be required to comply with state regulations for minimizing HFCs that are in place at the time of construction.

Construction/Land Use

The 2017 Scoping Plan identifies increasing carbon sequestration as crucial to achieving the state's long-term climate-change strategy, outlines objectives to maintain natural lands as a resilient carbon sink, and sets a goal to reduce GHG emissions from natural and working lands by at least 15 to 20 million metric tons of CO_2e by 2030. SB 1386 also identifies the protection and management of natural and working lands as a key strategy toward meeting the state's 2030 GHG-reduction target. However, SB 1386 is directed to state agencies, departments, boards, and commissions and not local jurisdictions, such as the County. No specific policies, directives, or regulations have been adopted that must be implemented in the County. Finally, the 2022 Scoping Plan specifically includes no-net loss or conversion of natural and working lands as a required project attribute for project consistency with the Scoping Plan.

As discussed in Section 3.3, *Biological Resources*, oak woodland is protected by policies in the County's General Plan and Code of Ordinance. Accordingly, the proposed project is required to mitigate all native oak tree impacts at a 1:1-inch ratio and all heritage oak trees at a 3:1-inch ratio. The total amount of CO_2 sequestered as a result of the tree planting over a 30-year tree life period is estimated to be 83,940 metric tons of CO_2e (Ascent 2024). Permeant conversion of natural lands would result in 15,436 metric tons of CO_2 and vineyard management would generate 31 metric tons of CO_2 per year. Thus, the proposed project would have a net positive land use change effect and would not conflict with the state's land use and sequestration goals.

With respect to construction-equipment emissions, USEPA and the NHTSA have adopted standards for CO_2 emissions and fuel consumption from heavy- and medium-duty vehicles. The 2019 California Green Building Standards Code (CALGreen Code) contains mandatory requirements aimed at reducing construction waste, making buildings more efficient in their use of materials and energy, and reducing environmental impacts during and after construction. For example, residential projects must recycle and/or salvage for reuse a minimum of 65% of nonhazardous construction and demolition debris or meet local construction and demolition waste-management ordinance requirements, whichever is more stringent (CALGreen Code §§ 4.4081.1 and 5.408.1). In addition,

100% of trees, stumps, rocks, and associated vegetation and soils resulting primarily from land clearing for nonresidential projects must be reused or recycled (CALGreen Code § 5.408.3).

The VMVSP includes the following policies that would help reduce construction-related GHG emissions.

- Policy 9.24 requires a 20% reduction in cement use, which would reduce embodied energy associated with construction.
- Policy 9.25 requires cement and concrete be made with recycled products, which would conserve virgin materials and may reduce manufacturing energy.
- Policy 9.26 requires efficient framing techniques, which would reduce the amount of lumber used and waste generated during construction.
- Policy 9.27 requires use of sustainably sourced, regional, bio-based, and reused materials, which may reduce hauling requirements and transportation mileage.
- Policy 9.28 requires a construction waste-management plan to increase recycling and divert landfilled waste, which would reduce CH_4 emissions from waste decomposition.
- Policy 9.29 requires a minimum of 65% of the nonhazardous construction waste generated be recycled or salvaged for reuse, which will reduce CH_4 emissions from waste decomposition.
- Policy 9.30 requires topsoil displaced during grading be placed in a designated area for future reuse, which may reduce hauling requirements and transportation mileage.
- Policy 9.31 requires 100% of trees, stumps, rocks and associated vegetation and soils resulting from land clearing to be reused or recycled.

Although these policies would reduce emissions associated with construction, given the potential 18-year construction period and the state's long-term goals to eliminate fossil-fuel combustion, construction activities may conflict with the state's emission-reduction trajectory.

Conclusion

Operation of the VMVSP could conflict with the state's emissions-reduction goals and trajectory, specifically within the area, energy, mobile, and construction sectors. Although the VMVSP has a diverse suite of strategies that target emissions from these sectors, many of the measures are voluntary, and there is no guarantee that the action would be incorporated into the project design of all future development.

Because the regulatory changes to meet the 2045 emissions-reduction target are still being developed, the extent to which the proposed project's emissions and resulting impacts would be mitigated through implementation of statewide (and nationwide) changes is not known. The calculation of post-2030 emissions cannot consider future federal or state actions that may be taken to achieve long-term reductions, beyond the Pavley I standards and SBs 100/1020.

The achievement of long-term GHG-reduction targets will require substantial change in terms of how energy is produced and consumed, as well as other substantial economy-wide changes, many of which can only be implemented by the federal and state governments. Given that the proposed project includes development and emissions sources that may be inconsistent with the state's long-term reduction trajectory, VMVSP would result in a potentially significant impact on GHG emissions.

Accordingly, Mitigation Measures GHG-1 through GHG-2, TRA-2, AQ-2b, and AQ-2c are required to mitigate the VMVSP's GHG impact.

The purpose of Mitigation Measures GHG-1, GHG-2, TRA-2, AQ-2b, and AQ-2c is to require project-specific GHG-emission reductions consistent with the California GHG-reduction targets required in SB 32 for 2030, and to support long-term reductions consistently with the need to eventually reach carbon neutrality statewide (AB 1279). The actions within the measures are either recommended by SMAQMD or EDCAQMD or are consistent with the major strategies for GHG reductions reflected in Appendix B of CARB's 2017 Scoping Plan and Appendix D of CARB's 2022 Scoping Plan. Because the VMVSP already contains numerous policies that will reduce emissions, Mitigation Measures GHG-1 and GHG-2 reflect additional commitments that can be made to further reduce emissions.

Mitigation Measures GHG-1, AQ-2b, and AQ-2c would reduce GHG emissions during construction through implementation of BMPs that will reduce fossil-fuel combustion and support electric-powered (or alternatively fueled) equipment and vehicles. Mitigation Measure GHG-2 outlines feasible GHG-reduction strategies that can be individually or collectively implemented to reduce operational GHG emissions within the area, energy, and mobile source sectors. The measure includes required revisions to several VMVSP policies, as well as a menu of onsite and offsite strategies (including GHG credits). Various combinations of onsite and offsite strategies could be pursued to optimize total costs or community co-benefits. The project applicant will be responsible for determining the overall mix of strategies necessary to ensure the performance standard to mitigate the significant GHG impact is met, as discussed further below.

Table 3.6-8 summarizes estimated operational emissions with implementation quantifiable revisions to VMVSP Policies 9.4, 9.22 and 9.37, which are required by Mitigation Measure GHG-2. Reductions from revisions to VMVSP Policies 9.1, 9.3, 9.6, 9.13 and 9.34, which are also required by Mitigation Measure GHG-2, could not be quantified at this time. This is because specific details required to quantify emissions reductions are not currently available. The table also includes reductions achieved by TRA-2, which is discussed further in Chapter 3.14, *Transportation and Circulation.*

Table 3.6-8. Estimated Full Build Operational GHG Emissions with Implementation of Mitigation Measure TRA-2 and Quantifiable Revisions to VMVSP Policies Required by Mitigation Measure GHG-2 (metric tons per year, unless otherwise stated) [a]

Operational Year	CO_2 [a]	CH_4	N_2O	HFCs	CO_2e
Emissions [b]					
2030 (Partial Operation)	4,825	8	<1	8	5,155
2045 (Full Build)	23,551	34	1	10	24,781
Emissions per Capita [c]					
2030 (Partial Operation)	–	–	–	–	1.7
2045 (Full Build)	–	–	–	–	2.7
Informational Statewide Benchmarks					
2030 (Partial Operation)	–	–	–	–	6.0
2045 (Full Build)	–	–	–	–	0.0

Source: Ascent 2024.

[a] Accounts for average annual sequestration benefits from tree planting (see Appendix C-2).

[b] Emissions account for reductions achieved by the RPS, VMVSP Policies 9.16, 9.36, 9.42, 9.45, 9.50, and 9.51, Mitigation Measure TRA-2, and revisions to VMVSP Policies 9.4, 9.22 and 9.37 per Mitigation Measure GHG-2.

[c] Assumes a partial 2030 population of 3,106 residents and a full-build population of 9,227 residents.
CH_4 = methane; CO_2 = carbon dioxide; CO_2e = carbon dioxide equivalents; GHG = greenhouse gas; N_2O = nitrous oxide; HFCs = hydrofluorocarbons.

As shown in Table 3.6-8, Mitigation Measure TRA-2 and revisions to VMVSP policies will reduce GHG emissions, but the majority of reductions achieved by Mitigation Measure GHG-2 will be through onsite and offsite strategies. Selected strategies will be identified and implemented through a GHG-reduction plan that will be prepared by the applicant, pursuant to Mitigation Measure GHG-2. The following sections evaluate the potential for required VMVSP policy revisions and onsite and offsite strategies included in Mitigation Measure GHG-2, as well as Mitigation Measure TRA-2, to address conflicts with the state's emission-reduction goals and trajectory within the mobile, energy, and area. The analysis also evaluates the potential for required construction mitigation (i.e., Mitigation Measure GHG-1, AQ-2b, and AQ-2c) to address the potentially significant impact within the construction sector.

Mobile Sources

Mitigation Measure TRA-2 requires shifting of 25,000 square feet of commercial office land use to commercial retail land use. As discussed in Chapter 3.14, implementation of Mitigation Measure TRA-2 would reduce VMT per capita for the residential component to a level less than the established threshold of 85% of unincorporated El Dorado County VMT per capita. Mitigation Measure GHG-2 would further support further VMT reductions though strengthening of VMVSP sustainably and land use policies. Accordingly, with implementation of TRA-2 and GHG-2, VMT generated by new development under the VMVSP would not conflict with the County's VMT thresholds.

Although the VMVSP meets the County's VMT threshold, the plan is not consistent with all project attributes identified in the state's 2022 Scoping Plan that aim to reduce mobile-source GHG emissions. Specifically, the project attributes related to electric-vehicle charging, parking restrictions, land use conversion, provision of affordable housing, and SCS consistency. Mitigation Measure GHG-2 requires revision to VMVSP Policy 9.4 to require electric-vehicle readiness in all Village Residential - Medium, Village Residential - High, Office Park, Commercial, and Public Facilities designations and revision to VMVSP 9.1 to limit off-street parking requirements to maximum allowable parking ratios. Although these measures are consistent with the 2022 Scoping Plan's electric-vehicle charging and parking-restriction project attributes, the VMVSP would still develop natural lands, does not propose affordable housing, and would be inconsistent with the growth scenario of the MTP/SCS. Accordingly, the proposed project may conflict with the state's emission-reduction trajectory within the mobile source sector.

Beyond the VMVSP policy revisions, Mitigation Measure GHG-2 identifies offsite strategies that may be pursued by the applicant, as feasible, to reduce VMT and support the state's and El Dorado County Transit Authority's (EDCTA) mobile source goals to expand transit. However, although the project developers can provide financial and administrative assistance to EDCTA to develop high-quality transit service within the plan area, the implementation of transit-improvement projects depends on coordination and partnership with EDCTA, which the applicant cannot fully control.

Energy Sources

Required revision to VMVSP Policy 9.22 under Mitigation Measure GHG-2 bolsters renewable-energy resources through mandates for onsite generation. Mitigation Measure GHG-2 also identifies all-electric buildings as a potential onsite strategy. In order to meet the state's 2045 climate-

neutrality goal (AB 1279), OPR (2018a) recommends all-electric buildings, and the 2022 Scoping Plan identifies all-electric design as a key project attribute for plan consistency. Because SBs 100 and 1020 obligate utilities to supply 100% carbon-free electricity by 2045, all-electric buildings that do not consume any natural gas would not generate any emissions. Accordingly, if all-electric design selected and fully implemented as an onsite strategy pursuant to Mitigation Measure GHG-2, the VMVSP would not conflict with the 2017 and 2022 Scoping Plans or the state's long-term statewide-reduction trajectory for energy sources.

Although all-electric buildings have been designed and constructed throughout California, the Ninth Circuit Court of Appeals ruled that the federal Environmental Policy and Conservation Act (EPCA) preempts local natural-gas bans for new development (*California Association of Restaurants vs. City of Berkeley [2023] 65 F.4th 1045*). While the Court's ruling only applies to local ordinances, like Berkley's natural-gas ban, it could constrain the County's ability to impose all-electric design requirements for new development. Given this legal uncertainty, the County recognizes that its authority to require all-electric buildings may be restricted. The ability to lawfully require all-electric buildings is one of many considerations that will be made by the project applicant and the County in developing the final GHG-reduction plan for the project.

Beyond all-electric design, Mitigation Measure GHG-2 identifies several other onsite and offsite strategies that would reduce building energy consumption. For example, where feasible, buildings may be achieve Leadership in Energy and Environmental Design (LEED) Silver certification or higher. LEED Silver certification cannot be expressly mandated for all structures because final building design will depend on individual buyer preferences at the point of sale. The specific components and feasibility of plan-wide LEED certification are thus not currently known, particularly for custom lots. Accordingly, the project may conflict with the state's emissions-reduction trajectory within the energy-source sector.

Area Sources

Required revision to VMVSP Policy 9.6 under Mitigation Measure GHG-2 will help facilitate electrification of fossil-fueled equipment by requiring outdoor electric outlets. However, the provision of exterior electric outlets does not necessarily guarantee use of electric equipment. Beyond the VMVSP policy revision, Mitigation Measure GHG-2 identifies onsite strategies that may be pursued by the applicant to reduce area source emissions. For example, the applicant may encourage use of electric-powered landscaping equipment in place of conventional diesel equipment. Although this strategy will support reductions in area source emissions, it is important to recognize that project developers do not have authority to mandate use of electric equipment among residents. Accordingly, the project may conflict with the state's emissions-reduction trajectory within the area source sector.

Construction

Mitigation Measure GHG-1 would reduce construction-generated GHG emissions by requiring use of alternative fuels and minimizing vehicle-idling time, among other BMPs. Additional commitments for electric-powered (or alternatively fueled) equipment may be pursued through Mitigation Measure AQ-2b and newer onsite trucks through Mitigation Measure AQ-2c.

Although these measures and actions would reduce emissions associated with construction, given the 18-year construction period, construction activities may conflict with the state's emissions-reduction trajectory.

Summary

Although required VMVSP policy revisions and onsite and offsite strategies included in Mitigation Measure GHG-2, as well as implementation of Mitigation Measures TRA-2, GHG-1, AQ-2b, and AQ-2c will achieve GHG benefits, the VMVSP would conflict with the state's emission-reduction goals and trajectory within the area, energy, mobile, and construction sectors. It is therefore likely that procurement of GHG credits will be a required component of the project GHG-reduction plan to achieve the necessary GHG reductions to mitigate the project's significant GHG impact. Mitigation Measure GHG-2 identifies GHG credits as the third priority strategy after onsite and offsite strategies.

The performance standard that must be achieved by the selected strategies under Mitigation Measure GHG-2 is to reduce project area, construction, and building natural-gas (energy) sector emissions to achieve a no-net increase in project-related GHG emissions from these sectors, consistent with CARB and OPR recommendations to eliminate fossil-fuel combustion emissions. The performance standard also requires mobile-source emissions to be reduced to achieve the requisite reductions needed to achieve compliance with the 2022 Scoping Plan land use conversion and affordable-housing project attributes. As discussed above, the VMVSP is not included in the growth scenario for the MTP/SCS, and thus does not achieve the 2022 Scoping Plan SCS consistency project attribution. This inconsistency is because of planning assumptions within the MTP/SCS. Achieving consistency with the project attribute would either require a reduction in development to meet the programmed MTP/SCS growth scenario for the project, or an amendment to the MTP/SCS. Because the project is not included in the growth scenario for the MTP/SCS, the growth projection is zero, or the No Project Alternative. Amending the MTP/SCS would depend on coordination and partnership with SACOG, which the applicant cannot fully control. Thus, there is no mitigation to address the project inconsistency with the 2022 Scoping Plan SCS project attribute.

The required level of GHG reduction needed to achieve consistency with the 2022 Scoping Plan land use conversion and affordable-housing project attributes is calculated as follows.

- *Land Use Conversion*: In general, compact development in infill areas has more-efficient travel patterns, resulting in lower VMT and GHG emissions (CARB 2022a). Developing natural or working lands, particularly those not proximate to existing residential and commercial services, can increase the average distance and number of per-capita vehicle trips compared to the same development in a more-urbanized area. Although the project traffic and associated emissions analysis accounts for these geographic and land use considerations, land conversion is unavoidable for the proposed project's location. The resulting conflict with the 2022 Scoping Plan is tied to the location-based VMT effect of constructing project land uses in an undeveloped area compared to a developed area. SACOG (2021) has mapped existing VMT throughout the SACOG region. Results are presented using hexagon (HEX) geography, which displays VMT per resident and per job over a hexagon grid. Because it is undeveloped, much of the VMVSP plan area is not mapped. The adjacent HEXs include FG-128 through FN-133 (non-inclusive), which have an average per capita VMT of 30.18 and an average work tour VMT of 27.32 per job. The nearest developed area to the VMVSP plan area is north of U.S. 50 in eastern Cameron Park, which includes HEXs FI-125 through FJ-128 (non-inclusive) with average per capita VMT of 28.95 and an average work tour VMT of 26.16 per job. If land uses proposed under the VMVSP were developed in these HEXs, the project would not require land conversion and would thus be consistent with the 2022 Scoping Plan land conversion project attribute. Accordingly, the amount of project emissions related to the land use inconsistency was calculated based on the%

change in per capita and per-job VMT between the nearest HEXs that would not require land use conversion and the VMVSP plan area HEXs. These values (4.1% for per capita VMT and 4.2% for per-job VMT) were multiplied by project mobile source GHG emissions from residential and commercial VMT, respectively.

It is worth nothing that this calculation approach likely overestimates the influence of land use conditions on project VMT and mobile-source GHG emissions. The SACOG HEX data are based on without-project conditions. Over time, with implementation of the VMVSP and other future regional and local projects, the plan area HEXs and surrounding area will mature and contain a mixture of residential, commercial, retail, and recreational uses. This densification and diversity of land use types will contribute to shorter vehicle trips and more vehicle trips made by alternative modes of transportation. Accordingly, the per-capita VMT and per-job VMT for the VMVSP plan area will likely be lower than represented by the current SACOG data; thus, the delta in per-capita VMT and per-job VMT compared to developed areas (i.e., no land conversion) would be less.

- *Affordable Housing*: In certain locations, affordable housing can reduce VMT by providing lower-income families greater opportunity to live closer to job centers and transit options. Research cited by CARB in the 2022 Scoping Plan indicates that location-efficient variables, such as development density, proximity to transit, and availability of localized amenities, are necessary for affordable housing strategies to deliver VMT reduction (California Housing Partnership Corporation and TransForm 2014; Newmark and Hass 2015). Restricting housing to below-market rates in areas without proximate supporting services will not achieve the same success as providing affordable housing in location-efficient, transit-rich areas. As shown in Figure 2-6, VRM—Village Residential Medium, VRH—Village Residential High, and VC—Village Commercial are proximate to proposed or nearby offsite commercial uses and major throughfares (e.g., Marble Valley Parkway). The VRL—Village Residential Low designation will support single-family homes that are less dense and further from services. Accordingly, VRL units would not be effective candidates for VMT reduction through affordable housing and are excluded from the 2022 Scoping Plan compliance review.

  As shown in Table 3.2-7, the 2022 Scoping Plan affordable-housing project attribute requires 20% of units to be designated affordable. The project design does not support this designation. Accordingly, the amount of project emissions related to the affordable housing inconsistency was calculated based on the expected percent reduction in GHGs that would be achieved if 20% of VRM, VRH, and VC units were designated affordable. This value (5.7%) was calculated using CAPCOA (2021) and multiplied by project mobile source GHG emissions from VRM, VRH, and VC VMT.

Table 3.6-9 presents estimated operational mobile, area, construction, and building natural-gas emissions subject to the reduction commitment under Mitigation Measure GHG-2. Area, mobile, and natural-gas source emissions have been forecasted over a 30-year operational analysis period. The forecast holds annual emissions quantified under full-build conditions constant over time. This approach likely overestimates future area source emissions because it does not account for improvements in engine technology or regulations that will reduce the carbon intensity of landscaping equipment**.** Specifically, AB 1346, which was signed by Governor Newsom on October 9, 2021, directs CARB to adopt regulations requiring new small off-road engines used primarily for landscaping to be zero-emission by 2024. Accordingly, it is likely that state regulation will reduce the carbon intensity of future landscaping equipment, although the precise amount and impact on

VMVSP emissions cannot currently be quantified at this time. The analysis likewise does not account for project-level mobile-source benefits from regulations and policies adopted after publication of the analysis models—principally, the Advanced Clean Truck and Advanced Clean Cars II regulations, which ban the sale of fossil-fuel-powered heavy vehicles and passenger cars/trucks, respectively, beyond certain future dates.

Table 3.6-9. Project Mobile, Area, Construction, and Building Natural Gas Sector Emissions Subject to Reduction under Mitigation Measure GHG-2 (metric tons CO_2e)

Year [a]	Construction [a]	Operations	Total [b]
Construction Year 1	1,606	0	1,606
Construction Year 2	1,164	0	1,164
Construction Year 3	1,364	922	2,286
Construction Year 4	434	1,400	1,834
Construction Year 5	456	1,845	2,301
Construction Year 6	428	2,344	2,772
Construction Year 7	497	2,720	3,217
Construction Year 8	520	3,192	3,712
Construction Year 9	1,067	3,709	4,776
Construction Year 10	521	4,130	4,651
Construction Year 11	1,107	4,693	5,800
Construction Year 12	707	5,204	5,911
Construction Year 13	1,205	5,908	7,113
Construction Year 14	392	6,425	6,817
Construction Year 15	1,001	6,846	7,847
Construction Year 16	382	7,267	7,649
Construction Year 17	1,004	7,696	8,700
Construction Year 18	684	8,138	8,822
Full Build (Operational Year 1)	0	8,783	8,783
Operational Years 2–30	0	254,719	254,719
Total	14,539	335,943	350,482

Source: Based on Ascent 2024.

[a] Excludes emissions from one-time sequestration loss because these would be offset through long-term increases in carbon sequestration from project tree planting.

[b] Includes all area source and building natural gas emissions, which, per Mitigation Measure GHG-2, must be reduced to achieve a no-net increase in project-related GHG emissions, as well as the project share of mobile source–emission reductions needed to achieve compliance with the 2022 Scoping Plan land use conversion and affordable-housing project attributes. Partial operational emissions for construction Years 3 through 18 were scaled from the 2030 and full-build estimates based on the number of development acres constructed in the year prior.

The analysis utilizes a 30-year operational analysis period consistent with CARB-approved analyses for AB 900 projects, which are considered "environmental leadership development projects" (Murphy 2019). Although regulations are likely to reduce emissions from area sources to net zero within this period (2040 to 2070), there is the possibility GHG emissions from these sources could persist beyond the analysis period considered in this document. Specifically, the operational lifetime of commercial and residential land uses constructed under the plan is expected to exceed 30 years. Uncertainty is associated with characterizing future-market conditions, regulations, technologies,

and consumer choices, and the degree of that uncertainty increases dramatically the further into the future the forecast extends. The confidence in emissions projections beyond 30 years is limited and would be speculative. Accordingly, this analysis uses a 30-year analysis period for the consideration of future GHG emissions.

Total construction and operational area-, mobile-, and building natural gas-source emissions over the 30-year analysis period are estimated to be 350,482 metric tons CO_2e. This represents the project's maximum total mitigation commitment, which may be recalculated and achieved on a phase-by-phase basis, as described under Mitigation Measure GHG-2. The mitigation obligation may therefore change over time as the project is implemented, regulations change, and new control technologies become available and effective.

Should GHG credits be pursued as a strategy, Mitigation Measure GHG-2 outlines specific and enforceable standards to obtain such credits. A GHG credit enables development projects to compensate for their GHG emissions and associated environmental impacts by financing reductions in GHG emissions elsewhere. GHG credits are classified as either compliance or voluntary. In California, compliance credits can be purchased by covered entities subject to the state's Cap-and-Trade regulation to meet predetermined regulatory targets. The emissions associated with this project are not covered by the Cap-and-Trade regulation; thus, the Cap-and-Trade offsets cannot be used for this project. Voluntary credits are not associated with the Cap-and-Trade regulation and are purchased with the intent to voluntarily meet carbon-neutral or other environmental obligations.

Successful GHG credit programs require not only established accounting protocols to monitor, report, and document reductions, but also independent verification of the reported reductions to ensure their credibility and accuracy. GHG credit "protocols" outline the accounting rules and requirements for monitoring, quantifying, and reporting GHG credits. Numerous GHG credit protocols currently exist internationally, nationally, and state-wise. However, only those maintained by *accredited* registries provide technically sound methods to assure GHG credits achieve real GHG reductions. Accredited registries develop high-quality protocols and oversee registration and retirement of GHG credits.

CARB (2021a) currently recognizes the following three registries as accredited under the Cap-and-Trade regulation: American Carbon Registry (ACR), Climate Action Reserve (CAR), and Verra (formally Verification Carbon Standard). The Cap-and-Trade regulation requires all GHG credits be real, additional, quantifiable, permanent, verifiable, and enforceable, pursuant to and as defined in 17 CCR 95802(a). CARB (2021b) has approved six protocols that establish the accounting procedures to verify that GHG credits for the Cap-and-Trade program achieve these standards. In its Golden Door decisions, the Court emphasized the need for GHG credits pursued as CEQA mitigation to meet these six criteria and also originate from a CARB-approved protocol or a "protocol [that is] consistent with CARB requirements under title 17, Section 95972, subdivision (a)(1)–(9) of the California Code of Regulations." The ACR, CAR, Verra, and other accredited registries (e.g., Gold Standard) maintain many programs that are equally as rigorous and enforceable as the six CARB-approved protocols for the Cap-and-Trade program (i.e., they meet the requirements of 17 CCR 95972) (AEP Climate Change Committee 2020). CARB approval of their six protocols merely distinguishes them for use in the Cap-and-Trade system and associated compliance market. CARB's regulations are not legally applicable to the voluntary GHG credit market, and CARB has no authority to enforce standards for the voluntary GHG credit market.

Salient to the discussion of GHG credits as CEQA mitigation is geographic location. As discussed above, climate change is a global problem, and GHGs are global pollutants. Some GHGs can reside in the atmosphere for 1,000 of years, becoming well-mixed and transported internationally (Gulev et al. 2021). For this reason, achieving a 1-metric-ton reduction in GHGs in California is functionally equivalent to a 1-metric-ton reduction in GHGs anywhere else in the world. In its Golden Door decisions, the Court expressed concern with use of international GHG credits. However, their concern was not with the science underpinning the cumulative nature of GHGs, but rather with potential uncertainty regarding enforcement of GHG credits in foreign countries. There is no doubt that the quality of GHG credits depends on the protocol and registry by which they are certified. Requirements of GHG credit protocols, such as for credits to meet the six criteria established in 17 CCR 95802, apply regardless of the credit's location. This is evidenced by the Cap-and-Trade regulation itself, which permits out-of-state and even outside-U.S. compliance credits.[10]

Although CARB does have certain enforcement authority pursuant to the covered entities regulated under the Cap-and-Trade regulation in regard to compliance offsets, the procurement of GHG credits on the voluntary market is a commercial transaction subject to the same laws and securities as any business agreement. Moreover, GHG credits resulting from GHG offsets are the result of projects that have already occurred. Therefore, the reduction has already been achieved.

In developing Mitigation Measure GHG-2 and considering use of GHG credits to meet the performance standard (350,482 metric tons CO_2e), the County has thoroughly and thoughtfully considered the current scientific, regulatory, and legal framework for effective GHG mitigation and use of GHG credits. The measure reflects best practices for carbon accounting and use of GHG credits to compensate for the GHG impacts of future development. Specifically, Mitigation Measure GHG-2 articulates the following.

- **Achievable and Enforceable Performance Standards**. The measure requires total GHG emissions from construction and operational GHG emissions from project area source, building natural gas, and mobile sources (proportional share inconsistent with 2022 Scoping Plan project attributes) over a 30-year analysis period be reduced to net zero (i.e., no-net increase over baseline). The County recognizes that project-generated construction emissions would occur over many years, with long-term operation of new development occurring annually thereafter. Mitigation Measure GHG-2 provides the flexibility to reduce emissions using phased approach that is commensurate with buildout of the plan. This requires development of a plan that outlines the schedule of implementation, identifies the GHG-reduction commitment of each phase, and tracks achieved reductions relative to the overall performance-standard measure. The measure requires that the applicant develop the phasing plan prior to County approval of the tentative map, parcel map, or planned development permit.
- **Objective Criteria to Ensure that GHG Credits Achieve Real GHG Reductions**. Under 17 CCR 95972, all GHG credits purchased pursuant to Mitigation Measure GHG-2 must originate from a CARB-approved protocol, or a protocol that is equal to or more rigorous than CARB requirements. Implicit in this requirement is that all credits be real, permanent, quantifiable, verifiable, enforceable, and additional. These protocols also have criteria and procedures to ensure permanence of GHG credits, where applicable. All GHG credits must also originate from a CARB-approved registry (currently ACR, CAR, or Verra).

[10] This map identifies recent CARB compliance credits, many of which are located throughout the United States and internationally in Canada: https://webmaps.arb.ca.gov/ARBOCIssuanceMap/.

- **Consideration of Geographic Priorities***.* Mitigation Measure GHG-2 requires GHG credits in geographies closest to the County be prioritized first over international, national, and statewide credits. Although the geographic location of a GHG credit is irrelevant from a scientific standpoint, the County recognizes that GHG credit projects can achieve valuable co-benefits (e.g., improved air quality, reduced traffic congestion, improved energy security and/or resilience). When achieved locally in the County, these co-benefits directly benefit the community. The measure includes reasonable cost-containment standards with respect to geographic prioritization to ensure that the measure remains implementable. Local credits must be pursued if they are available and are of equal or lesser cost compared to the settlement price of the latest Cap-and-Trade auction.[11]
- **Strict Accounting of GHG Credit Types and their Expected Reduction Benefit Relative to Project Emissions***.* The measure allows both GHG offsets and forecasted mitigation units (FMUs). *Offsets* are a type of GHG credit resulting from an emission-reduction project that has already occurred and is subject to rigorous monitoring and verification. Emission reductions achieved by GHG offsets have therefore already occurred or are already occurring (but would not have existed without a credit market). *FMUs* are a type of GHG credit resulting from a project that will occur in the future. FMUs are subject to the same rigorous monitoring and verification as GHG offsets. However, the ex-ante nature of FMUs requires additional consideration of resulting GHG reductions for the purposes of CEQA mitigation. Specifically, Mitigation Measure GHG-2 requires that any GHG credits from FMUs be funded and implemented within 5 years of emission of the project GHG emissions that they will mitigate. This is to account for the fact that CO_2 emissions (which will be the most-common project GHG-emissions type) reach their peak radiative effect on the atmosphere within the first 10 years of emissions (Ricke and Caldeira 2014). The measure further requires that any use of FMUs that result in a time lag between project emissions and their reduction by GHG credits be compensated through a prorated surcharge of additional FMUs proportional to the effect of the delay. Given the current and accelerating effects of climate change, the 5-year time restriction and FMU surcharge is necessary to ensure that Mitigation Measure GHG-2 appropriately compensates for any lag in temporal radiative forcing should FMUs be used as GHG credits.
- **Standards for Verification and Independent Review to Assure Transparency**. The measure requires that an independent, third-party entity verify that all GHG credits meet the performance standards of the measure (including adherence to the geographic prioritization scheme). The ANSI National Accreditation Board or CARB must approve the verifier.

The County recognizes that GHG credits are a tradable market commodity. Demand for voluntary GHG credits is driven by companies and individuals that take responsibility for reducing their own emissions, as well as entities that purchase pre-compliance GHG credits before emissions reductions are required by regulation. Recent studies predict that the voluntary carbon market will grow substantially over the next 30 years, expanding by 5 to 10 times the current (2020) levels by 2030 and 10 to 30 times the current levels by 2050 (Trove Research et al. 2021). As demand for voluntary GHG credits increase, so will costs, with the same study predicting costs to rise above $50 per ton by 2040 (Trove Research et al. 2021). High-quality credits meeting the standards discussed above will be priced at a premium and will likely exceed this average estimate.

[11] Auctions under the Cap-and-Trade program happen quarterly. Settlement prices for the past 13 auctions range from $14.90 per metric ton to $23.69 per metric ton (CARB 2021c).

The potential for significant cost escalation in future markets creates economic uncertainty that must be considered and disclosed. Equally, opportunities to secure GHG credits meeting the extremely stringent requirements of Mitigation Measure GHG-2 may be constrained by competing markets and demand. Unforeseen circumstances (e.g., emission reversal) may also impede long-term implementation of Mitigation Measure GHG-2. Finally, as noted above, the performance standard for Mitigation Measure GHG-2 is calculated for a 30-year analysis period for operational area and energy sources. Although regulations are likely to reduce area- and energy-source emissions to net zero within this period (2045 to 2075), there is the possibility that GHG emissions from these sources could persist beyond the analysis period considered in this document. Ultimately, due to the plan-level nature of this analysis, coupled with the unknowns surrounding the future reduction technologies and the affordability of purchasing GHG credits, inherent uncertainty exists about the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts. Consequently, although all identified impacts except consistency with the 2022 Scoping Plan SCS project attribute could be reduced to a less-than-significant level with implementation of Mitigation Measure GHG-2, this document takes a conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that all impacts on GHG emissions would be potentially significant and unavoidable.

Mitigation Measure TRA-2: Shift 25,000 square feet of commercial office land use to commercial retail land use.

Mitigation Measure AQ-2b: Implement BMPs to reduce construction-related exhaust emissions during early construction.

Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks.

Mitigation Measure GHG-1: Implement BMPs to reduce construction-generated GHG emissions

The project applicant will require contractors, as a condition of contract, to reduce construction-related GHG emissions through the following measures. These BMPs are consistent with SMAQMD's (2020) recommended measures to reduce construction-generated GHG emissions.

- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to no more than 3 minutes (5-minute limit is required by the state airborne toxics control measure [CCR Title 13 §§ 2449(d)(3) and 2485]). Provide clear signage at the entrances to the site that explains this requirement for workers.
- Maintain all construction equipment in proper working condition according to manufacturer's specifications, and train equipment operations in proper use of equipment. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated.
- Perform onsite material hauling with trucks equipped with on-road engines, as feasible.
- Ensure that alternatively fueled (e.g., biodiesel, electric, CARB-approved low-carbon fuel, such as renewable diesel) construction vehicles/equipment comprise at least 15% of the fleet.

- Encourage and provide carpools, shuttle vans, transit passes and/or secure bicycle parking for construction-worker commutes.
- Reduce electricity use in the construction office by using compact fluorescent bulbs, powering off computers every day, and replacing heating and cooling units with more efficient ones.
- Recycle or salvage nonhazardous construction and demolition debris (goal of at least 75% by weight).
- Use locally sourced or recycled materials for construction materials (goal of at least 20% based on costs for building materials and volumes for roadway, parking lot, sidewalk and curb materials). Use wood products certified through a sustainable forestry program, as feasible.
- Minimize the amount of concrete for paved surfaces or utilize a low-carbon concrete option.
- Use SmartWay-certified trucks for deliveries where the haul distance exceeds 100 miles and a heavy-duty Class 7 or Class 8 semi-truck or 53-foot or longer box-type trailer for hauling. SmartWay-certified trucks are outfitted at point of sale or retrofitted with equipment that significantly reduces fuel use and emissions.

Mitigation Measure GHG-2: Develop and implement a GHG-reduction plan to reduce construction and operational area, mobile, and building natural gas GHG emissions.

Measure Performance Standards

Prior to the County issuing approval of a small-lot tentative map, parcel map, and/or PD permit, the building permit applicant will submit a plan for County approval for reducing GHG emissions from: (a) construction; (b) operational GHG emissions from project area sources and building natural-gas combustion over a 30-year analysis period; and (c) operational GHG emissions from the share of project mobile sources over a 30-year analysis period inconsistent with the 2022 Scoping Plan (or future scoping plans) land use change and affordable-housing project attributes.

Emissions from the 18-year construction period and from these operation sources over a 30-year analysis period have been quantified in this DEIR. Total construction-sector, project area source, building natural gas, and mobile source emissions over the 30-year analysis period are estimated to be 350,482 metric tons CO_2e. This yields a reduction commitment of up to 350,482 metric tons of CO_2e needed to achieve a no-net increase in project-related GHG emissions from these sources. Although this inventory could be used exclusively to inform the required mitigation commitment, the methods used to quantify emissions in the DEIR were conservative. Accordingly, this DEIR likely overestimates actual GHG emissions that would be generated by the project. The project applicant may therefore reanalyze GHG emissions for any phase of the project to update the required reduction commitment to achieve net zero.

Any updated emissions analysis conducted for the project must be performed using EDCAQMD-, CARB-, or the USEPA-approved emissions models and quantification methods available at the time of the reanalysis. The analysis must use the latest-available engineering data for the project, inclusive of any required mitigation measures identified in the DEIR that will reduce GHG emissions. Consistently with the methodology used in this DEIR, emission factors may account for enacted regulations that will influence future-year emissions intensities (e.g., fuel-

efficiency standards for on-road vehicles). The building permit applicant will retain a qualified professional firm to conduct any revised emissions modeling. The building permit applicant will submit updates to the project emissions inventory and/or GHG credit commitment to the County for review and approval, which will include third-party review by a qualified consultant of the County's selection and be subject to building permit applicant reimbursement of consultant costs.

Plan Development

Developing a fixed and rigid implementation strategy up-front to cover 18 years of construction followed by project operation will be restrictive and will potentially preclude the project applicant from pursing future reduction technologies that could be economically or environmentally superior to options that are currently available.

Given the constraints associated with developing a fixed and rigid reduction plan to cover all project emissions subject to this measure, the plan may be developed and implemented over multiple phases. A phased approach provides implementation and management flexibility and enhances plan quality and accuracy because each subsequent emissions inventory can better account for the latest regulations and reduction technologies. The first phase of the plan must identify the expected future phases, schedule for reducing GHG emissions, and needed quantity of GHG reductions remaining after each phase to attain the performance standard of this measure.

GHG-Reduction Strategies

Each phase of the plan will identify the GHG-reduction strategies that will be implemented during that phase to achieve the performance standard. Strategies that could be used in formulating the plan are summarized below. GHG-reduction strategies must be verifiable and feasible to implement. The plan will identify the entity responsible for implementing each strategy (if not the project applicant) and the estimated GHG reduction that will be achieved by implementation of the strategy. If the selected strategies are shown to exceed total net emissions of that phase, the estimated surplus can be applied as a credit in future phase(s), as explained below.

Revisions to VMVSP policies (A) are required and must be incorporated into the plan. Following policy revisions, the project applicant will prioritize selected strategies as: (B) onsite strategies; (C) offsite strategies; and (D) GHG credits. The order of priority for the location of selected strategies will be: (1) within the plan area; (2) within communities surrounding the plan area (e.g., Cameron Park); (3) throughout Northern California; (4) in the State of California; (5) in the United States; and (6) outside of the United States. If using offsite strategies or GHG credits, the plan must present substantial evidence to explain why higher priority strategies were deemed infeasible as defined under CEQA.

It is possible that some of the strategies could independently achieve the performance standard for the project. Various combinations of strategies could also be pursued to optimize total costs or community co-benefits. The project applicant will be responsible for determining the overall mix of strategies necessary to ensure the performance standard to mitigate the significant GHG impact is met.

The list of strategies presented in this section is not exclusive. The project applicant may include additional or new strategies to reduce GHG emissions to the extent that they become

commercially available and cost effective and earn a track-record for reliability in real-world conditions.

A. Revisions to VMVSP Policies: The following VMVSP policy revisions will be included as specific requirements of future small-lot tentative maps, parcel maps, and/or PD permits.

(1) **Parking**: VMVSP Policy 9.1 will be revised as follows: Limit off-street parking requirements to maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet).

(2) **Shared Parking**: VMVSP Policy 9.3 will be revised as follows: Off-street parking in all Village Residential - Medium, Village Residential - High, Office Park, Commercial, and Public Facilities land use designations shall include a minimum number of dedicated public parking spaces for Low-Emitting and Fuel-Efficient Vehicles, in accordance with CalGreen Nonresidential Tier 1 Voluntary Measures, as well as shared vehicles.

(3) **Electrical Vehicle Charging**: VMVSP Policy 9.4 will be revised as follows: Off-street parking in all Village Residential – Medium, Village Residential – High, Office Park, Commercial, and Public Facilities designations shall provide dedicated parking for plug-in electric vehicles (PEVs) and install minimum Level 2 PEV-charging stations in each dedicated PEV-parking space, in accordance with CalGreen Tier 1 Voluntary Measures. Installation of 220/240 volt garage circuits to support PEVs will be required in all residential buildings within the Village Residential designations.

(4) **Electrical Outlets:** VMVSP Policy 9.6 will be revised as follows: Electrical outlets shall be provided along the front and rear exterior walls in all Residential and Public Facility designations to allow for the use of electric landscape maintenance tools.

(5) **Cool Roofs**: VMVSP Policy 9.13 will be revised as follows: Cool roofing materials shall be required in both residential and nonresidential buildings, consistent with CalGreen Tier 1 voluntary measures.

(6) **Onsite Solar Energy**: VMVSP Policy 9.22 will be revised as follows: All VRL – Single Family – Production (3–4 DU/ac) and VRM – Condo/Townhome – Production developments will be required to install rooftop solar power. Commercial, other residential, and public buildings shall be designed to allow for the installation of renewable-energy systems including active solar, wind, or other emerging technologies. Rooftop photovoltaic (PV) arrays or solar water-heating systems (SWHS) shall be installed in accordance with the State Fire Marshal safety regulations and guidelines.

(7) **Compost**: VMVSP Policy 9.34 will be revised as follows: On-site reuse of compost and mulch shall be encouraged in privately owned-gardens and landscaping and required within common landscaped areas in the plan area.

(8) **Water Use**: VMVSP Policy 9.37 will be revised as follows: Nonresidential indoor water use shall be required to be reduced by a minimum of 30% from the 2008 Plumbing Code baseline, or then-current Plumbing Code in effect at the time of construction as demonstrated by the prescriptive fixture-based method or according to a water use baseline, in accordance with CalGreen Nonresidential Voluntary Tier 1 Measures.

B. Onsite Strategies: Strategies to reduce onsite operational emissions may include but are not limited to the following:

(1) The building permit applicant will use commercially reasonable standards to achieve all-electric buildings design. All water heaters in new residential developments will be either solar or electrically powered. The building permit applicant will ensure that all residential and nonresidential development meet the State's Zero Net Energy standards, if and when adopted. Concurrently with submittal of the building permit application, the building permit applicant will submit documentation to the County demonstrating compliance with this mitigation measure. The County will ensure compliance prior to issuance of certificate of occupancy.

(2) The building permit applicant will use commercially reasonable standards to achieve use of natural alternatives to HFCs for building air conditioning equipment. Natural refrigerants include ammonia, CO_2, or hydrocarbons. The County will require all development to meet CARB regulations restricting HFCs, if and when adopted. Concurrently with submittal of the building permit application, the applicant will submit documentation to the County demonstrating compliance with this mitigation measure. The County will ensure compliance prior to issuance of certificate of occupancy.

(3) The building permit applicant will use commercially reasonable standards to achieve LEED Silver certification or higher through specific committed measures in the use of recycled and sustainable materials in construction, water efficiency, and efficiency of energy use. The United States Green Building Council is a private 501(c)3, non-profit organization which promotes sustainability in building design, construction, and operation. The U.S. Green Building Council developed the LEED program, which provides a rating system that awards points for new construction based on energy use, materials, water efficiency, and other sustainability criteria. LEED has certification systems for both commercial and residential use. Concurrently with submittal of the building permit application, the applicant will submit to the County a copy of the LEED project registration for participating residential sites. Final LEED certification from Green Business Certification, Inc., will be provided to the County. The County will ensure compliance prior to issuance of certificate of occupancy. If LEED Silver certification were not achieved, then the building permit applicant must explain the circumstances that prevented certification.

(4) The building permit applicant will provide education for residential and commercial tenants concerning electric-powered landscaping equipment. Prior to receipt of any certificate of final occupancy, the building permit applicant will work with EDCAQMD to develop electronic correspondence to be distributed by email to new residential and commercial tenants that encourages the purchase of electric-powered equipment to reduce GHG and criteria pollutant emissions.

C. Offsite Strategies: Strategies to reduce offsite emissions may include but are not limited to the following:

(1) The applicant will partner with EDCTA to support funding for high-quality transit service within the plan area. Where bus service is provided, the applicant will consider provision of transit amenities to increase ridership, including bus shelters and park-and-ride lots. The applicant may also fund or contribute funding to alternatively fueled transit buses, including electric buses.

(2) The applicant will partner with PG&E to fund or contribute to an energy efficiency improvement program to achieve reductions in residential and commercial natural gas and electricity usage. Potential building improvements may include energy efficient appliances, energy efficient boilers, installation of alternative water heaters in place of natural gas storage tank heaters, installation of induction cooktops in place of gas ranges, or installation of cool roofs or green roofs.

(3) The applicant will partner with PG&E to fund or contribute to community solar, wind, or other renewable-energy projects or programs. This could include providing funding to support utility programs that will allow homeowners to install solar-photovoltaic systems at zero or minimal up-front cost. All projects installed under this measure must be designed for high performance (e.g., optimal full-sun location, solar orientation) and additive to utility RPS goals.

(4) The applicant will partner with PG&E to fund or contribute to community infrastructure projects (e.g., retirement of natural gas facilities) to support decarbonization of the electric power sector.

(5) The applicant will partner with the County to fund or contribute to programs to increase sidewalk coverage to improve pedestrian access and interconnectivity of the pedestrian network.

(6) The applicant will partner with the County to fund or contribute to programs to construct or improve bicycle lane facilities (Class I, II, or IV) or bicycle boulevards.

(7) The applicant will partner with the County to fund or contribute to the deployment of neighborhood/city conventional or electric carshare or bikeshare programs.

D. GHG Credits: All GHG credits must be created through a CARB-approved registry. These registries are currently the ACR, CAR, and Verra, although additional registries may be accredited by CARB in the future. These registries use robust accounting protocols for all GHG credits created for their exchange, including the six currently approved CARB protocols. This mitigation measure specifically requires GHG credits created for the project originate from a CARB-approved protocol or a protocol that is equal to or more rigorous than CARB requirements under 17 CCR 95972. The selected protocol must demonstrate that the GHG-emissions reductions are real, permanent, quantifiable, verifiable, enforceable, and additional. Definitions of these terms from 17 CCR 95802(a) are provided below (Note: the original text used the term *offset*, which has been replaced in the text below with the generic term *GHG credit* because this measure allows for use of both offsets and FMUs).

- **Real**: GHG reductions or enhancements result from a demonstrable action or set of actions and are quantified using appropriate, accurate, and conservative methodologies that account for all GHG emissions sources, GHG sinks, and GHG reservoirs within the (GHG credit) project boundary and account for uncertainty and the potential for activity-shifting and market-shifting leakage.
- **Additional**: GHG reductions or removals that exceed any GHG reduction, or removals otherwise required by law, regulation, or legally binding mandate, and that exceed any GHG reductions or removals that would otherwise occur in a conservative BAU scenario.
- **Permanent**: GHG reductions and removal enhancements are not reversible, or when GHG reductions and GHG-removal enhancements may be reversible, that mechanisms

are in place to replace any reversed GHG-emission reductions and GHG-removal enhancements to ensure that all credited reductions endure for at least 100 years.

- **Quantifiable**: The ability to accurately measure and calculate GHG reductions or GHG-removal enhancements relative to a project baseline in a reliable and replicable manner for all GHG-emission sources, GHG sinks, or GHG reservoirs included within the (GHG credit) project boundary, while accounting for uncertainty and activity-shifting and market-shifting leakage.
- **Verifiable**: A (GHG credit) project report assertion is well-documented and transparent such that it lends itself to an objective review by an accredited verification body.
- **Enforceable:** The authority for CARB to hold a particular party liable and take appropriate action if any of the provisions of this article are violated. Note that this definition of *enforceability* is specific to the Cap-and-Trade regulation, where CARB holds enforcement authority, but this measure will employ GHG credits from the voluntary market, where CARB has no enforcement authority. Applying the definition to this mitigation measure means that GHG reductions must be owned by a single entity and be backed by a legal instrument or contract that defines exclusive ownership.

Geographic Prioritization of GHG Credits

GHG credits from reduction projects in the County will be prioritized before projects in larger geographies (i.e., northern California, California, United States, and international). The applicant will inform brokers of the required geographic prioritization for the procurement of GHG credits. GHG credits from reduction projects identified in the County that are of equal or lesser cost compared to the settlement price of the latest Cap-and-Trade auction must be included in the transaction. GHG credits from reduction projects outside of the County may be purchased if adequate credits cannot be found in the County or if they exceed the maximum price identified above. The economic and geographic analysis undertaken to inform the selection of GHG credits must be provided by the applicant to the County as part of the required documentation discussed below under *Plan Implementation and Reporting*.

Types of GHG Credits

GHG credits may be in the form of GHG offsets for prior reductions of GHG emissions verified through protocols or FMUs for future committed GHG emissions meeting protocols. Because emissions reductions from GHG offsets have already occurred, their benefits are immediate and can be used to compensate for an equivalent quantity of project-generated emissions at any time. GHG credits from FMUs must be funded and implemented within 5 years of project GHG emissions to qualify as a GHG credit under this measure (i.e., there can only be a maximum of 5 years lag between project emissions and their real-world reductions through funding a FMU in advance and implementing the FMU on the ground). Any use of FMUs that results in a time lag between project emissions and their reduction by GHG credits from FMUs must be compensated through a prorated surcharge of additional FMUs proportional to the effect of the delay. Because emissions of CO_2 in the atmosphere reach their peak radiative forcing within 10 years, a surcharge of 10% for every year of lag between project emissions and their reduction through a FMU will be added to the GHG credit requirement (i.e., 1.10 FMUs would be required to mitigate 1 metric ton of project GHG emissions generated in the year prior to funding and implementation of the FMU).

Verification and Independent Review of GHG Credits

All GHG credits will be verified by an independent verifier accredited by the ANSI National Accreditation Board (ANAB) or CARB, or an expert with equivalent qualifications to the extent necessary to assist with the verification. Following the standards and requirements established by the accreditation board (i.e., ANAB or CARB), the verifier will certify the following.

- GHG credits conform to a CARB-approved protocol or a protocol that is equal to or more rigorous than CARB requirements under 17 CCR 95972. Verification of the latter requires certification that the credits meet or exceed the standards in 17 CCR 95972.
- GHG credits are real, permanent, quantifiable, verifiable, enforceable, and additional, as defined in this measure.
- GHG credits are purchased according to the geographic prioritization standard defined in this measure under *Geographic Prioritization of GHG Credits*.

Verification of GHG offsets must occur as part of the certification process for compliance with the accounting protocol. Because FMUs are GHG credits that will result from future projects, additional verification must occur beyond initial certification is required. Verification for FMUs must include initial certification and independent verification every 5 years over the duration of the FMU generating the GHG credits. The verification will examine both the GHG credit realization on the ground and its progress toward delivering future GHG credits. The applicant will retain an independent verifier meeting the qualifications described above to certify reductions achieved by FMUs are achieved following completion of the future reduction project.

Plan Implementation and Reporting

As described above, the plan may be developed and implemented over multiple phases. Prior to the start of each phase, the project applicant will update the plan to calculate the amount of GHG emissions anticipated in the covered phase, as well as emissions from prior phases (if applicable) and the projected total net emissions of the project. The plan will identify the specific GHG-reduction strategies that will be implemented to meet the performance standard for the covered phase and quantify the expected reductions that will be achieved by each strategy. All emissions and reductions will be quantified in accordance with the requirements outlined above.

The applicant will retain a qualified professional firm to assist with its review and approval of the plan. Subsequent amendments to the plan will identify reductions that have been achieved during prior phases and determine if those reductions exceed emissions generated by the project. If the GHG-reduction strategies implemented by the applicant result in a surplus of reductions above the performance standard, the balance of those reductions may be credited to subsequent phases.

The applicant will prepare the plan (or first phase of the plan) prior to the County issuing approval of a small-lot tentative map, parcel map, and/or PD permit. If the applicant elects to use a phased approach, the first phase of the plan must identify the expected future phases and schedule for amending the plan to cover future phases. The final phase of the plan must address operational emissions over a 30-year period, accounting for regulations adopted at that time that will reduce project emissions.

Revisions to VMVSP policies and selected onsite strategies will be included as specific requirements of future small-lot tentative maps, parcel maps, and/or PD permits. Selected offsite strategies will be completed or operational before completion of the applicable phase. If GHG credits are pursued, the applicant will enter the necessary contract(s) to purchase credits prior to the start of each phase. All credits must be retired before completion of the applicable phase.

The applicant will conduct annual reporting to verify and document that selected strategies achieve sufficient emissions reductions to mitigate project emissions. Each report should describe the GHG-reduction strategies that were implemented over the prior year, summarize past, current, and anticipated project phasing, document compliance with plan requirements, and identify corrective actions (if any) needed to ensure the plan achieves the performance standard. If GHG credits have been purchased to reduce emissions for the reporting year, the annual report must include copies of the offset retirement verification.

Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs (significant and unavoidable)

Metropolitan Transportation Plan and Sustainable Communities Strategy

The MTP/SCS provides a long-range framework to minimize transportation impacts on the environment, improve regional air quality, protect natural resources, and reduce GHG emissions. The MTP/SCS is consistent with SB 375, which requires SACOG to adopt an SCS that outlines policies to reduce per-capita GHG emissions from passenger vehicles. The SCS policies include a mix of strategies that target smart growth, mixed-used design, alternative transportation, transit, mobility and access, network expansion, and transportation investment.

Implementation of the SCS is intended to improve the efficiency of the transportation system and achieve a variety of housing types throughout the SACOG region that meet market demands in a balanced and sustainable manner. Consistent with SACOG goals, the VMVSP would create a mixed-used, pedestrian-friendly, and walkable community. The land use design would minimize off-street parking to help reduce vehicle trips and support alternative transportation. VMVSP policies would also provide short- and long-term bicycle parking, as well as dedicated parking for PEV and pre-wiring for future PEV-charging stations. These policies would support alternative transportation within the community, which could help reduce per-capita GHG emissions from passenger vehicles consistent with VMVSP's MTP/SCS. This impact would be less than significant.

2017 Scoping Plan/SB 32

The 2017 Scoping Plan built on the programs set in place as part of the previous AB 32 Scoping Plan that was drafted to meet the 2020 reduction targets per AB 32. The 2017 Scoping Plan proposed meeting the 2030 goal by accelerating the focus on zero and near-zero technologies for moving freight, continued investment in renewables, greater use of low-carbon fuels, including electricity and hydrogen, stronger efforts to reduce emissions of short-lived climate pollutants (i.e., CH_4 and fluorinated gases), further efforts to create walkable communities with expanded mass transit and other alternatives to traveling by car, continuing the Cap-and-Trade program, and ensuring that natural lands become carbon sinks to provide additional emissions reductions and flexibility in meeting the target (CARB 2017b).

In general, the VMVSP is built around the concept of sustainability. This is manifested through increased mixed-use and green building principles, including an emphasis on energy efficiency, water conservation, and waste reduction. Although the measures included in the 2017 Scoping Plan are necessarily broad, the VMVSP is generally consistent with the goals and desired outcomes of the plan (i.e., increasing energy efficiency, water conservation, waste diversion, transportation sustainability.). The consistency of the VMVSP with the policies in the 2017 Scoping Plan is analyzed in Table 3.6-10.

Table 3.6-10. VMVSP Consistency with 2017 Scoping Plan Policies

Policy	Primary Objective	VMVSP Consistency Analysis
SB 350	Reduce GHG emissions in the electricity sector through the implementation of the 50% RPS, doubling of energy savings, and other actions as appropriate to achieve GHG emissions reductions planning targets in the Integrated Resource Plan process.	This policy is a state program that requires no action at the local or project level. Nonetheless, development of new land uses under the VMVSP would be consistent with the energy-saving objective of this measure. The VMVSP includes policies that support natural cooling and passive solar heating through building placement and orientation, using vegetation and light-colored paints to shade buildings to limit direct solar gain and glare, using energy-efficient appliances, exceeding energy-efficiency standards, and installing solar panels and/or solar hot water systems. These policies would reduce energy demands.
Low-Carbon Fuel Standard	Transition to cleaner/less-polluting fuels that have a lower carbon footprint.	This policy is a state program that requires no action at the local or project level. Nonetheless, development of new land uses under the VMVSP would support reducing the carbon footprint associated with vehicle travel. VMVSP policies would create a mixed-use and pedestrian-friendly and walkable community. The land use design would minimize off-street parking to help reduce vehicle trips and support alternative transportation. VMVSP policies would also provide short- and long-term bicycle parking, as well as dedicated parking for PEV and pre-wiring for future PEV-charging stations.
Mobile Source Strategy (Cleaner Technology and Fuels Scenario)	Reduce GHGs and other pollutants from the transportation sector through transition to zero-emission and low-emission vehicles, cleaner transit systems and reduction of VMT.	This policy is a state program that requires no action at the local or project level. Nonetheless, development of new land uses under the VMVSP would support the reduction of VMT. As noted above, the VMVSP includes a number of policies that will support alternative transportation, electric vehicles, and overall reductions in vehicle trips.

Policy	Primary Objective	VMVSP Consistency Analysis
SB 1383	Approve and Implement Short-Lived Climate Pollutant strategy to reduce highly potent GHGs	This policy is a State program that requires no action at the local or project level, and is not directly applicable to the VMVSP.
California Sustainable Freight Action Plan	Improve freight efficiency, transition to zero-emission technologies, and increase competitiveness of California's freight system.	This policy is a state program that requires no action at the local or project level, and is not directly applicable to the VMVSP.
Post-2020 Cap-and-Trade Program	Reduce GHGs across largest GHG emissions sources.	This policy is a state program that requires no action at the local or project level, and is not directly applicable to the VMVSP.

Although the VMVSP is consistent with the broad policy objectives of the 2017 Scoping Plan, it includes development that could generate emissions that conflict with the state's ability to achieve its 2030 reduction target; thus, it could conflict with the 2017 Scoping Plan. This consistency analysis is presented in detail under Impact GHG-1. Mitigation Measures GHG-1, GHG-2, TRA-2, AQ-2b and AQ-2c include a diverse suite of actions that will reduce emissions in the amount of the proposed project's contribution of construction and operational area and building natural-gas source emissions to achieve a no-net increase in project-related GHG emissions and also to reduce operational mobile-source emissions to achieve consistency with the 2022 Scoping Plan land use change and affordable-housing project attributes. Although impacts with the 2017 Scoping Plan could be reduced to a less-than-significant level with implementation of Mitigation Measures GHG-1, GHG-2, TRA-2, AQ-2b and AQ-2c, this EIR takes a conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that operation of the project could impede implementation of the 2017 Scoping Plan. This impact would be significant and unavoidable.

Other State Regulations

Systemic changes will be required at the state level to achieve the statewide future GHG-reduction goals. Regulations, such as the SB 100/1020–mandated 100% carbon-free RPS by 2045; implementation of the state's SLCP Reduction Strategy; and future updates to CCR Title 24 standards (including requirements for net-zero energy buildings), will be necessary to attain the magnitude of reductions required for the state's goals. The VMVSP would be required to comply with these regulations in new construction (in the case of updated CCR Title 24 standards) or would be directly affected by the outcomes (e.g., energy consumption would be less carbon-intensive due to the increasingly stringent RPSs). Unlike the Scoping Plans, which explicitly call for additional emissions reductions from local governments and new projects, none of these state regulations identify specific requirements or commitments for new development beyond what is already required by existing regulations or will be required in forthcoming regulations. Thus, for the foreseeable future, the VMVSP would not conflict with any other state-level regulations pertaining to GHGs in the post-2020 era, and this impact would be less than significant.

2022 Scoping Plan/AB 1279

Based on CARB's 2022 Scoping Plan, the 2045 milestone of reducing anthropogenic GHG emissions to 85% below 1990 levels and achieving carbon neutrality requires an aggressive reduction of fossil fuels wherever they are currently used in California, building on and accelerating carbon-reduction

programs that have been implemented by the previous Scoping Plans. The 2022 Scoping Plan indicates that reductions would need to take the form of changes pertaining to transportation emissions, changes pertaining to sources of electricity and increased energy efficiency at existing facilities, and state and local plans, policies, or regulations that will lower GHG emissions relative to BAU conditions. Independent studies have reached similar conclusions. Deep reductions in GHG emissions can be achieved only with significant changes in electricity production, transportation fuels, and industrial processes. For example, a Center for Climate and Energy Solutions report notes that "achieving climate neutrality requires a broad array of social, economic, and technological transformations—in essence, reinventing the ways we power our homes and economies, move people and goods from place to place, and manage our lands" (Lempert et al. 2019).

The systemic changes needed to achieve the state's long-term GHG-reduction goals will require significant policy, technical, and economic solutions. Decarbonization of the transportation-fuel supply will require electric, hybrid, and PEV vehicles to comprise most light-duty vehicles. Some changes, such as the use of biofuels to replace petroleum for aviation, cannot be accomplished without action by the federal government. Furthermore, achieving the long-term GHG-reduction goals will require California to dramatically increase the amount of electricity that is generated by renewable-generation sources and, correspondingly, advance the deployment of energy-storage technologies and smart-grid strategies, such as price-responsive demand and smart-charging vehicles. This would entail a significant redesign of California's electricity system.

In qualitatively evaluating the proposed project's emissions for consistency with the 2022 Scoping Plan, it is important to note that some of these broad-scale shifts in how energy is produced and used are outside of the control of the proposed project. The changes necessitated by the state's long-term climate policy will require additional policy and regulatory changes, which are unknown at this time. Therefore, the extent to which the project's emissions and resulting impacts would be mitigated through implementation of such changes is not known and cannot be known at this time. Furthermore, implementation of such additional policy and regulatory changes is within the jurisdiction of state-level agencies (e.g., CARB), not the County. However, some of these measures (e.g., decarbonization, energy efficiency, reduced fossil-fuel-based VMT) can be facilitated, at least to some extent, through implementation of specific GHG-reduction measures. Under this same rationale, if the VMVSP did not implement measures to maximize energy efficiency or utilize renewable energy, then the reductions may not be sufficient for an individual project to meet the aggressive long-term cumulative-reduction goals.

As discussed in *Thresholds of Significance*, the 2022 Scoping Plan outlined project attributes related to transportation electrification, VMT reduction, and building decarbonization. These "project attributes are intended as a guide to help local jurisdictions qualitatively identify those residential and mixed-use projects that are clearly consistent with the State's climate goals" (CARB 2022a). Projects that incorporate all attributes "are considered to be consistent with the Scoping Plan or other plans, policies, or regulations adopted for the purposes of reducing GHGs" (CARB 2022a). As shown in Table 3.6-7, the VMVSP does not include all required 2022 Scoping Plan attributes related to VMT reduction. Although the VMVSP encourages energy efficiency and onsite renewable energy, not all buildings will be designed without natural-gas appliances. The continued consumption of fossil fuels by VMVSP buildings would conflict with building-decarbonization project attribute. This is a significant impact without mitigation.

VMVSP policies and Mitigation Measures GHG-1, GHG-2, TRA-2, AQ-2b, and AQ-2c are consistent with anticipated long-term statewide strategies to reduce GHG emissions. It is possible that future-

adopted state and federal actions would reduce project emissions below a level consistent with the reduction targets of AB 1279, but this cannot be known at this time. Mitigation Measure GHG-2 also requires GHG reductions in the amount of the project's contribution of area, construction, and building natural-gas emissions to achieve a no-net increase in project-related GHG emissions, and also to reduce operational mobile-source emissions to achieve consistency with the 2022 Scoping Plan land use change and affordable-housing project attributes. Although all identified impacts except consistency with the 2022 Scoping Plan SCS project attribute could be reduced to a less-than-significant level with implementation of Mitigation Measures GHG-1, GHG-2, TRA-2, AQ-2b, and AQ-2c, this EIR takes a conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that the project could substantially contribute to a significant cumulative impact.

Conclusion

The VMVSP would be consistent with the GHG-reduction strategies of SACOG's MTP/SCS and state regulations that will reduce GHG emissions (e.g., SB 100, SLCP Reduction Strategy). However, although the VMVSP policies and Mitigation Measures GHG-1, GHG-2, TRA-2, AQ-2b, and AQ-2c are consistent with anticipated long-term statewide strategies to reduce GHG emissions, they may not be adequate on their own to reduce project-level emissions consistent with the levels required to meet statewide climate-change goals. The VMVSP is also inconsistent with the 2022 Scoping Plan SCS project attribute. Accordingly, it is conservatively concluded that the project's emission levels would be inconsistent with the goals of 2017 Scoping Plan/SB 32 and 2022 Scoping Plan/AB 1279. Therefore, this impact would be significant and unavoidable.

Mitigation Measure TRA-2: Shift 25,000 square feet of commercial office land use to commercial retail land use.

Mitigation Measure AQ-2b: Implement BMPs to reduce construction-related exhaust emissions during early construction.

Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks.

Mitigation Measure GHG-1: Implement BMPs to reduce construction-generated GHG emissions.

Mitigation Measure GHG-2: Develop and implement a GHG-reduction plan to reduce construction and operational area, mobile, and building natural gas GHG emissions.

Impact GHG-3: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment as a result of offsite improvements (less than significant with mitigation)

GHG emissions associated with construction of offsite improvements were included in the analysis of overall total project emissions (Table 3.6-4**Error! Bookmark not defined.**). Mitigation Measures GHG-1, AQ-2b, and AQ-2c are required to reduce these emissions.

Operational activities that would generate emissions, such as delivery of water from new pipelines and use of water, or vehicle use on offsite roadway connections, are associated with the land uses in the VMVSP and were included in the project operational analysis (Table 3.6-5 and Table 3.6-6). The

GHG reductions associated with the VMVSP and state policies, quantified in Table 3.6-6, are applicable to the offsite improvements. For example, the recycled-water line (if used) would play a role in reducing the carbon intensity of water consumption in the project area, consistent with VMVSP Policy 9.40. Water delivered to the project through upgraded water lines would result in GHG emissions, but water use in the plan area would be reduced through Policy 9.46 and Policy 9.42. These strategies are consistent with the 2017 and 2022 Scoping Plans water measures and the state's regulatory programs within the water sector. Operation of the facilities would not materially affect regional VMT. Moreover, state measures (e.g., Pavley Standards) would reduce transportation emissions from vehicles using the new offsite roadways. Therefore, construction and operation of the offsite improvements would not result in GHG emissions that would have a significant impact on the environment with mitigation.

Mitigation Measure AQ-2b: Implement BMPs to reduce construction-related exhaust emissions during early construction.

Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks.

Mitigation Measure GHG-1: Implement BMPs to reduce construction-generated GHG emissions.

Impact GHG-4: Impacts on GHG emissions resulting from implementation of General Plan Policy TC-Xf traffic improvements (less than significant with mitigation)

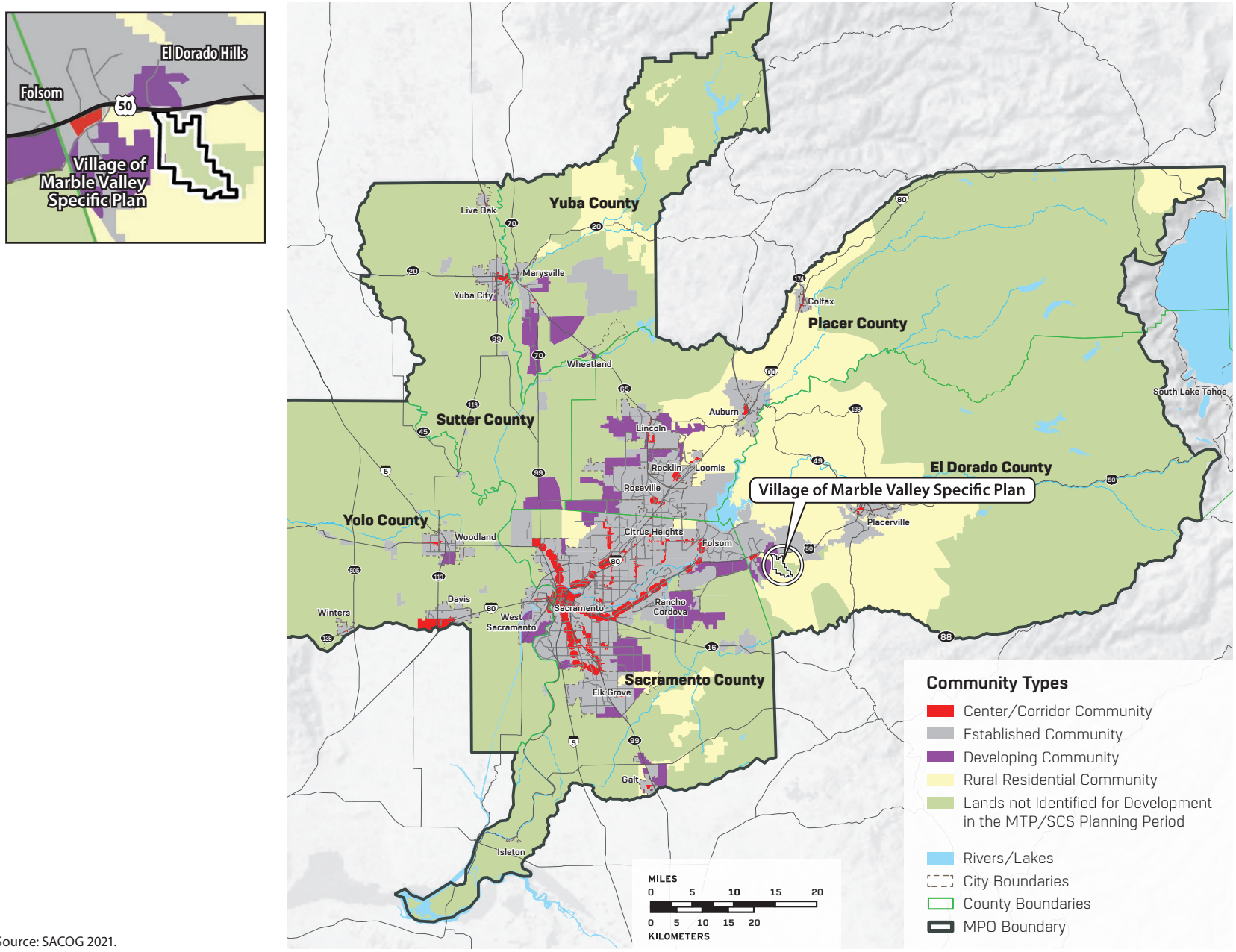
Construction for the intersection and roadway improvements would generate minor amounts of GHG emissions, similar to the offsite roadway improvements discussed under Impact GHG-3. Mitigation Measures GHG-1, AQ-2b, and AQ-2c are required to reduce these emissions.

The General Plan Policy TC-Xf traffic improvements would improve traffic and intersection operations. Accordingly, the improvements would likely reduce mobile source emissions because vehicle movement would be more efficient compared with existing conditions. These reductions may fully, or partially offset emissions generated during construction. Therefore, construction and operation of the General Plan Policy TC-Xf traffic improvements would not result in GHG emissions that would have a significant impact on the environment with mitigation.

Mitigation Measure AQ-2b: Implement BMPs to reduce construction-related exhaust emissions during early construction.

Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks.

Mitigation Measure GHG-1: Implement BMPs to reduce construction-generated GHG emissions.



Source: SACOG 2021.

ICF Graphics... 00667.12 (12/9/21) AB

Figure 3.6-1
MTP/SCS Map with Village of Marble Valley Location

3.7 Hazards and Hazardous Materials

This resource section describes existing conditions and the regulatory setting related to hazards and hazardous materials and analyzes potential impacts that could result from implementation of the Village of Marble Valley Specific Plan (VMVSP; proposed project).

A *hazardous material* is a substance or combination of substances that, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may pose a potential hazard to human health or the environment when handled improperly. *Hazardous waste* is waste that is dangerous or potentially harmful to human health or the environment. Hazardous wastes can be liquids, solids, gases, or sludges. They can be discarded commercial products, like cleaning fluids or pesticides, or the by-products of manufacturing processes (USEPA 2019a).

3.7.1 Existing Conditions

Regulatory Setting

Federal

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as *Superfund*, is a federal act establishing a national trust for hazardous waste–related industries to be able to fund and coordinate large cleanup activities for hazardous waste spills and accidents and to clean up older abandoned waste sites. Amended in 1986, the act establishes two primary actions: (1) to coordinate short-term removal of hazardous materials; and (2) to coordinate and manage the long-term removal of hazardous materials identified on the U.S. Environmental Protection Agency's (USEPA's) National Priorities List (NPL). The NPL is a record of known or threatened releases of hazardous substances, pollutants, or contaminants. A national database and management system, known as the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), is used by USEPA to track activities at hazardous waste sites considered for cleanup under CERCLA. USEPA also maintains provisions and guidelines dealing with closed and abandoned waste sites and tracks amounts of liquid and solid media treated at sites on the NPL or sites that are under consideration for the NPL.

Occupational Safety and Health Standards

Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the workplace. The Occupational Safety and Health Administration is the agency responsible for assuring worker safety in the workplace.

The Occupational Safety and Health Administration assumes primary responsibility for developing and enforcing standards for safe workplaces and work practices in the state. At sites known to be contaminated, a site safety plan must be prepared to protect workers. The site safety plan establishes policies and procedures to protect workers and the public from exposure to potential hazards at the contaminated site.

Hazardous Materials Transportation Act (49 Code of Federal Regulations 171, Subchapter C)

The U.S. Department of Transportation (USDOT), the Federal Highway Administration, and the Federal Railroad Administration are the three entities that regulate the transport of hazardous materials at the federal level. The Hazardous Materials Transportation Act governs the transportation of hazardous materials. These regulations are promulgated by the USDOT and enforced by USEPA.

Resource Conservation and Recovery Act of 1976 (42 United States Code 6901–6987)

The Resource Conservation and Recovery Act of 1976 (RCRA), including the Hazardous and Solid Waste Amendments of 1984 (HSWA), protects human health and the environment, and imposes regulations on hazardous waste generators, transporters, and operators of treatment, storage, and disposal facilities. The HSWA also requires USEPA to establish a comprehensive regulatory program for underground storage tanks (UST). The corresponding regulations in 40 Code of Federal Regulations Parts 260–299 provide the general framework for managing hazardous waste, including requirements for entities that generate, store, transport, treat, and dispose of hazardous waste.

Toxic Release Inventory

The Emergency Planning and Community Right-to-Know Act of 1986 and the Pollution Prevention Act of 1990 established a publicly available database called the Toxic Release Inventory (TRI) that has information on toxic chemical releases and other waste management activities. The TRI is updated annually and lists chemical releases by industry groups and federal facilities managed by USEPA.

State

Asbestos Regulations

Title 8 California Code of Regulations (CCR) Section 1529 regulates asbestos exposure in all construction work and defines permissible exposure limits and work practices. Typically, removal or disturbance of more than 100 square feet of material containing more than 0.1% asbestos must be performed by a registered asbestos abatement contractor, but associated waste labeling is not required if the material contains 1% or less asbestos. With respect to potential worker exposure, notification, and registration requirements, the California Division of Occupational Safety and Health defines asbestos-containing construction material as construction material that contains more than 0.1% asbestos (8 CCR 341.6).

Hazardous Materials Release Response Plans and Inventory Act

The Hazardous Materials Release Response Plans and Inventory Act (also known as the Business Plan Act) requires a business using hazardous materials to prepare a Business Plan describing the facility, inventory, emergency response plans, and training programs. The owner or operator of any business that has specified amounts of liquid and solid hazardous materials, compressed gases, extremely hazardous substances, underground storage sites onsite, or generates or treats hazardous waste, is required to develop and submit a Business Plan to the local Certified Unified Program Agency. In El Dorado County, the Certified Unified Program Agency is the Hazardous Materials Division of the El Dorado County Department of Environmental Management.

Hazardous Waste Control Act

The state equivalent of RCRA is the Hazardous Waste Control Act (HWCA). HWCA created the State Hazardous Waste Management Program, which is similar to the RCRA program but generally more stringent. HWCA establishes requirements for the proper management of hazardous substances and wastes with regard to criteria for: (1) identification and classification of hazardous wastes; (2) generation and transportation of hazardous wastes; (3) design and permitting of facilities that recycle, treat, store, and dispose of hazardous wastes; (4) treatment standards; (5) operation of facilities; (6) staff training; (7) closure of facilities; and (8) liability requirements.

Emergency Services Act

Under the California Emergency Services Act, the state developed an emergency response plan to coordinate emergency services provided by all governmental agencies. The plan is administered by the California Office of Emergency Services. The California Office of Emergency Services coordinates the responses of other agencies, including USEPA, the Federal Emergency Management Agency, the California Highway Patrol, water quality control boards, air quality management districts, and county disaster response offices. Local emergency response teams, including fire, police, and sheriff's departments, provide most of the services to protect public health.

California Health and Safety Codes

The California Environmental Protection Agency (Cal-EPA) has been granted primary responsibility by USEPA for administering and enforcing hazardous materials management plans within California. Cal-EPA defines a hazardous material more generally than USEPA as a material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released (26 CCR 25501).

State regulations include detailed planning and management requirements to ensure that hazardous materials are properly handled, stored, and disposed of to reduce human health risks. In particular, the state has acted to regulate the transfer and disposal of hazardous waste. Hazardous waste haulers are required to comply with regulations that establish numerous standards, including criteria for handling, documenting, and labeling the shipment of hazardous waste (26 CCR 25160 et seq.).

California Public Resources Code—State Responsibility Area

The California Public Resources Code (PRC) requires the designation of State Responsibility Areas (SRAs), which are identified based on cover, beneficial water uses, probable erosion damage and fire risks, and hazards. The state has the primary financial responsibility for preventing and suppressing fires in the SRA. Fire protection in areas outside the SRA are the responsibilities of local or federal jurisdictions and are referred to as local responsibility areas and federal responsibility areas, respectively. El Dorado County includes SRAs and local responsibility areas.

Department of Toxic Substance Control

The Department of Toxic Substance Control (DTSC) regulates the generation, transportation, treatment, storage, and disposal of hazardous material waste. The hazardous waste regulations establish criteria for identifying, packaging, and labeling hazardous wastes; dictate the management of hazardous waste; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in landfills.

These regulations also require hazardous materials users to prepare written plans, such as a hazardous materials business plan, that describe hazardous materials inventory information, storage and secondary containment facilities, emergency response and evacuation procedures, and employee hazardous materials training programs. A number of agencies participate in enforcing hazardous materials management requirements, including DTSC, the Regional Water Quality Control Board (Regional Water Board) and El Dorado County's Environmental Management Division Hazardous Materials/ Waste Program.

Cortese List

Cal-EPA maintains the Hazardous Wastes and Substances Site (Cortese) List, a planning document used by state and local agencies and developers to comply with California Environmental Quality Act (CEQA) requirements in providing information about the location of hazardous materials release sites. The list must be updated at least once per year, pursuant to Government Code Section 65962.5. The DTSC, State Water Resources Control Board, and California Department of Resources Recycling and Recovery all contribute to the site listings.

State CEQA Guidelines Section 15186

Section 15186 of the State CEQA Guidelines requires that school projects, as well as projects proposed near schools, examine potential health impacts resulting from exposure to hazardous materials, wastes, and substances. Such impacts are to be examined and disclosed in a negative declaration or environmental impact report (EIR). State CEQA Guidelines Section 15186 describes three types of sites for which specific findings must be made. When a project involves the purchase of a school site or the construction of a secondary or elementary school, the negative declaration or EIR must provide enough information to determine whether the property is: (1) the site of a current or former hazardous waste or solid waste disposal facility, and if so, whether wastes have been removed; (2) a hazardous substance release site identified by the DTSC in a current list for removal or remedial action pursuant to Chapter 6.8 (commencing with Section 25300) of Division 20 of the Health and Safety Code; or (3) the site of one or more buried or aboveground pipelines that carry hazardous substances, acutely hazardous materials, or hazardous wastes, as defined in Division 20 of the Health and Safety Code. In developing such information, the lead agency is to consult with the affected school district regarding the potential impacts on the school and notify the affected school district of the project, in writing, not less than 30 days prior to approval or certification of the negative declaration or EIR.

Very High Fire Hazard Severity Zones

Government Code Section 51178 requires the California Department of Forestry and Fire Protection (CAL FIRE) to identify very high fire hazard severity zones (VHFHSZ) in the state. Government Code Section 51179 requires a local agency to designate, by ordinance, VHFHSZs in its jurisdiction.

Fire Safe Regulations

CCR Titles 14 and 24 establish minimum wildfire protection standards in conjunction with building construction and development in wildland urban interface[1] areas.

[1] An area where wildland fuels abut structures, with a clear line of demarcation between residential, business, and public structures and wildland fuels.

California Fire Plan

The *2019 Strategic Fire Plan for California* addresses the protection of lives and property from wildfires (California Department of Forestry and Fire Protection 2019). The plan describes four goals and related objectives that creates landscape resilient landscapes and the protection of human-made assets through local, state, federal, and private partnerships.

NPDES General Permit for Construction Activities

The General National Pollutant Discharge Elimination System (NPDES) Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, as amended by Order No. 2010-0014-DWQ and Order No. 2012-006 DWQ) (Construction General Permit) regulates stormwater discharges for construction activities (Clean Water Act 402). Dischargers whose projects disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, are required to obtain coverage under the Construction General Permit. The Construction General Permit requires the development and implementation of a stormwater pollution prevention plan (SWPPP) and best management practices (BMPs). In addition, a procedure for spill prevention and control is typically developed to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during all construction activities.

Local

El Dorado County General Plan

To ensure provision of adequate public human health and safety services in the county, the Public Services and Utilities Element and the Public Health, Safety, and Noise Element of the *El Dorado County General Plan* (County General Plan) (El Dorado County 2004, 2019a) includes the following goals and policies. The full text of these goals and policies can be found in Appendix B, *Consistency with El Dorado County General Plan Policies*, which provides an analysis of the project's consistency with County General Plan policies as required under State CEQA Guidelines Section 15125.

Public Services and Utilities Element

- Goal 5.7, *Emergency Services*, addresses provision of adequate and comprehensive emergency services, including fire protection, law enforcement, and emergency medical services, and includes implementing Policies 5.1.2.1, 5.1.2.2, 5.7.1.1, and 5.7.2.1.

Public Health, Safety, and Noise Element

- Goal 6.2, *Fire Hazards*, addresses protection of life and property through minimization of fire hazards and risks in wildland and developed areas and includes implementing Policies 6.2.2.1, 6.2.2.2, 6.2.3.1, 6.2.3.2, 6.2.3.4, 6.2.4.1, and 6.2.4.2.
- Goal 6.6, *Management of Hazardous Materials*, requires measures to reduce the threats to public health and the environment posed by the use, storage, manufacture, transport, release, and disposal of hazardous materials, and includes implementing Policy 6.6.1.2.

El Dorado County Airport Land Use Compatibility Plan

The *El Dorado County Airport Land Use Compatibility Plan* (Mead & Hunt 2012) presents policies and maps specific to Cameron Airpark Airport, Georgetown Airport, and Placerville Airport to maintain

safe operating conditions for the airports. The project area is not within the planning areas for these airports.

Hazardous Materials Ordinance of 1990

The Hazardous Materials Ordinance (County Code Chapter 8.38) regulates the handling, storage, use, transport, processing, and disposal of hazardous materials. This ordinance requires reporting of the use of hazardous materials. It also requires disclosure of accidental release of hazardous materials, as well as preventive and mitigative efforts for impacts of hazardous materials. The ordinance is enforced locally by trained staff of fire protection districts and the Solid Waste & Hazardous Materials Division of the El Dorado County Environmental Management Department (EMD).

El Dorado County Air Quality Management District

El Dorado County Air Quality Management District (EDCAQMD) administers the state and federal Clean Air Acts in accordance with state and federal guidelines. EDCAQMD regulates air quality through its district rules and permit authority. It also participates in planning review of discretionary project applications and provides recommendations. Rule 223 regulates fugitive dust, including dust potentially containing naturally occurring asbestos (NOA). Section 3.2, *Air Quality*, provides additional discussion on effects from fugitive dust.

Solid Waste Management Ordinance (1994)

The Solid Waste Management Ordinance (County Code Chapter 8.42) prohibits the disposal, depositing, or otherwise disposing of any hazardous or biomedical waste onto land, into soil, rock, air, or water, or at unauthorized disposal sites, transfer stations, resource recovery facilities, transformation facilities, buy-back centers, drop-off recycling centers, or any container to be collected and ultimately deposited, unless otherwise approved by the County. Penalties may be assessed on acts of illegal disposal.

El Dorado County Solid Waste Management Plan

EMD developed the Solid Waste Management Plan to provide residents, businesses, and facility operators with a coordinated plan to meet the County's future solid waste program, infrastructure, and capacity requirements (El Dorado County 2012). Goals include minimizing waste generation, such as household hazardous waste, and reducing improper disposal of hazardous waste.

El Dorado County Fire Hazard Ordinance

Chapter 8.08 of the El Dorado County Code, also known as the County Fire Hazard Ordinance, requires defensible space as described in PRC Section 4291, including the incorporation and maintenance of a 100-foot fire break or clearing around structures (El Dorado County 2021). The Fire Hazard Ordinance is applicable to all developments in the county, including all discretionary and ministerial developments.

El Dorado County Vegetation Management and Defensible Space Ordinance

The purpose of the County's Vegetation Management and Defensible Space Ordinance (Chapter 8.09 of the El Dorado County Code) is to provide for the removal of hazardous vegetation and combustible materials situated in the unincorporated areas of the county to reduce the potential for

fire and to promote the safety and welfare of the community (El Dorado County 2021). The ordinance is applicable to all development in the unincorporated areas of the county.

El Dorado County Hazardous Waste Management Plan

The El Dorado County Hazardous Waste Management Plan recommends goals, objectives, policies, and programs for hazardous waste management and facility needs and siting (El Dorado County 1990). Specific programs recommended by the El Dorado County Hazardous Waste Management Plan include a Comprehensive Hazardous Materials and Hazardous Waste Inspection and Monitoring Program, a Hazardous Materials Release Response Plan and Inventory, hazardous waste inspections, hazardous waste programs for small businesses and for households, and a hazardous materials and hazardous waste data information system.

El Dorado County Hazardous Materials Area Plan

The El Dorado County Hazardous Materials Area Plan, last updated in 2009, establishes the policies, responsibilities, and procedures required to protect the health and safety of El Dorado County's citizens, the environment, and public and private property from the effects of hazardous materials emergency incidents (El Dorado County 2009).

Region IV Local Emergency Planning Committee Hazardous Materials Emergency Plan

The Local Emergency Planning Committee regions, which include the 11 inland counties of Alpine, Amador, Calaveras, El Dorado, Nevada, Placer, Sacramento, San Joaquin, Stanislaus, Tuolumne, and Yolo, were designated as emergency planning districts (El Dorado County 2011). These counties are required to prepare hazardous materials emergency plans pursuant to the Superfund Amendments and Reauthorization Act, Title III (Emergency Planning and Community Right-to-Know Act) (Title 42, United States Code 110003(a)). These plans include the identity, location, and emergency contacts for facilities that handle threshold quantities of extremely hazardous substances. The plans also contain chemical release response procedures, public protective action notification information, County emergency coordinators, and plans for exercising the hazardous materials emergency plan.

Western El Dorado County Community Wildfire Protection Plan

The *Western El Dorado County Community Wildfire Protection Plan* (CWPP) provides an overview of local fire history, fire risks, hazards and past strategies to reduce the wildfire risk locally. The CWPP identifies specific fire protection problems and issues. The CWPP identifies specific fire mitigation efforts, such as the construction and maintenance of fire breaks.

Local Fire Prevention Codes and Ordinances

Both the El Dorado County Fire Protection District and the El Dorado Hills Fire Department have established local fire prevention codes and ordinances that pertain to new development projects and individual parcels in the community (El Dorado County 2017). These codes and ordinances address a variety of concerns including general fire and life safety provisions, building and equipment design features, special occupancies and operations, and hazardous materials.

El Dorado County Local Hazard Mitigation Plan

The El Dorado County Local Hazard Mitigation Plan (El Dorado County 2019b) was adopted by FEMA in March 2019 and by the El Dorado County Board of Supervisors on April 23, 2019. The County developed the Local Hazard Mitigation Plan Update to make the County and its residents less

vulnerable to future hazard events. The plan was prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 so that the County would be eligible for FEMA's Pre-Disaster Mitigation and Hazard Mitigation Grant programs. The plan includes five goals and objectives for reducing the County's vulnerability to hazards.

Environmental Setting

The project site consists of 2,341 acres of hilly, rural land composed of blue oak savannah and woodland, nonnative grasses, and serpentine chaparral. The lands surrounding the project area consist of a mix of developed residential land uses and undeveloped lands. Low-density residential developments of Marble Ridge, Ryan Ranch, Royal Equestrian Estates, and Cameron Estates border the project site to the west, south, and east. Land in the undeveloped future phase of the Valley View Specific Plan is contiguous to the western boundary of the project site. The Deer Creek Wastewater Treatment Plant and undeveloped land abut portions of the eastern side of the project site.

Site Assessment

A site assessment was performed for the project area in 1990 (Radian Corporation 1990). Results of soil sampling identified contaminated soils located near the North Quarry pit. Soil contaminants include lubricating oil, diesel, gasoline, xylenes, toluene, and ethyl benzene. Remediation of contaminated soils was recommended. Based on surface water samples collected and tested, water quality appeared to be unaffected by quarry operations. No USTs were identified onsite. In addition, the report recommended backfilling the existing mine shaft located near the northwest corner of the South Quarry.

Hazardous Materials Release Sites

There are a number of federal and state databases that provide information regarding the facilities or sites identified as meeting the Cortese List requirements and which list the past and present businesses that have had or are currently experiencing a hazardous materials release in the general vicinity of the project area. These databases include the CERCLIS, El Dorado County Hazardous Waste and Substances Sites List, the Leaking Underground Storage Tank (LUST) Geotracker Database, the TRI, the List of Active Cease and Desist Orders and Cleanup and Abatement Orders, and EnviroMapper.

There are no CERCLA sites in the county (USEPA 2019b). There are no sites in the project area listed on the List of Hazardous Waste and Substances sites from the DTSC Envirostor database, LUST Geotracker Database, or the list of solid waste disposal sites with waste constituents above hazardous waste levels outside the waste management unit (California Department of Toxic Substances Control 2019; California Environmental Protection Agency 2019a). There are no identified sites within the project area on the TRI database managed by USEPA (USEPA 2019c).

One site within El Dorado County, but not near the proposed project site, is on the List of Active Cease and Desist Orders and Cleanup and Abatement Orders (California Environmental Protection Agency 2019b).

USEPA maintains the EnviroMapper for the Envirofacts website, which compiles USEPA environmental data and identifies environmental activities related to waste and land. There are no USEPA-regulated hazardous waste generators on or near the project site.

As discussed above, an environmental site assessment was completed in 1990 that describes stained, discolored soil in the vicinity of the former aboveground fuel tanks and heavy equipment repair area located on the southern ledge of the North Quarry. Soil samples contained contamination from lubricating oil, diesel, gasoline, and solvents, which contain petroleum hydrocarbons (Radian Corporation 1990). As described below, some of this material has been remediated (Youngdahl Consulting Group 2012a).

Soil Stockpiles from Historic Quarrying

Total petroleum hydrocarbons (TPH) describes a large family of hundreds of chemical compounds that originally come from crude oil. Soil stockpiles containing TPH remain on the project site from past limestone quarrying and crushing operations. Approximately 42,750 cubic yards of soil and rock containing petroleum constituents have been delineated in the project area near the North Quarry (Wallace Kuhl & Associates 2000). Some of this material was removed from the site, and some was remediated onsite. Nine piles of contaminated soil remain on the site, with the total soil volume estimated to be 31,570 cubic yards (Youngdahl Consulting Group 2012a). Youngdahl Consulting Group (2012a) completed an assessment for TPH in three samples from the reportedly hydrocarbon-contaminated soil stockpiles and identified hydrocarbons in the motor oil range with concentrations ranging from 3 to 79 milligrams per kilogram (mg/kg). The detected concentrations of TPH in the samples are below the Environmental Screening Levels (ESLs)[2] for TPH of 500 mg/kg (San Francisco Bay Regional Water Quality Control Board 2013).

Household and Business Hazardous Waste

Hazardous materials may be stored in aboveground storage tanks (AST), USTs, drums, and other types of containers. Typically, USTs are used by businesses, such as gasoline stations. Many households store heating fuel such as propane in ASTs. The project area is undeveloped and does not have any businesses that use or store hazardous materials. There are no known USTs at the project site.

Businesses classified as Conditionally Exempt Small Quantity Generators are required to ship their hazardous wastes to the El Dorado Disposal Materials Recovery Facility in Diamond Springs for proper disposal. There are no Conditionally Exempt Small Quantity Generators within the project site (USEPA 2013).

Mine-Related Hazards

Limestone quarrying and processing occurred on the project site beginning in the 1860s. The North Quarry pit pond, mine tailings, structures, and cabins from the quarrying period are still present in the project area. Mine shafts that may be present on the project site and the potential hazards related to them are addressed in Section 3.5, *Geology, Soils, Minerals, and Paleontological Resources*.

[2] The ESLs user's guide, prepared by the San Francisco Bay Regional Water Board staff, provides conservative screening levels for over 100 chemicals commonly found at sites with contaminated soil and groundwater and is intended to expedite the identification and evaluation of potential environmental concerns at contaminated sites.

Airport-Related Hazards

The northernmost portion of the project site would be approximately 2 miles from the Cameron Airpark Airport, a public-use airport. The project site is not located within this airport's influence area (Mead & Hunt 2012). The airport is publicly owned and operated through the Cameron Park Airport District, which was formed by the El Dorado County Board of Supervisors. The closest private airstrip is Akin Airport, located approximately 9 miles northeast of the project area.

Asbestos-Related Hazards

Asbestos is a naturally occurring fibrous mineral that is a human health hazard when airborne. Asbestos is classified as a known human carcinogen by state and federal agencies and was identified as a toxic air contaminant by the California Air Resources Board. It is of particular concern in El Dorado County because the local geography contains ultramafic rock, including serpentinite. Asbestos occurs naturally in surface deposits of several types of serpentinite and ultramafic rock (rock that contains magnesium and iron and a very small amount of silica). Asbestos emissions can result from the use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining (Governor's Office of Planning and Research 2008). Limited amounts of NOA have been identified in several areas to the northeast, south, and west of the project area (Youngdahl Consulting Group 2012b:5). Materials used for surfacing roads, trails, or other areas subject to traffic are allowed to contain less than 0.25% asbestos. Limited amounts of NOA (less than 0.25%) were identified in the project area at 4 of 48 test sites in areas that are already designated EDCAQMD Asbestos Review Zones (Youngdahl Consulting Group 2013:2–15). NOA was detected in one sample from each proposed school site (Youngdahl Consulting Group 2012b:8). Hazards specifically associated with NOA and potential impacts onsite are discussed in Impact AQ-4c, and potential offsite impacts are discussed in Impacts AQ-6 and AQ-7 in Section 3.2, *Air Quality*.

Fire-Related Hazards

Local weather conditions play a role in wildfire behavior. El Dorado County has a Mediterranean-type climate that features hot, dry summers and cool, moist winters (El Dorado County 2017). This climate condition has made wildfires common in the area for several decades. The June–October dry season, magnified by periodic regionwide drought periods, can create ideal wildfire conditions. The area sees seasonal north or east strong, dry winds, known as Foehn Winds, usually during the spring and fall months that can elevate fire conditions in the area (El Dorado County 2017).

The long, hot, dry summers in El Dorado County, combined with inadequate clearance between structures and vegetation, flammable vegetation, critical fire weather conditions and steep topography, can result in conditions conducive for wildfires. Wildland urban interface fire incidents require immediate protective measures and a rapid response by local fire agencies and CAL FIRE to minimize the risk to lives and properties in the project area. Extreme burning conditions, including rapid fire spread, dense smoke, and the wide distribution of firebrands (burning embers) via air currents into populated areas can create difficult fire suppression conditions for firefighters during a wildfire. The need to evacuate residents, vulnerable and special needs populations, livestock, and domestic animals at the same time fire suppression activities are taking place can further hamper the limited emergency responder resources available in the project area. The protection of critical infrastructure and values at risk can further strain limited resources during a wildfire.

Topography is an important factor when considering the fire hazard of an area. As slopes increase, fires spread faster and can create a "chimney effect," in which drafts of hot air and gases blow upward from steep ravines, resulting in intense surface and crown fire spread, increased distribution of firebrands, and dense smoke conditions which can place firefighters, civilians and property in danger. Steep terrain may delay and/or restrict accessibility to wildland fires by fire suppression crews and allows fires to spread into additional areas. Because of these physical conditions, CAL FIRE has designated the project site as being within either a VHFHSZ or high fire hazard severity zone (HFHSZ), depending on location within the project site (California Department of Forestry and Fire Protection 2023). The project site currently falls within an SRA, an area where CAL FIRE has financial responsibility for wildland fire protection. The El Dorado Hills Fire Department serves the western portion of the project site, while the El Dorado County Fire Protection District serves the eastern portion of the project site. The project site consists of valleys and hillsides with dense oak woodlands, which burn easily. Slopes of up to 70% occur on the project site, but development is not proposed on areas steeper than 30% (Figure 3.5-1).

According to CAL FIRE statistics, the majority of wildland fires that have occurred in the Western El Dorado County area are human caused. Common fire ignition sources have included arson, equipment failure, escaped debris burns, and vehicle-related causes. The project area has not seen a large wildfire (more than 300 acres) for over 30 years. In 1976 the "Quarry" wildfire burned approximately 20,869 acres near the project area. A review of public-source documents[3] reported several smaller wildfires that have occurred in the El Dorado Hills, Cameron Park, Shingle Springs area during this same reporting period (Firesafe Planning Solutions 2023).

A Fire Evacuation Assessment was prepared for the County by Fehr and Peers (Fehr & Peers 2023) and is provided in Appendix N of this EIR. This assessment analyzed evacuation time expectations and the potential effect the VMVSP may have on the evacuation times. Evacuation time estimates were modeled for vulnerable populations under a self-evacuation as well as an ordered evacuation for the entire population where the evacuation time is defined as the time it takes to safely evacuate all evacuees from the time a hazard is identified to the time the last evacuee leaves the hazardous area. The analysis modeled conservative scenarios with extreme fire travel times for a no project scenario, a VMVSP scenario, Lime Rock Valley Specific Plan (LRVSP) scenario, and both VMVSP and LRVSP scenario (Fehr and Peers 2023). The results for the VMVSP scenario are presented in Section 3.7.2, *Environmental Impacts*.

A Wildland Fire Risk Report was prepared by Firesafe Planning Solutions to assess the risks related to the intensity of a potential wildfire approaching the project site (Firesafe Planning Solutions 2023) and is provided in Appendix M of this EIR. The report takes into consideration existing and future vegetative interface fuels, topography, fire, and weather, during extreme fire conditions and provides results of computer calculations that measured the fire intensity, flame lengths, rate of spread, and fire travel distance (arrival times) from worst-case scenario wildfires in both the extreme (Diablo wind) and the predominant (Onshore wind) wind conditions. The results for the Wildland Fire Risk Report are presented in Section 3.7.2, *Environmental Impacts*.

The project site is not within or adjacent to a historic fire corridor, as documented by a review of the area's fire history. Historically, fires have travelled southwest to northeast, as indicated by most fire perimeters, and consistent with predominant wind directions (Firesafe Planning Solutions, Figure

[3] A History of California Wildfires; Capitol Public Radio; http://projects.capradio.org/california-fire-history/?fbclid=IwAR0W6lv7WvOR6Wc2P6-BsP1CeCbseK38gUvaYehu12nUfgEE2aLGuZzA7Vo#5.71/38.819/-122.249

12). The Scott Fire (8,8 27 acres in 1996), the Grant Fire (5,062 acres in 2020), the SMUD #1 Fire (1,178 acres in 1992) and the Sands Fire (4, 239 acres in 2014) have burn areas that exhibit this directional pattern. A few fires run south to north, including the 1964 Joerger Fire and the 1976 Quarry Fire, which is the largest fire in the vicinity at 20,869 acres. (Firesafe Planning Solutions 2023).

Large fires in the project area have been due to several issues, including access and topography. The area is largely rural, road access is primarily from the north, and there are few fire stations in close proximity. Some areas are steep and most of the area is well-vegetated. Fires that occur are generally related to the transportation and infrastructure (powerlines and roads) in the area that provide the ignition sources. Additionally, this area sometimes experiences dry thunderstorms which produce strong winds and lightning without the rainfall necessary to put out the spot fires. Other factors affecting fire behavior and intensity include weather, temperature, relative humidity, wind, fuels, slope, and aspect and elevation. Reference Appendix M of this EIR for more detailed information. (Firesafe Planning Solutions 2023).

Natural Disaster–Related Hazards

Hazards specifically associated with earthquakes, soil stability, and other geologic conditions are discussed in Section 3.5, *Geology, Soils, Minerals, and Paleontological Resources*. Hazards specifically associated with flooding, mudflow, and other hydrologic conditions are discussed in Section 3.8, *Hydrology, Water Quality, and Water Resources*.

Proximity to Schools

State CEQA Guidelines Section 15186 requires consideration of projects within 0.25 mile of a school to ensure that potential health impacts resulting from exposure to hazardous materials, wastes, and substances are evaluated. The project area is south of, and within 0.5 mile of Holy Trinity School, Camerado Springs Middle School, and Blue Oak Elementary/Charter Montessori School. The project area is within approximately 3.4 miles of Ponderosa High School, Oak Meadow Elementary School, Golden Hills School, and Marble Valley School, and within approximately 5 miles of Buckeye Elementary School.

Emergency Response and Evacuations

Both the state and local fire agencies have established levels of fire protection services within the county. These service levels recognize that other fire protection resources exist at the federal and local level to collectively provide a regional emergency response capability. In addition, California has an integrated fire and rescue mutual aid system that provides fire protection services through both automatic and mutual aid agreements for fire incidents across all ownerships.

The *El Dorado County Local Hazard Mitigation Plan* provides coordinated disaster response and programs to assist the public in emergency preparedness and response procedures (El Dorado County 2019b). The County has not identified specific roads as emergency evacuation routes but encourages residents to learn their local roads in preparation for an emergency (Cathey pers. comm.).

3.7.2 Environmental Impacts

Methods of Analysis

The baseline for analysis of impacts related to hazards and hazardous materials consists of the hazards and hazardous materials that already exist in the area and are identified in the County General Plan (El Dorado County 2004) and other sources of hazards and hazardous material cited in the *Environmental Setting* section. This section qualitatively analyzes the potential for hazards and hazardous materials as a result of implementation of the proposed project.

Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the proposed project would be considered to have a significant effect if it would result in any of the conditions listed below.

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- 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.
- Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.
- Be located within an airport land use plan area or, where such a plan has not been adopted, be within 2 miles of a public airport or public-use airport, and result in a safety hazard or excessive noise for people residing or working in the project area.
- Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.
- 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.
- 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.
- 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.

Impacts and Mitigation Measures

Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (less than significant)

Construction and operation of residential, commercial, agricultural, and public facility uses that use hazardous materials could result in the transport, use, and disposal of hazardous materials. Construction would also require heavy construction equipment (e.g., excavators, backhoes, grading machines, asphalt machines), the operation and maintenance of which would involve the use and handling of hazardous materials, including diesel fuel, gasoline, lubricants, and solvents. These hazardous materials would be used and stored within the area designated for the construction site. Diesel fuel would be used to power the equipment and would be present in the fuel tanks of the individual pieces of equipment and potentially in larger storage tanks used to refuel the equipment. Additionally, during construction of residential or commercial buildings, small quantities of lubricants and solvents would be stored in the support area for maintenance of construction equipment. The quantities of hazardous materials could exceed regulatory thresholds and, thus, require transport, handling, storage, and disposal in accordance with applicable federal, state, or local regulations, as described under *Regulatory Setting* in Section 3.7.1, *Existing Conditions*, to minimize the potential for release of hazardous materials into the environment. Therefore, use and presence of hazardous materials are not anticipated to cause a significant hazard to the public or environment.

Under operating conditions, the use or disposal of hazardous materials would be based on the square footage of residential, commercial, and agricultural land uses allowed under the VMVSP. Commercial land uses and the proposed vineyards and associated facilities may be classified as small quantity generators of hazardous waste depending on the nature of their businesses. Although these land uses may result in the generation and storage of small amounts of hazardous materials and wastes, there is a low potential for a significant hazard to the public or environment because all businesses would be required to comply with the regulations, standards, requirements, and guidelines established by federal and state law and overseen by the agencies as described under *Regulatory Setting* in Section 3.7.1, *Existing Conditions*. The County, along with the federal and state government, requires all businesses that handle moderate amounts of hazardous materials to submit business plans and emergency management plans to regulating agencies. Furthermore, EMD conducts inspections of all businesses to confirm their business and emergency management plans are adequate and to ensure proper storage of hazardous materials. Therefore, the proposed project would not result in a significant hazard to the public or environment as a result of routine hazardous materials use.

Residential land uses could also result in the transport, use, or disposal of hazardous materials. Hazardous wastes generated by residential uses are referred to as *household hazardous waste*. Households often discard many common items, such as paints, stains, oven cleaner, motor oil, and pesticides, as well as batteries, thermostats, lamps, televisions, and computer monitors, which contain hazardous constituents. The County collected approximately 1,861,897 pounds of household hazardous waste through its various collection programs in 2012, with 68,812 households in the service area participating (California Department of Resources Recycling and Recovery 2013). The proposed development of 3,236 residential units under the VMVSP would result in the annual

generation of approximately 64,720–87,372[4] pounds of household hazardous waste. Residences are exempt from reporting the use of hazardous materials, and the County currently has, and would continue to have, local programs and regulations to provide opportunities for disposal of household hazardous waste (e.g., El Dorado County Solid Waste Management Plan). Therefore, it is not anticipated that the generation of household hazardous waste or the disposal of it as a result of the residential development would result in a significant hazard to the public or environment.

Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (less than significant with mitigation)

Naturally Occurring Asbestos

Construction would involve grading and disruption of the existing soil and geology on the project site. While NOA does exist in El Dorado County, only trace amounts were found at the project site (Marble Valley Company, LLC 2023). Additional discussion about NOA and its airborne form can be found in Section 3.2, *Air Quality*. Mitigation Measure AQ-3, which would require implementation of an asbestos dust mitigation plan and evaluation of NOA during site grading as required by Rule 223, would reduce impacts to a less-than-significant level.

Soil Contamination

TPH have been found on the project site in soil stockpiles remaining from past limestone and crushing operations in the quarry. Sampling by Youngdahl Consulting Group (2012a) of three of the nine soil stockpiles indicated that the levels of contamination have fallen considerably below concentrations measured in 1995 and are below the San Francisco Bay Regional Water Board's ESLs and, therefore, the soils are not likely to be considered contaminated. However, the site assessment performed for the project area in 1990 is over 30 years old. Also, the stockpiles have not been fully assessed and without further study and mitigation, the potential for contact by construction workers with these contaminated soils as a result of ground-disturbing activities during construction could represent a significant impact.

Mitigation Measure HAZ-2a requires a Phase I environmental site assessment and would identify and describe any sources of contaminated stockpiles and potential for other contamination. Mitigation Measure HAZ-2b would be implemented if the results of the Phase I environmental site assessment indicate there is contamination that needs to be further evaluated, as identified through a Phase II environmental site assessment. If contamination is present, Mitigation Measure HAZ-2b also requires that remediation be implemented prior to any ground disturbance in an affected area. Mitigation Measure HAZ-2c requires further testing of the stockpiles and remediation if TPH levels exceed standards. Implementation of Mitigation Measures HAZ-2a, HAZ-2b, and HAZ-2c would reduce this impact to a less-than-significant level by ensuring contamination, if any, is remediated in accordance with applicable laws and regulations.

[4] The average U.S. household generates 20 pounds of household hazardous waste each year (USEPA 2011). The average El Dorado County household generated 27 pounds of household hazardous waste in 2012 (California Department of Resources Recycling and Recovery 2013).

Quarry-Related Features

Tailings and various structures remaining from the previous limestone quarry exist on the project site. Quarrying limestone involves the use of drills, explosives, and shovels and bulldozers, and there are no major hazardous wastes (other than THP discussed above) associated with limestone mining or processing (BCS, Incorporated 2002). Therefore, these features are not expected to have associated hazardous materials. Unrecorded mine shafts, adits, and other features may pose a fall hazard. Please refer to Section 3.5, *Geology, Soils, Minerals, and Paleontological Resources*, Impact GEO-7, for a discussion of this impact.

Construction Activities

Construction equipment that would be used to build the proposed project has the potential to release oils, greases, solvents, and other materials through accidental spills. Spill or upset of these materials would have the potential to affect surrounding land uses. However, the consequences of construction-related spills are generally not as great as other accidental spills and releases because the amount of hazardous material released during a construction-related spill is small. The volume in any single piece of construction equipment is generally less than 50 gallons, and fuel trucks are limited to 10,000 gallons or less. Construction-related spills of hazardous materials are not uncommon-, but the enforcement of construction standards, such as the required SWPPP and BMPs as part of the Construction General Permit would minimize the potential for an accidental release of petroleum products and hazardous materials during construction. Therefore, it is not anticipated that use of hazardous materials during construction would result in a reasonably foreseeable upset or accident conditions that would cause significant hazard to the public or environment.

There would be limited potential for a reasonably foreseeable upset or accident involving the release of oils, greases, solvents, and other materials through accidental spills under construction and operation due to the quantity and type of hazardous materials used; therefore, it is not anticipated that a significant hazard to the public or the environment would occur. This impact would be less than significant.

Mitigation Measure AQ-3: Submit and implement an Asbestos Dust Mitigation Plan in accordance with EDCAQMD Rule 223-2

Mitigation Measure HAZ-2a: Conduct a Phase I environmental site assessment and a Phase II environmental site assessment if recommended in the Phase I environmental site assessment

Prior to construction, the applicant shall hire a qualified environmental professional that is acceptable to the County to conduct a Phase I environmental site assessment in conformance with the American Society for Testing and Materials (ASTM) Standard Practice E1527-13, or the standard in place at the time of development. Upon completion, the environmental site assessment shall be submitted to the County for review. All environmental investigation, sampling, and remediation activities associated with properties in the project area shall be conducted by a qualified environmental professional consistent with Phase I and Phase II environmental site assessments as detailed below.

A Phase I environmental site assessment includes four main components.

- Site Reconnaissance. An onsite visit to determine current conditions (e.g., vegetative dieback, chemical spill residue, presence of ASTs or USTs).
- Interviews. Interviews with persons knowledgeable about the site's history (e.g., current or previous property owners, property managers).
- Records Review. File searches with appropriate agencies (e.g., State Water Resources Control Board, fire department, County health department) having oversight authority relative to water quality, groundwater, and soil contamination. A review of current and historic topographic maps and historical aerial photography of the site and adjacent properties. Review of Sanborn fire insurance maps.
- Report. A report that presents findings, conclusions, and recommendations indicating whether the property has recognized environmental conditions of environmental concern.

If the Phase I environmental site assessment indicates likely site contamination, the County shall require the project proponent to conduct a Phase II environmental site assessment, performed by a qualified environmental professional acceptable to the County. The Phase II assessment shall be prepared in conformance with the ASTM Standard Practice E1903-11, or the standard in place at the time of development.

A Phase II environmental site assessment shall include, but is not limited to, the following measures.

- Collection of original surface and/or subsurface samples of soil, groundwater, and building materials to analyze for quantities of various contaminants.
- An analysis to determine the vertical and horizontal extent of contamination (if the evidence from sampling shows contamination).

The analysis may also include an ecological and human health risk assessment.

The Phase II environmental site assessment shall outline additional site investigation needs and potential remedial actions that may be required to clean up the property prior to issuance of grading permits. Upon completion, the Phase II environmental site assessment shall be submitted to the County for review. If the Phase II environmental site assessment indicates likely site contamination, then the County shall require implementation of Mitigation Measure HAZ-2b.

Mitigation Measure HAZ-2b: Implement remediation as necessary

The project proponent must properly remediate any contamination identified on a project site subject to applicable DTSC and/or Regional Water Board regulations in effect at the time. Remediation shall be complete prior to the issuance of grading permits. Prior to the applicant implementing remediation, the County shall require the applicant to submit a work plan for remediation prepared by a qualified environmental professional acceptable to the County EMD for review and approval. The County shall notify DTSC and/or the Regional Water Board, as appropriate, to determine the need, if any, for state oversight or approval of work plan implementation.

Hazardous wastes generated by the proposed project shall be managed by the project proponent in accordance with the California Hazardous Waste Control Law (Health and Safety Code, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulation (22 CCR 4.5).

The County shall oversee the completion of this mitigation measure and shall require the project proponent to provide proof of completion of any necessary remediation prior to issuance of grading and building permits for the affected area.

Mitigation Measure HAZ-2c: Conduct additional sampling and analysis of soils containing TPH

The applicant shall hire a qualified environmental professional to conduct additional sampling and analysis of contaminated soils prior to construction or issuance of grading permits to determine if all soils are below the amount of TPH designated in the San Francisco Bay Regional Water Board's ESLs. This shall allow El Dorado County EMD to grant unconditional closure of the stockpiles so that the material would be available for all uses (e.g., construction and development) (Youngdahl Consulting Group 2012a). If TPH levels in the soils exceed the ESLs, remediation or a human health risk assessment, as recommended by a qualified environmental professional, will be conducted. To the maximum extent feasible, soil shall be recycled and reused onsite if it meets standards for such reuse. All remediation shall be required to conform to regulations such as the Hazardous Materials Transportation Act, HWCA, and Hazardous Materials Ordinance of 1990.

The County shall oversee the completion of this mitigation measure and shall require the project proponent to provide proof of completion of any necessary remediation prior to issuance of grading and building permits for the affected area.

Impact HAZ-3: Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school (less than significant)

The VMVSP provides two sites for elementary schools and/or middle schools in the project area. A number of other schools are located in the vicinity, but not within 0.25 mile of the project area.

Construction of the project is anticipated to occur in many phases, with schools being built in the last third of overall construction. As discussed under Impact HAZ-1, there is a low potential for construction or operation of the project to cause a significant hazard through transport, use, or disposal of hazardous materials because all new businesses would be required to comply with the regulations, standards, requirements, and guidelines established by federal and state law and overseen by the regulatory agencies. As discussed in Impact HAZ-2, it is not anticipated that construction or operation allowed under these land uses would result in the release of hazardous materials to the public or environment. Therefore, it is not anticipated that construction would emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.

Soil samples have indicated that NOA does occur on the sites proposed for school development. However, NOA would be mitigated as part of construction of schools through implementation of the County's requirements (see Impact AQ-3d for additional information). Compliance with DTSC requirements regarding assessments for NOA at publicly funded school sites within 10 miles of an area known to have NOA (Youngdahl Consulting Group 2012b:8) would also ensure this impact will be reduced to a less-than-significant level. School sites would be evaluated for NOA following DTSC

protocols, and the California Department of Education would conduct school site investigations (Youngdahl Consulting Group 2012b:9). If NOA is present, excavation for and construction of the two school sites would adhere to NOA capping mitigation, which requires the design of a capping system, a public review process for the planned mitigation, the implementation of the mitigation, documentation of the mitigation, the creation of an operations and maintenance plan for the capping systems, and periodic inspections of the capping system most commonly for the life of the school (Youngdahl Consulting Group 2012b:8). The reader is also referred to Impact AQ-3d in Section 3.2, *Air Quality*, for additional information and analysis of potential NOA impacts. Therefore, it is not anticipated that construction or operation of the planned development would result in significant impacts due to emissions or handling of hazardous or acutely hazardous materials, substances, or waste related to NOA within 0.25 mile of an existing or proposed school.

Impact HAZ-4: Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment (no impact)

No hazardous materials sites included on lists compiled pursuant to Government Code Section 65962.5 are present within the project area. Therefore, there would be no impact.

Impact HAZ-5: Be located within an airport land use plan area or, where such a plan has not been adopted, be within 2 miles of a public airport or public-use airport, and result in a safety hazard for people residing or working in the project area (no impact)

Cameron Airpark Airport, the nearest airport, is more than 2 miles northeast of the project area. The *Cameron Airpark Airport Land Use Compatibility Plan* influence area is outside of the project area (Mead & Hunt 2012). Therefore, there would be no impact.

Impact HAZ-6: Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area (no impact)

The closest private airstrip is Akin Airport approximately 9 miles east of the project area. The proposed project is not located in the vicinity of a private airstrip and, therefore, would not result in a safety hazard for people residing or working in the project area (AirNav 2013). There would be no impact.

Impact HAZ-7: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (less than significant)

The County has not identified specific roads as emergency evacuation routes that apply to the project area and vicinity but encourages residents to learn their local roads in preparation for an emergency (Cathey pers. comm.). The El Dorado County Sheriff's Office would determine whether evacuation is recommended or required in the project area based on parameters of an emergency.

Therefore, development of the proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan because the proposed development would not physically reduce the capacity of existing roadways in the project area. As identified in Chapter 3.14, *Traffic and Circulation*, and Chapter 5, *Other CEQA Considerations*, the project would be required to ensure County level of service standards for roadway operations during peak hours are maintained through improvements consistent with policies under General Plan Goal TC-X. Given that the project would improve roadway operations, provide new roadway capacity and evacuation routes, and would not physically alter existing roadways in the project area,

it is not expected to impair emergency response or evacuation activities. In addition, as described in Impact HAZ-8, below, the project design would be reviewed to ensure appropriate access/egress points are provided for emergency response and/or evacuation. Therefore, impacts would be less than significant.

See *Emergency Response and Evacuation Under Fire Event Scenarios* under Impact HAZ-8 for a discussion of fire-specific emergency evacuation impacts.

Impact HAZ-8: Expose people or structures, either directly or indirectly to a significant risk of loss, injury, or death involving wildland fires; due to slope, prevailing winds, and other factors, exacerbate wildfire risks; require the installation or maintenance of associated infrastructure that may exacerbate fire risk; or expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes (less than significant with mitigation)

Several factors contribute to the susceptibility of wildfire danger in the county, including weather, temperature, relative humidity, wind, intensity, fuels, slope, aspect and elevation subdivision design, and water supply. The entire community of El Dorado Hills is mostly adjacent to dry hills on the eastern and southern sides, and is, therefore, at risk of fire. The project site is located within designated HFHSZs and VHFHSZs by CAL FIRE (California Department of Forestry and Fire Protection 2023). Introducing construction activities, electrical service structures, and people to this area would expose them and the surrounding community to potential wildfire risk and associated impacts from tree and habitat loss and air quality impacts from smoke.

Risk of Exposure of Wildland Fire Risks to People and Structures

The assessment of wildfire risk examines fire behavior in the area and assesses vulnerability of structures and residents to wildfire. The assessment is based on existing conditions, the proposed project, and factors such as access and risk reduction measures. Vulnerability is examined at multiple levels (regional, landscape, community, and parcel). Results indicate that the primary factors are time, distance, and shielding: the amount of time that the fire will impact the area, the distance between the fire and the structures or residents, and the ability of the project site to shield structures and residents from the harmful effects of the fire. (Firesafe Planning Solutions 2023.)

According to the Wildland Fire Risk Report (Appendix M), the location of the project, adjacent to State Route 50 (a possible ignition source), in an undeveloped area with abundant fuels (particularly chapparal), and the potential for wind during times of low humidity and high temperatures, indicates that fire is likely to occur in the area. That no fires of over 50 acres have occurred within 10 miles of the project site is likely a result of successful efforts to minimize fires. Because a wildfire risk does exist, risk reduction measures are necessary, and largely consist of existing regulations, requirements, and VMVSP policies.

Though the risk does exist, the wildfire risk for the VMVSP, specifically, is no greater than similar communities. As such, the development of VMVSP may be at a lower wildland fire risk compared to similar communities due to current, more stringent regulations (Firesafe Planning Solutions 2023).

The VMVSP provides a buffer to nearby existing communities by removing upwind wildland fuels during development. New infrastructure would not exacerbate fire risk, but could benefit the area with increased water supply, defensible zones, and roadways for evacuation. Therefore, the proposed project would not exacerbate wildfire risk as a result of installation or maintenance of new

infrastructure. The VMVSP is not expected to allow fire to pervade existing downwind communities with a similar level of intensity and rate of spread.

The VMVSP includes measures (listed below) that would reduce the risk of exposing people and structures to wildfires and reduce the risk of wildfire ignition. Development would not occur on land with slopes greater than 30%, thereby reducing fire risks associated with steep slopes. Because development would be limited to slopes less than 30%, mostly not on ridgelines, and because winds are generally mild, the project would not exacerbate wildfire risks.

Risk Reduction Measures

- All dwelling units and most large commercial buildings will be protected with automatic fire sprinklers. (Fire department plan check and inspections ensure compliance.)
- The project site has increasing housing density and used a consolidated design to reduce or eliminate, where possible, wildland fuels within the interior of the project site and keep the edge of the project site as an identifiable interface with appropriate fuel breaks, fire breaks and fuel modification/defensible space zones. (Fire department plan check and inspections ensure compliance.)
- The project site has been designed to avoid and minimize low-density urban development patterns or leapfrog-type developments (i.e., those with undeveloped wildland between developed areas). (Fire department plan check and inspections ensure compliance.)
- Decreasing the extent and amount of "edge," or interface area, where development is adjacent to undeveloped wildlands. (Fire department plan check and inspections ensure compliance.)
- The project site has, or will create, buffer zones and defensible space within and adjacent to the development, with particular attention to ensuring that vegetation will not touch structures or overhang roofs. The project will establish the legal obligations within the CCR's to ensure that defensible space measures are retained over time. (Implementation of Fire Safe Plan, Fire department plan check and inspections ensure compliance.)
- Undergrounding of power lines will be accomplished in the entire project site. (Fire department plan check and inspections ensure compliance.)
- The project site design attempts to limit development along steep slopes and amidst rugged terrain, so as to decrease exposure to rapid fire spread and increase accessibility for firefighting. Sites which have wildland fuels below (lower than the project structures) will have additional protections provided with radiant heat walls, increased built-in fire protection features and/or placement of the structure so that the impacts of "underslung fuels" are reduced to a level of acceptable risk. (Implementation of Fire Safe Plan, Fire department plan check and inspections ensure compliance.)
- Fire hardening structures and homes in accordance with Chapter 7A of the Building Code, Section R337 of the Residential Code, and the specific requirements of the fire department during the development review process for the site-specific locations. (Implementation of Fire Safe Plan, Fire department plan check and inspections ensure compliance.)
- Siting structures and features to maximize the role of low-flammability landscape features and roadways that may buffer the development from fire spread. (Implementation of Fire Safe Plan, Fire department plan check and inspections ensure compliance.)

- The project will expand existing fire resources in the region (new fire station site within the development). (Developer Agreement with Fire Department, participation in fire district.)
- Placement of development within the existing or planned ingress/egress and potential evacuation routes to efficiently evacuate the project population and the existing community population, consistent with evacuation plans, while simultaneously allowing emergency access. (Implementation of Fire Safe Plan, Fire department plan check and inspections ensure compliance.)

With the additional identified protection and required wildland fire protection features, the project would protect residents from significant wildfire risks and would not increase or create new risks. The proposed project would not expose people or structures to a significant risk of loss, injury, or death, either directly or indirectly, due to a wildland fire as a result of the fuel modifications and defensible space development. With accessible egress points, compliance with fire department fuel modification and defensible space standards, improved water supply and roadways, and the implementation of the proposed risk reduction measures, the proposed project would have a less-than-significant impact from wildland fires (Firesafe Planning Solutions 2023).

Post-fire Instability

The project would not expose people or structures to post-fire instability issues such as flooding or landslides because the project would be reviewed and approved by the local fire protection district, which would include site-specific conditions of approval to reduce any potential for post-fire risks. Additionally, a wildfire safety plan would be prepared for the project in consultation with fire safety providers prior to tentative map(s) approval, when lots and exact roadway locations are known, per VMVSP Policy 6.47, which would assess wildfire hazards and risks associated with the development of the plan area and address hazard mitigation measures appropriate to the high and very high fire hazard severity zones. Development would be required to conform to regulations and County General Plan policies that designate responders to wildland fires, minimize fire hazards, and require new development to meet “defensible space” and building code requirements.

Installation of Utilities

The installation of utilities for the project would not exacerbate fire risks because they would be designed and installed per current state and County standards. Pacific Gas and Electric Company electricity service would be extended from a 21-kilovolt single-phase overhead line connecting to two existing substations, Clarksville to the west and Shingle Springs to the east (Marble Valley Company, LLC 2023). All trees and vegetation near future overhead electrical lines would be cleared to avoid the potential to cause a fire. Additionally, the improved water supply and distribution system that would be installed as part of the project would increase the defensibility of the area in case of wildfire (Firesafe Planning Solutions 2023.)

Emergency Response and Evacuation Under Fire Event Scenarios

Development would not substantially impair an adopted emergency response plan or evacuation plan because the project would adhere to VMVSP Policies 7.25 and 6.47, which require review of the project to ensure adequacy of emergency water supply, storage, conveyance facilities, access for fire protection, and for the preparation of a wildfire safety plan. The project would also be consistent

with General Plan Policies 5.7 and 6.2, which require that the project address protection of life and property through minimization of fire hazards and risks in wildland and developed areas.

The Fire Evacuation Assessment (Appendix N) results indicate that, under the Self-Evacuation modeling, the proposed project would inhibit a fire more than under existing conditions. It would take less than 20 minutes to evacuate the vulnerable evacuees, which is less than the estimated 30-minute fire progression. With the addition of the proposed project, the total time to safety decreases for existing vulnerable evacuees due to increased access to evacuation routes and slower fire progression. Under the Ordered Evacuation modeling, the study concludes that it would take less than 200 minutes to evacuate the project area. Although the proposed project would increase the number of residents in the project area, the addition of the proposed project residents would not increase the total evacuation time for most of the scenarios due to increased access to evacuation routes as a result of the proposed project. The modeling results do not anticipate unknown factors that could potentially stall evacuation times; however, the project would include new emergency access connections from multiple points of egress to aid all evacuees (Fehr and Peers 2023).

The Wildland Fire Risk Report identified two primary points of evacuation as well as five Emergency Vehicle Access (EVA) points. For every fire scenario modeled, the report found multiple evacuation points available at various times throughout an evacuation. The modeled fire scenarios are modeled to demonstrate worst-case scenarios and represent fires that have not occurred in the past and likely will not occur in the future. Since every modeled fire scenario has identified evacuation points, there is a lower risk of exposing residents to air quality impacts from smoke or other pollutant concentrations during a fire event because they can evacuate. Thus, the proposed project would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire (Firesafe Planning Solutions 2023).There is an overall benefit to surrounding communities of the proposed new development due to the increased defensible space and additional time to evacuate. The VMVSP does not have an adopted emergency evacuation plan and the addition of a fire station and roadway improvements provide enhancements to the area to decrease risk during a fire event. Thus, the proposed project would not impair an adopted emergency evacuation plan. VMVSP would be considered and constructed per current regulations, including risk reduction measures required by codes, (ordinances and standards) and technology, including built-in fire protection features (such as defensible space, fuel modification, hardening of structures, and consideration of configuration). As such, the proposed project does not have a greater fire risk than the surrounding communities.

Policies included in the VMVSP related to fire hazards and fire minimization and that would be enforced after its adoption are listed below.

- **VMVSP Policy 7.25:** The local fire protection district shall review and approve all discretionary applications for tentative subdivision maps, parcel maps, and planned development permits prior to County approval to ensure the adequacy of emergency water supply, storage, conveyance facilities, and access for fire protection. Recommendations may be incorporated as conditions of approval.
- **VMVSP Policy 6.47:** Prior to submittal of the first small lot tentative subdivision map, CAL FIRE and the El Dorado Hills Fire Department will review and approve a Wildfire Safety Plan. The plan will assess wildfire hazards and risks associated with the development of the plan area and address hazard mitigation measures appropriate to the moderate and high fire hazard severity zones.

The project would comply with state law (including PRC 4290) and with all county fire safety requirements related to development in a designated VHFHSZ or HFHSZ. The project would develop and implement a series of fire safety strategies to create an effective approach for preventing home and building destruction during extreme wildfire conditions. Those strategies include developing a comprehensive fire risk assessment for all phases of the project, implementing an effective fuel modification plan that coordinates its efforts with surrounding neighborhoods and communities, ensuring all areas of the project adhere to state and county fire codes and standards, and developing and implementing a project evacuation plan.

Existing regulations, such as County General Plan Goals 5.7 and 6.2 and the El Dorado County Fire Hazard Ordinance, the Vegetation Management and Defensible Space Ordinance (Adopted April 30, 2019), as well as the proposed VMVSP policies identified above, would be implemented to minimize fire hazards. Mitigation Measure HAZ-8 would reduce impacts to a less-than-significant level by requiring the preparation of a wildfire safety plan, as required by the aforementioned General Plan policies and ordinances, that includes requirements to applicable codes and regulations, fire response capabilities, fire risk assessment, fire safety requirements, emergency evacuation routes and emergency shelter locations, and project-specific recommendations.

Reducing fuels (e.g., vegetative management anticipated in a Wildfire Safety Plan) have been found to be effective at reducing fire frequency, fire severity, and annual area burned over an extended period of time (Kim et al. 2013; Martinson and Omi 2013; Tubbesing et al. 2019). Where treatments have occurred, the pattern of wildfire progression may be limited to low-intensity underbrush and surface burning, which can create safe conditions for firefighters to successfully suppress fires in areas near homes or other structures, or around areas of high resource value.

Implementation of Mitigation Measure HAZ-8 and the aforementioned state, El Dorado County Fire Protection District, El Dorado Hills Fire Department, and VMVSP requirements and standards would minimize the potential for wildfire and would not result in substantially greater potential to exacerbate existing wildfire hazards in the project area. Therefore, impacts would be less than significant with mitigation.

Mitigation Measure HAZ-8: Preparation of a wildfire safety plan

Prior to the submittal of the first small lot tentative subdivision map, the County will require the preparation of a wildfire safety plan appropriate to the high and very high fire classifications of the plan area on the CAL FIRE Hazard Severity Zone Map for El Dorado County. The wildfire safety plan will include, but not be limited to, the following.

- Site and project description
- Applicable codes and regulations
- Fire department response capabilities
- Site fire risk assessment (weather, fuels, topography, fire and ignition history, and potential fire behavior)
- Fire safety requirements (vegetation management, structural hardening site access, water availability, alternative materials and methods)
- Response strategies for emergency evacuations related to wildfire (number of people using routes; accessibility of routes; any disruptions to routes from natural hazards; and location and capacity of emergency shelters)

- Frequency of fuel management
- Funding source

The County will submit the plan to CAL FIRE and the local fire protection districts for review and approval. The County will not approve the first small lot tentative map until it has received approval of the plan by CAL FIRE and fire protection districts. Prior to issuance of a grading permit, the County will verify the physical fire safety requirements, emergency routes, and project-specific recommendations in the plan have been implemented.

Impact HAZ-9: Create a significant hazard to the public or the environment as a result of offsite infrastructure and General Plan Policy TC-Xf traffic improvements (less than significant with mitigation)

Impacts related to hazards and hazardous waste resulting from offsite improvements would be similar to those described above for the project area. Offsite improvements, as described in Chapter 2, *Project Description*, include the development offsite infrastructure necessary to serve the project and traffic improvements required under General Plan Policy TC-Xf, extensions of and connections to existing roadways; extensions of water, recycled water (potentially), stormwater, wastewater, and dry utility lines; and oak canopy offsite improvements. Construction and operation of these offsite improvements could result in the transport, use, or disposal of hazardous materials.

Construction of offsite improvements, as shown in Figures 2-13 and 2-15 and as described in Chapter 2, *Project Description*, would involve the use of heavy construction equipment (e.g., excavators, backhoes, grading machines, asphalt machines), the operation and maintenance of which would involve the use and handling of hazardous materials, including diesel fuel, gasoline, lubricants, and solvents. The quantities of hazardous materials could exceed regulatory thresholds and, thus, require transport, handling, storage, and disposal in accordance with applicable federal, state, or local regulations, as described under *Regulatory Setting* in Section 3.7.1, *Existing Conditions*, to minimize the potential for release of hazardous materials into the environment. Construction equipment that would be used to build the offsite infrastructure has the potential to release oils, greases, solvents, and other materials through accidental spills. Construction-related spills of hazardous materials are not uncommon, but the enforcement of construction standards, including a SWPPP and BMPs by appropriate local and state agencies (e.g., fire departments) would minimize the potential for an accidental release of petroleum products and hazardous materials during construction. It is not anticipated that use of hazardous materials during construction would result in a reasonably foreseeable upset or accident conditions that would cause significant hazard to the public or environment. Therefore, construction of offsite improvements would not result in a significant hazard to the public or environment.

Construction of offsite improvements would involve grading and disruption of the existing soil and geology on the project site. While NOA does exist in El Dorado County, only trace amounts have been identified in the general vicinity of the project area. As required by Mitigation Measure AQ-3 as part of the asbestos dust mitigation plan, soil would be routinely inspected during construction. If NOA is found, the soil would be handled and disposed of in compliance with the BMPs and requirements identified in applicable regulations (e.g., the California Air Resources Board's *Asbestos Airborne Toxic Control Measure for Surfacing Applications* and the *Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations*).

Operation and maintenance of the additional roadways could allow for the transport, use, or disposal of hazardous materials. The roadway improvements would be limited to local facilities and would not be major transportation routes. The types and amounts of hazardous materials that could be transported on the roadway improvements would be limited to materials typically associated with residential and local-serving non-residential uses. All maintenance and hazardous waste handlers would be required to comply with applicable regulations, as described above, which would reduce impacts to a less-than-significant level.

Offsite traffic improvements required under General Plan Policy TC-Xf could result in detours or temporary lane closures that could interfere with an adopted emergency response plan or evacuation plan. Implementation of Mitigation Measure TRA-4, as described in Section 3.14, *Transportation and Circulation,* would require the applicant to develop a site-specific construction transportation management plan (TMP) that addresses specific steps to be taken before, during, and after construction to minimize traffic impacts. Mitigation Measure TRA-4 requires the applicant to ensure that the TMP is implemented prior to beginning construction at the offsite locations. The County will review and approve the TMP prior to issuing a grading permit. Implementation of this measure would ensure delays experienced during construction of offsite improvements would be minimized to the greatest extent feasible and would not increase wildfire risk. Implementation of Mitigation Measure TRA-4 would reduce this impact to a less-than-significant level.

Mitigation Measure TRA-4: Implement site-specific transportation management plan during construction

3.8 Hydrology, Water Quality, and Water Resources

This section identifies existing conditions; describes the regulatory setting for hydrology, water quality, and water resources in the project area; and analyzes the potential for implementation of the Village of Marble Valley Specific Plan (VMVSP; proposed project) to affect these resources. Information presented in the discussion and used for the subsequent analysis was drawn primarily from the following sources.

- *Marble Valley Storm Drain Master Plan* (Appendix J, *Drainage Analysis*)
- *Wetland Delineation for Marble Valley Property, EI Dorado County, California* (ECORP Consulting 2006).
- *Preliminary Wetland Assessment for the Village of Marble Valley Specific Plan, Off-Site Infrastructure Improvement Areas, El Dorado County, California* (ECORP Consulting 2014a).
- *Application for Clean Water Act Section 404 Individual Permit for The Village of Marble Valley, El Dorado County, California* (ECORP Consulting 2013).
- *Proposed Marble Valley Development, Hydrogeologic Analysis and Preliminary Geotechnical Report* (EBASCO Services 1989).
- *Preliminary Engineering Geology Report, Marble Valley Property, EI Dorado Hills, California* (Wallace Kuhl & Associates 2000).
- *Geotechnical Engineering Slope Stability Study of the Marble Valley Development, Bass Lake Road Area, EI Dorado County, California* (Youngdahl & Associates 1994).
- *El Dorado County General Plan* (County General Plan) (El Dorado County 2004a).
- *County of El Dorado Drainage Manual* (Drainage Manual) (El Dorado County 2020).
- *Cooperative Climatological Data Summaries, NOAA Cooperative Stations—Temperature and Precipitation* (Western Regional Climate Center 2014).
- *Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board Central Valley Region* (Fifth Edition) (Central Valley Regional Water Quality Control Board 2019).
- *Western El Dorado County Storm Water Management Plan* (County SWMP) (El Dorado County 2004b).

3.8.1 Existing Conditions

Regulatory Setting

Federal

Clean Water Act

The federal Clean Water Act (CWA) of 1972 provides for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. The CWA emphasizes technology-based (end-of-pipe) control strategies and requires discharge permits to allow use of public

resources for waste discharge. The CWA also limits the amount of pollutants that may be discharged and requires wastewater to be treated with the best treatment technology economically achievable regardless of receiving water conditions. The control of pollutant discharges is established through National Pollutant Discharge Elimination System (NPDES) permits that contain effluent limitations and standards. The U.S. Environmental Protection Agency (USEPA) has delegated responsibility for implementation of portions of the CWA, such as Sections 303, 401, and 402 (discussed below), to the State Water Resources Control Board (State Water Board) and the associated nine Regional Water Quality Control Boards (Regional Water Boards). The project site is located within the jurisdiction of the Central Valley Regional Water Quality Control Board (Central Valley Water Board).

Section 303(d) and Total Maximum Daily Loads

The State of California adopts water quality standards to protect beneficial uses of waters of the state as required by Section 303(d) of the CWA and the Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act). Section 303(d) of the CWA established the total maximum daily load (TMDL) process to guide the application of state water quality standards (see the discussion of state water quality standards below). To identify candidate waterbodies for TMDL analysis, a list of water quality–impaired segments is generated by the State Water Board. These stream or river segments are impaired by the presence of pollutants such as sediment and are more sensitive to disturbance because of this impairment.

In addition to the impaired waterbody list required by CWA Section 303(d), CWA Section 305(b) requires states to develop a report assessing statewide surface water quality. Both CWA requirements are addressed through the development of a 303(d)/305(b) integrated report, which addresses both an update to the 303(d) list and a 305(b) assessment of statewide water quality. The State Water Board's statewide *2020/2022 California Integrated Report* was based on the integrated reports from each of the nine Regional Water Boards. After approval of the 303(d) list portion of the *2020/2022 California Integrated Report* by the State Water Board, the report was approved by USEPA on May 11, 2022.

Deer Creek (Sacramento County) has no listed water quality impairments. However, Deer Creek discharges into the Lower Cosumnes River. The lower Cosumnes River is listed as impaired for indicator bacteria, invasive species, mercury, dissolved oxygen, and toxicity downstream of the project site. TMDLs for indicator bacteria (2021), invasive species (2019), mercury (2033), dissolved oxygen (2035), and toxicity (2035) are expected.

Section 401—Water Quality Certification

Section 401 of the CWA requires that an applicant pursuing a federal permit to conduct an activity that may result in a discharge of a pollutant obtain a Water Quality Certification (or waiver). A Water Quality Certification requires the evaluation of water quality considerations associated with dredging or placement of fill materials into waters of the United States. Water Quality Certifications are issued by one of the nine geographically separated Regional Water Boards in California. Under the CWA, the Regional Water Board must issue or waive a Section 401 Water Quality Certification for a project to be permitted under CWA Section 404.

As described in Section 2.4, *Required Approvals*, the project applicant would be required to obtain a Water Quality Certification for proposed project construction activities that will affect waters of the state.

Section 402—National Pollutant Discharge Elimination System

The 1972 amendments to the Federal Water Pollution Control Act established the NPDES permit program to control discharges of pollutants from point sources (Section 402). The 1987 amendments to the CWA created a new section of the CWA devoted to stormwater permitting (Section 402(p)). USEPA has granted the State of California (the State Water Board and Regional Water Boards) primacy in administering and enforcing the provisions of CWA and NPDES. NPDES is the primary federal program that regulates point-source and nonpoint-source discharges to waters of the United States.

NPDES General Permit for Construction Activities

The NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order No. 2022-0057-DWQ) (Construction General Permit) regulates stormwater discharges for construction activities (CWA Section 402). Dischargers whose projects disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, are required to obtain coverage under the Construction General Permit. The Construction General Permit requires the development and implementation of a stormwater pollution prevention plan (SWPPP).

The permit program is risk-based, meaning that a project's risk is based on its potential to cause sedimentation and the risk such sedimentation poses to the receiving waters. A project's risk determines its water quality control requirements, ranging from Risk Level 1, which consists of only narrative effluent standards, implementation of best management practices (BMPs), and visual monitoring, to Risk Level 3, which consists of numeric effluent limitations, additional sediment control measures, and receiving water monitoring. Additional requirements include compliance with postconstruction standards focusing on low-impact development (LID), preparation of rain event action plans, increased reporting requirements, and specific certification requirements for certain project personnel.

As described in Section 2.4, *Required Approvals*, the project applicant would be required to obtain a Construction General Permit for the proposed project because total land disturbance would be greater than 1 acre.

BMPs in the SWPPP may include the following measures.

a. Providing permeable surfaces where feasible.

b. Retaining and treating stormwater onsite using catch basins and filtering wet basins.

c. Minimizing the contact of construction materials, equipment, and maintenance supplies with stormwater.

d. Reducing erosion through soil stabilization, watering for dust control, installing perimeter silt fences, placing rice straw bales, and installing sediment basins. In order to minimize potential impacts on wildlife, no monofilament plastic mesh or line will be used for erosion control.

e. Maintaining water quality by using infiltration systems, detention systems, retention systems, constructed wetland systems, filtration systems, biofiltration/bioretention systems, grass buffer strips, ponding areas, organic mulch layers, planting soil beds, sand beds, and vegetated systems such as swales and grass filter strips that are designed to convey and treat either fallow flow (swales) or sheetflow (filter strips) runoff.

In addition, a procedure for spill prevention and control is typically developed to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during all construction activities. If a spill should occur during construction that causes a release of a hazardous material, including oil and radioactive materials, the proper agencies are typically notified and an Emergency Release Follow-up Notice Reporting Form is submitted to the State Emergency Response Commission and the Hazardous Materials Division of El Dorado County Environmental Management Department no more than 30 days following the release.

The Construction General Permit typically covers uncontaminated dewatering activities, which are considered in the permit to be authorized non-stormwater discharges.

NPDES General Municipal Stormwater Permit

CWA Section 402 mandates programmatic permits for municipalities to address stormwater discharges, which are regulated under the NPDES General Permit for Municipal Separate Storm Sewer Systems (MS4) (MS4 Permit). Phase I MS4 regulations cover municipalities with populations greater than 100,000, certain industrial processes, or construction activities disturbing an area of 5 acres or more. Phase II (Small MS4) regulations require that stormwater management plans be developed by municipalities with populations smaller than 100,000 and construction activities disturbing 1 or more acres of land area.

The State Water Board is advancing LID in California as a means of complying with municipal stormwater permits. LID incorporates site design, including the use of vegetated swales and retention basins and minimizing impermeable surfaces, to manage stormwater to maintain a site's pre-development runoff rates and volumes.

The project area is located entirely within El Dorado County, and, therefore, would be subject to the requirements of the Waste Discharge Requirements (WDRs) for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems General Permit No. CAS000004 (Order No. 2013-0001-DWQ) (Small MS4 Permit), as amended by Order WQ 2015-0133-EXEC, Order WQ 2016-0069-EXEC, WQ Order 2017-XXXX-DWQ, Order WQ 2018-0001-EXEC, and Order WQ 2018-0007-EXEC. Additionally, El Dorado County (County) has a stormwater management plan for western El Dorado County (El Dorado County 2004b).

Section E.12 of the Small MS4 Permit is the "Post-Construction Stormwater Management Program." The proposed project qualifies as a *Regulated Project* as defined in Section E.12.c of the Order and, would therefore be required to comply with the standards provided in the Order. Before approving any tentative map, the County (as permittee) would be responsible for ensuring the proposed project site design includes measures required under Sections E.12.a (Site Design Measures), E.12.d (Source Control Measures), E.12.e (LID Design Standards), and E.12.f (Hydromodification Measures). Other portions of Section E.12 address the County's responsibilities for documenting compliance with the MS4 Permit.

Waste Discharge Requirements for Dewatering and Other Low Threat Discharges to Surface Waters

CWA Section 402 also includes WDRs for dewatering activities. The Central Valley Water Board adopted a NPDES Low Threat Discharge and Dewatering General Permit. However, the Central Valley Water Board is no longer accepting applications for coverage under the Low Threat General Order. New applicants should apply for coverage under the Limited Threat General Order General Waste Discharge Requirements/NPDES Permit for Limited Threat Discharges to Surface Waters,

Order R5-2016-0076/NPDES Permit No. CAG995002. If dewatering is required as part of the proposed project, then the project applicant will need to comply with the Central Valley Water Board dewatering requirements. The Limited Threat General Order applies to dischargers by individuals, public agencies, private businesses, and other legal entities discharging clean or relatively pollutant-free wastewaters that pose little or no threat to water quality with (1a) Discharges of less than 0.25 million gallons per day (mgd) and/or less than 4 months in duration; (1b) Discharges greater than or equal to 0.25 mgd and/or greater than or equal to 4 months in duration; or (2) discharges that may contain toxic organic constituents, volatile organic compounds, pesticides, inorganic constituents, chlorine, and/or other chemical constituents that require treatment prior to discharge. As part of the Construction General Permit, all dewatering discharges are required to be filtered or treated, using appropriate technology, from sedimentation basins.

If dewatering activities lead to discharges to the storm drain or other waterbodies, water treatment measures may be designed and implemented so that water quality objectives are met prior to discharge to waters of the state. As a performance standard, these measures will be selected to achieve the maximum removal contaminant found in the groundwater and will represent the best available technology that is economically feasible. Measures may include using infiltration areas and retaining dewatering effluent until particulate matter has settled before the water is discharged. The contractor should perform routine inspections of the construction area to verify that the water quality control measures are properly implemented and maintained; the contractor would also conduct observations of the water (e.g., check for odors, discoloration, or an oily sheen on groundwater). Other pre-discharge sampling and reporting activities required by the Central Valley Water Board are typically conducted, if necessary. The final selection of water quality control measures would be subject to review by the Central Valley Water Board. If the groundwater is found to not meet water quality standards and treatment measures are not effective, the water may need to be hauled offsite for treatment and disposal at an appropriate waste treatment facility.

Section 404—Dredge/Fill Permitting

The discharge of dredged or fill material into waters of the United States is subject to permitting specified under Title IV (Permits and Licenses) of the CWA and specifically under Section 404 (Discharges of Dredge or Fill Material) of the CWA. Section 404 of the CWA regulates placement of fill materials into the waters of the United States. Section 404 permits are administered by U.S. Army Corps of Engineers (USACE).

As described in Section 2.4, *Required Approvals*, the project applicant would be required to obtain a Section 404 permit for proposed project construction activities that affect waterways. The project applicant applied for a Section 404 Permit in September 2013.

National Flood Insurance Program

In response to increasing costs of disaster relief, Congress passed the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. The purpose of these acts was to reduce the need for large, publicly funded, flood control structures and disaster relief by restricting development on floodplains. The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains. FEMA issues flood insurance rate maps (FIRMs) for communities participating in the NFIP. A FIRM is the official map of a community prepared by FEMA to delineate both the special flood hazard areas and the flood risk premium zones applicable to the community.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act authorizes the state to implement the provisions of the CWA and establishes a regulatory program to protect the water quality of the state and the beneficial uses of state waters.

The act requires projects that are discharging, or proposing to discharge, wastes that could affect the quality of the state's water to file a report of waste discharge with the appropriate Regional Water Board. The Porter-Cologne Act also requires that the State Water Board or a Regional Water Board adopt basin plans for the protection of water quality. Basin plans are updated and reviewed every 3 years and provide the technical basis for determining WDRs, taking enforcement actions, and evaluating clean water grant proposals. A basin plan must consist of a designation or establishment for the waters within a specified area of beneficial uses to be protected, water quality objectives to protect those uses, and a program of implementation needed for achieving the objectives. (Central Valley Regional Water Quality Control Board 2019).

As noted above, the project area lies within the jurisdiction of the Central Valley Water Board. The Central Valley Water Board is responsible for the protection of beneficial uses of water resources in the Central Valley Region. The *Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board Central Valley Region* (Fifth Edition) (Central Valley Water Board Basin Plan) was last updated in 2018 (Central Valley Regional Water Quality Control Board 2019).

The State Water Board proposed Amendments to the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) to Control Trash and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California collectively termed as the "Trash Amendments." The State Water Board also prepared a Staff Report/Substitute Environmental Document to meet California Environmental Quality Act (CEQA) compliance requirements. The Trash Amendments will require the implementation of a consistent statewide approach for reducing environmental issues associated with trash in state waters and will be incorporated into all NPDES permitting programs, including Phase I and Phase II MS4s, Construction General Permits, and Industrial General Permits, as well as WDRs and waivers to WDRs. NPDES permittees will be required to commit to one of two tracks to achieve compliance with the Trash Amendments. Page 12 of the Substitute Environmental Document says, "Any new development within the MS4 permittee's jurisdiction must be built to immediately comply with Track 1 or Track 2." On December 31, 2014, the State Water Board released a Notice of Revised Documents stating the proposed Final Trash Amendments were available online for review. On February 12, 2015, the State Water Board released a Notice of Public Meeting scheduled for April 7, 2015 to consider oral comments and the adoption of the proposed Final Trash Amendments. On April 7, 2015, the State Water Board adopted the Final Trash Amendments.

Regional Water Boards designate beneficial uses for all waterbody segments in their jurisdictions and then set criteria necessary to protect these uses. Consequently, the specific water quality objectives developed for particular water segments are based on the designated use. The Central Valley Water Board Basin Plan specifies region-wide and waterbody-specific beneficial uses and has set numeric and narrative water quality objectives for several substances and parameters for numerous surface waters in its region. Specific objectives for concentrations of chemical constituents are applied to bodies of water based on their designated beneficial uses (Central Valley Regional Water Quality Control Board 2019). In addition, the State Water Board identifies waters failing to meet standards for specific pollutants, which are then state-listed in accordance with CWA

Section 303(d). If it is determined that waters of the state are impaired for one or more constituents and the standards cannot be met through point-source or nonpoint-source controls (NPDES permits or WDRs), the CWA requires the establishment of TMDLs.

California Fish and Game Code Section 1602 Streambed Alteration Agreement

Under Chapter 6 of the California Fish and Game Code, California Department of Fish and Wildlife (CDFW) is responsible for the protection and conservation of the state's fish and wildlife resources. Section 1602 et seq. of the code defines the responsibilities of CDFW and requires that public and private applicants obtain an agreement to "divert, obstruct, or change the natural flow or bed, channel, or 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 those resources derive benefit, or will use material from the streambeds designated by the department." A streambed alteration agreement is required under Section 1602 for all activities that involve temporary or permanent activities within state jurisdictional waters.

As described in Section 2.4, *Required Approvals*, the project applicant would be required to obtain a streambed alteration agreement for proposed project construction activities that would affect waterways.

Sustainable Groundwater Management Act

On September 16, 2014, Governor Edmund G. Brown, Jr. signed historic legislation to strengthen local management and monitoring of groundwater basins most critical to the state's water needs. The three bills—Senate Bill (SB) 1168 (Pavley), SB 1319 (Pavley), and Assembly Bill 1739 (Dickinson)—together make up the SGMA. The bills would establish phased requirements for high- and medium-priority basins to adopt GSPs, depending on whether or not a basin is in critical overdraft. The act required adoption of GSPs by January 31, 2020, for all high- or medium-priority basins in overdraft condition and by January 31, 2022, for all other high- and medium-priority basins unless legally adjudicated or otherwise managed sustainably. These bills do not apply to this project because western El Dorado County has no groundwater basins. Please see the *Groundwater* discussion in the *Environmental Setting* section below.

Local

Grading, Erosion, and Sediment Control Ordinances

The County Grading, Erosion, and Sediment Control Ordinance (Grading Ordinance) (Chapter 110.14 of the County Code) establishes provisions for public safety and environmental protection associated with grading activities on private property. Section 110.14.290 of the Grading Ordinance prohibits grading activities that would damage or obstruct watercourses or drainage facilities or substantially degrade water quality of any body of water. Pursuant to the ordinance, the design of the drainage facilities must comply with the Drainage Manual (El Dorado County 2020).

El Dorado County Subdivision Ordinance

The County's Subdivision Ordinance (El Dorado County Code Title 120) requires drainage plans to be submitted prior to the approval of tentative maps for proposed subdivision projects. The drainage plans must include an analysis of upstream, onsite, and downstream facilities and pertinent details, as well as details of any necessary offsite drainage facilities. The tentative map

must include data on the location and size of proposed drainage structures. In addition, drainage culverts consistent with the drainage plan may be required in all existing drainage courses, including roads.

County of El Dorado Design and Improvement Standards Manual

The County's *Design and Improvement Standards Manual* was adopted in 1990 and identifies required erosion and sediment control measures that are applicable to subdivisions, roadways, and other types of developments. Specifically, *Volume III: Grading, Erosion and Sediment Control* describes the criteria for determining whether an erosion and sediment control plan is required. When required, an erosion and sediment control plan must also comply with the County SWMP (El Dorado County 2004b).

County of El Dorado Drainage Manual

The Drainage Manual (El Dorado County 2020) provides standard procedures for future designs of drainage improvements. The Drainage Manual supersedes the stormwater drainage system design standards in the County's *Design Improvements Standards Manual*. The Drainage Manual requires that a hydrologic and hydraulic analysis be submitted for all proposed drainage facilities. The analysis must include an introduction/background, location map/description, catchment description/delineation, hydrologic analysis, hydraulic and structural analysis, risk assessment/impacts discussion, discussion of unusual or special conditions, conclusions, and technical appendices. This analysis is usually required on projects undergoing discretionary review. However, under the Building Code and Grading Ordinance, the County also reviews ministerial development, including required drainage plans, to ensure that appropriate runoff design and controls are in place.

The final analysis would include an introduction/background, location map/description, catchment description/delineation, hydrologic analysis, hydraulic and structural analysis, risk assessment/impacts discussion, unusual or special conditions, conclusions, and technical appendices. The analysis would address the following topics.

- A calculation of pre-development runoff conditions and post-development runoff scenarios using appropriate engineering methods. This analysis would evaluate potential changes to runoff through specific design criteria, and account for increased surface runoff.
- An assessment of existing drainage facilities within the project area, and an inventory of necessary upgrades, replacements, redesigns, and rehabilitation, including the sizing of onsite stormwater detention features and pump stations.
- A description of the proposed maintenance program for the onsite drainage system.
- Standards for drainage systems to be installed on a project- or parcel-specific basis.
- Proposed design measures to ensure structures are not located within 100-year floodplain areas.

Drainage systems must be designed on a site-specific basis in accordance with the findings of the studies and County requirements. As a performance standard, measures to be implemented would provide for no net increase in peak stormwater discharge relative to current conditions to ensure that 100-year flooding and its potential impacts are maintained at, or below current levels and that people and structures are not exposed to additional flood risk.

In 2007 a memorandum was prepared by David Ford Consulting Engineers that identifies a procedure for computing the rational method C from Natural Resources Conservation Service curve numbers for the County (David Ford Consulting Engineers 2007). The memorandum updates the charts currently in the manual to add curves for times of concentration of 5 and 7.5 minutes.

Stormwater Management Plan and Stormwater Quality Ordinance

The County SWMP was adopted by the County in 2004 as a means of compliance with the then-applicable Small MS4 Permit. In May 2015, the County adopted a County-Wide Storm Water Ordinance (Ordinance No. 5022) to ensure compliance with the new Small MS4 Permit requirements in the entire unincorporated county. Chapter 8.79 of the County Code contains the stormwater regulations, which establish the County's authority to implement and enforce the SWMP and to ensure compliance with state and federal stormwater laws and regulations. It also sets forth requirements that development projects incorporate BMPs to control the volume, rate, and potential pollutant loading of stormwater runoff. As provided by Section 8.79.150.G, the required BMPs may be contained in any land use entitlement, conditions of approval, grading plans, improvement plans, or any construction or building-related permit to be issued relative to such development. The requirements became effective in June 2015.

Flood Damage Prevention Ordinance (1986)

To regulate development within the 100-year floodplain, the County has enacted a floodplain ordinance that is compatible with FEMA guidelines and applied in conjunction with the County's Zoning Ordinance. Under the Flood Damage Prevention Ordinance, development within the 100-year floodplain may occur; however, certain engineering and zoning standards apply to reduce injury, prevent loss of life, reduce structural damage caused by flooding, and reduce public expenditures for additional flood control structures. Development within the floodway is prevented unless no increase in flood elevation would result from the development.

Multi-Hazard Functional Emergency Operations Plan (2006)

The County's *Multi-Hazard Functional Emergency Operations Plan* (Emergency Operations Plan) (El Dorado County 2006) contains dam failure plans for those dams that qualify for mapping. The individual dam facility plans located at the County Department of Emergency Services contain a description of the dams, identify the direction of flood waters, list responsibilities and actions of individual jurisdictions, and provide evacuation plans. The Emergency Operations Plan also contains response plans for floods resulting from periods of high rainfall or rapid snowmelt, which can cause flooding in the 100-year floodplain.

Multi-Jurisdiction Hazard Mitigation Plan (2004)

The County's *Multi-Jurisdictional Hazard Mitigation Plan* (El Dorado County 2004c) contains implementation and evaluation procedures for reducing losses sustained by people and property during a disaster. The Cameron Park Lake/Warren Hollister Dam has the potential to inundate the project area (via Deer Creek) in the event of a dam failure. However, because dam failure is considered a low-risk hazard in El Dorado County, there are no developed actions; rather, the plan refers to the Emergency Operations Plan for guidance.

El Dorado County General Plan

The County General Plan Public Health, Safety, and Noise Element and Conservation and Open Space Element (El Dorado County 2019) include the relevant goals, objectives, and policies listed below, the text of which can be found in Appendix B, *Consistency with El Dorado County General Plan Policies*. See Section 3.9, *Land Use Planning and Agricultural Resources*, for an analysis of the project's consistency with County General Plan policies as required under State CEQA Guidelines Section 15125.

Public Health, Safety, and Noise Element

- Goal 6.4, *Flood Hazards*, includes Objective 6.4.1, *Development Regulations*, which seeks to minimize loss of life and property by regulating development, and Policies 6.4.1.1, 6.4.1.2, 6.4.1.3, 6.4.1.4, and 6.4.1.5; and Objective 6.4.2, *Dam Failure and Inundation*, and Policies 6.4.2.1 and 6.4.2.2.

Conservation and Open Space Element

- Goal 7.1, *Soil Conservation*, includes Objective 7.1.2, *Erosion/Sedimentation*, and implementing Policies 7.1.2.1 and 7.1.2.2.
- Goal 7.3, *Water Quality and Quantity*, includes Objective 7.3.1, *Water Resource Protection*, and Policies 7.3.1.1, 7.3.1.2, and 7.3.1.3; Objective 7.3.2, *Water Quality*, and Policies 7.3.2.1, 7.3.2.2, 7.3.2.3, and 7.3.2.5; Objective 7.3.3, *Wetlands*, and Policies, 7.3.3.1, 7.3.3.4, and 7.3.3.5; and Objective 7.3.4, *Drainage*, and Policies 7.3.4.1 and 7.3.4.2.

Public Services and Utilities Element

- Goal 5.4, *Storm Drainage*, includes Objective 5.4.1, Drainage and Flood Management Program, and implementing Policies 5.4.1.1 and 5.4.1.2.

Environmental Setting

Climate and Topography

The project area is located in the western portion of the Sierra Nevada geomorphic province, but the project area's climate is similar to that of the Sacramento Valley. In general, the project area has typical Mediterranean climate with hot, dry summers and cool, wet winters. Average high temperatures during the summer range from 90 to 100 degrees Fahrenheit in the Sacramento Valley (National Oceanic and Atmospheric Administration 2010). During winter, average low temperatures in the Sacramento Valley range from the low 40s to the 50s (National Oceanic and Atmospheric Administration 2010).

The Sacramento Valley and the immediate foothills to the east have mild winters with low annual precipitation. Precipitation usually falls from October through May, and virtually no precipitation occurs falls during June to September. The average annual precipitation in the city of Sacramento is 18 inches; average annual precipitation in the EI Dorado Hills area is approximately 26 inches (Western Regional Climate Center 2014).

The project area consists primarily of hilly, oak savannah with lowland riparian oak woodland along Marble and Deer Creeks and chaparral on several southern aspect hill slopes. The elevation ranges from approximately 680 to 1,300 feet above mean sea level. Slopes range from nearly level up to

70%. Marble Creek flows in a southerly direction from the northern boundary of the project area into Deer Creek, which flows from east to west through the southern portion of the project area. The hilly terrain is drained by various intermittent drainages and seasonal wetland swales.

There are two former limestone quarries in the northern portion of the project area. The project area's past use for limestone quarrying has created some significant topographic features, including the large soil stockpiles in the north-central portion of the project area (as noted in the Youngdahl & Associates 1994 geotechnical engineering slope stability study and the Wallace Kuhl & Associates 2000 preliminary engineering geology report) and the two quarries that created the stockpiles. These stockpiles are present along the east side of the North Quarry pit. The North Quarry pit is filled with water and is in excess of 200 feet deep. The remnants of a smaller and more historical limestone pit, as well as a stone structure associated with the quarrying operations, were also observed to the south–southwest of the larger pit. This smaller pit is significantly shallower (approximately 25–35 feet deep) and is cut into the hillside. Within the excavation is a cave that is currently filled with water.

Surface Water

Hydrology

The project area is within the San Joaquin River Hydrologic Region, which covers approximately 9.7 million acres (15,200 square miles) and includes all of Calaveras, Tuolumne, Mariposa, Madera, San Joaquin, and Stanislaus Counties, most of Merced and Amador Counties, and parts of Alpine, Fresno, Alameda, Contra Costa, Sacramento, El Dorado, and San Benito Counties (California Department of Water Resources 2003). According to the U.S. Geological Survey, the project area is within the Upper Cosumnes (Hydrologic Unit Code 18040013) watersheds (U.S. Geological Survey 1978).

Locally, the project area is in the Marble Creek watershed, which drains to Deer Creek. Deer Creek drains south through Cameron Park and continues south for approximately 2 miles after crossing under U.S. Highway (US) 50. It then turns and flows southwest, discharging into the Cosumnes River upstream of State Route 99 in Sacramento County.

Refer to Section 3.3, *Biological Resources*, for a full description of each waterbody in the project area.

Onsite Project Area

Drainage and Stormwater Runoff

Onsite drainage features consist of Marble Creek and Deer Creek and their associated wetlands and tributaries, including seasonal wetlands and swales, intermittent drainages, stock ponds, seeps, quarry ponds, and drainage ditches (ECORP Consulting 2006, 2007, 2014a). Most of the streambeds in the project area are incised to bedrock or naturally armored by large amounts of rock. Because of this, the streams are not downcutting or laterally eroding, and in most cases are quite stable (Jones & Stokes Associates 1988).

The onsite section of Deer Creek within the project area currently receives daily discharges from the Deer Creek Wastewater Treatment Plant (WWTP) (located south of the far edge of the Lime Rock Valley planning area), which causes the creek to have flows year-round. Because of the artificial flows, the onsite portion of Deer Creek is classified as a perennial creek, according to the USACE Wetlands Delineation Manual. Offsite sections of Deer Creek have seasonal flows and are classified as ephemeral creek.

Within the Marble Creek watershed, which comprises most of the project area, the terrain is moderately steep, with the creek flowing from US 50 southeast to its confluence with Deer Creek. Portions of the project area extend beyond the ridgelines of Marble Valley. To the east, relatively small areas drain to Deer Creek. To the west, relatively small areas drain to Strap Minor Creek and Plunkett Creek, both small watersheds that discharge into Deer Creek just upstream of Latrobe Road (Appendix J, *Drainage Analysis*). Figure 2-8c shows the locations of existing natural drainage features in the project area.

The project area is undeveloped. There is no downstream development along Marble Creek outside the project area, but there is development along Deer Creek farther downstream. There is no storm drainage system in the project area. In the Storm Drain Master Plan prepared for the project by Watermark Engineering (Appendix J, *Drainage Analysis*), stormwater volumes for the 2-year, 10-year, and 100-year storm events were estimated to be 1,544 acre-feet (af), 2,917 af, and 4,848 af, respectively. Of the three storm events, the 100-year storm volume is the one most likely to affect downstream properties.

Wetlands and Waters of the United States

Within the 2,341-acre project area, ECORP Consulting (2006, 2007, 2014a) has identified a total of 40.263 acres of waters of the United States that meet criteria for USACE jurisdiction and Regional Water Board definitions of *waters of the state*. Of the 1,875 acres proposed for development generally north of Deer Creek, ECORP has identified a total of 35.793 acres of waters of the United States that meet the criteria for USACE jurisdiction and Regional Water Board definitions of waters of the state and is the subject of the application for the CWA Section 404 permit. These waters consist of seasonal and perennial creeks, seasonal wetlands and swales, intermittent drainages, stock ponds, seeps, quarry ponds, and drainage ditches (refer to Figure 3.3-1 in Section 3.3, *Biological Resources*).

Refer to Section 3.3, *Biological Resources*, for a full description of each waterbody in the project area.

Offsite Improvement Areas

A total of approximately 8.87 acres of potential wetlands and other waters were mapped within the offsite improvement areas. Water features consist of seasonal wetlands and seasonal wetland swales, an ephemeral drainage, an intermittent drainage, creeks, and ditches (ECORP Consulting 2014a).

Water Quality

There is limited water quality data for Deer Creek. Surface water quality is measured at two locations by the El Dorado Irrigation District (EID), which operates the Deer Creek WWTP west of the project site. Downstream of the WWTP, water quality in Deer Creek is affected by treated effluent from the WWTP. Upstream of the WWTP, water quality is influenced by overland flows from the project site in addition to runoff from developed areas in Cameron Estates.

There is no current water quality information specific to surface flows in smaller drainages in the project area. Water quality is monitored by EID. Under existing conditions, water quality in Marble and Deer Creeks and their tributaries is affected primarily by erosion of soil and former agricultural (grazing) activities that can result in background levels of sediment, bacteria, and nitrates. Historical limestone rock quarrying activities may have also affected surface water quality because Marble Creek flowed through the current lake. However, as of 1997, water quality testing of Marble Valley

Lake (the former North Quarry) reported good water quality. Levels of nitrogen were reported to be well within acceptable limits (Youngdahl and Associates 1996 as cited in EIP Associates 1997).

Four of five soil map units (which cover a majority of the project area) are moderately to highly susceptible to sheet and rill erosion by water.

The Central Valley Water Board Basin Plan describes beneficial uses for waters within the project vicinity, as shown in Table 3.8-1. Table 3.8-2 shows 303(d) listed impairments for Deer Creek and the Lower Cosumnes River based on the *2020/2022 Integrated Report* (State Water Resources Control Board 2022). The segment of Deer Creek that flows through the project site is not listed as impaired.

Table 3.8-1. Designated Beneficial Uses for Surface Waterbodies within the Project Vicinity

Waterbody	Designated Beneficial Uses
Cosumnes River (source to the Delta)	Municipal and domestic supply; irrigation; stock water; water contact recreation; non-contact water recreation; warm and cold freshwater habitat; warm and cold fish migration; warm and cold fish spawning; wildlife habitat.

Source: Central Valley Regional Water Quality Control Board 2019: Table 2-1.

Urban nonpoint-source pollution includes heavy metals, pesticides, bacteria, organics (oil and grease), dirt, and nutrients. Urban runoff from vehicles on bridges can be discharged into streams during construction activities, rain events, vehicle accidents, and through normal wear and tear.

Table 3.8-2. 303(d) Listed Impaired Waters with Potential to be Affected by the Project

Waterbody	Pollutant Stressors	Potential Sources	TMDL Completion Date
Cosumnes River, Lower (below Michigan Bar; partly in Delta Waterways, eastern portion)	Indicator Bacteria	Unknown	Est. 2021
	Invasive Species	Unknown	Est. 2019
	Mercury	Unknown	Est. 2033
	Dissolved Oxygen	Unknown	Est. 2035
	Toxicity	Unknown	Est. 2035

Source: State Water Resources Control Board 2022.
TMDL = total maximum daily load

Groundwater

El Dorado County Hydrogeology

The majority of all water produced in El Dorado County wells comes from underground zones of hard crystalline or metamorphic rock within which there are fractures that provide natural storage for groundwater (El Dorado County Environmental Management Department 2004). The fractures do not form a connected system and vary in size and character. Therefore, with the exception of a small basin at South Lake Tahoe, there are no groundwater basins in El Dorado County;

consequently, groundwater resources can vary by location and reliability depending upon the underlying geology of that site (El Dorado County 2004d). The project area is not within a recognized groundwater subbasin.

Historical data on groundwater levels is limited. The water levels in water wells in the county are not routinely tested, are not reported to the County, and there is no comprehensive database on groundwater levels. However, DWR periodically tests groundwater wells for pollution or contaminants. Despite relatively mild fluctuations in groundwater well depths between 1999 and 2010, data collected between 2010 and 2014 indicate that fluctuations can be greater. A Public Update by DWR states that the greatest concentration of recently deepened wells is in the fractured bedrock foothill areas of Nevada, Placer, and El Dorado Counties (California Department of Water Resources 2014). Between years 2010 and 2014, El Dorado County deepened 41 domestic wells in fractured bedrock (California Department of Water Resources 2014) compared to far fewer cases (ranging from 1 to 17) in most other counties. Findings of this analysis support a conclusion that water wells in areas of fractured bedrock are more vulnerable to water shortages than wells in groundwater basins during times of drought (California Department of Water Resources 2014). In addition, fracture width generally decreases with depth (State Water Resources Control Board 2005), indicating even more limited supplies than porous or alluvial aquifer systems at greater depths because of diminished recharge, movement, and storage capacity (El Dorado County 2003). As such, long-term reliability of groundwater cannot be estimated with the same level of confidence as a porous or alluvial aquifer (El Dorado County 2003).

In addition to water levels, water quality can affect groundwater supplies. During 2003 and 2004, and as part of a small pilot study in 2001, a Voluntary Domestic Well Assessment Project sampled 398 private domestic wells in the county. Of the domestic wells sampled, approximately 30% (119 wells; multiple chemicals detected in some wells) would not pass state primary drinking water standards for public water systems. This statistic demonstrates that private domestic wells are vulnerable to contamination that may affect public health. The most common reasons for primary maximum contaminant level exceedance were positive detection of coliform (total coliform present in 111 domestic wells and fecal coliform present in 14 domestic wells), followed by arsenic (15 domestic wells) and nitrate (7 domestic wells) (State Water Resources Control Board 2005). According to the 2004 County General Plan Draft Environmental Impact Report, major sources of potential groundwater pollution include septic tanks or septic leach fields, underground fuel tanks, spills of hazardous materials or commercial waste, and infiltration of agricultural byproducts, including fertilizer and livestock waste (El Dorado County 2003).

Persistent drought and climate change will continue to affect the reliability of the county's groundwater supplies. The combination of rising temperatures, a smaller snowpack, and more frequent and potentially longer droughts could reduce the availability of both surface and groundwater supplies, as more water runs off or evaporates and less infiltrates the ground. Reduced infiltration could reduce the reliability of groundwater wells drilled in fractured rock (El Dorado County Water Agency 2019).

Project Area Hydrogeology

The principal groundwater aquifers under the project area are found within fractured bedrock. The fractures are developed by stress in the rock resulting from the cooling and contraction following regional metamorphism and from folding and faulting. These fractures are generally steep and oriented vertically, and they develop a foliation to the rock; as such, groundwater flow is affected by

the direction of the foliation. Most water-bearing fractures are wider and develop more water in the upper 200–300 feet of rock. Estimated depth to groundwater under the project area is 60 feet below ground surface. Groundwater is reported to surface from nearby Marble Valley Lake (EIP Associates 1997:4.10-9).

Based on field exploration by Youngdahl Consulting Group (2012), a perched groundwater condition was observed within one of the test pit excavations. The researchers note that in the foothill regions, many factors (e.g., proximity to bedrock, fractures in the bedrock, topographic elevations, proximity to surface water) lead to variation in the subsurface water conditions. Continued exposure to subsurface water may be evidenced by black staining on fractures, clay deposits, and surface markings indicating previous seepage. Based on Youngdahl Consulting Group's experience in the area, water may be perched on less weathered rock and/or be present in the fractures and seams of the weathered rock beneath the site at different times of the year (Youngdahl Consulting Group 2012:3).

The project area has been historically used for domestic cattle grazing and localized limestone rock quarrying. These prior uses have a limited potential for impact on groundwater quality (Youngdahl and Associates 1996 as cited in EIP Associates 1997).

Groundwater Recharge

Groundwater recharge occurs primarily due to precipitation, applied water, and streamflow. Groundwater is recharged primarily along stream channels where sand and gravel deposits occur to sufficient depth that adequate quantities of surface water can infiltrate into the underlying aquifer. The project area is underlain by bedrock and groundwater recharge potential is limited (EIP Associates 1997).

The project area is undeveloped and consists of Type D soils, which have low permeability (Appendix J, *Drainage Analysis*).

Flooding

FIRMs prepared by FEMA were reviewed to identify the locations of 100-year floodplains. None of the creeks in the project area is a FEMA-designated flood zone. However, some offsite locations north of US 50 (approximately 0.5 mile north) and farther south of the project area (approximately 1.5 miles south), portions of Deer Creek lie within in a FEMA–Zone A 100-year floodplain.

As identified by the County, however, Deer Creek in the project area is considered a flood-prone area from Cameron Park to the Sacramento County line (El Dorado County 2004c).

Upstream dam or levee failure and ensuing inundation pose a risk to the project area; a dam failure at Cameron Park Lake/Warren Hollister Dam would result in downstream flooding along Deer Creek (El Dorado County 2004c). A small reach of Deer Creek where it enters the project site from the northeast is within this potential inundation area. The area that could be inundated is proposed to remain as undeveloped open space. The Cameron Park Lake/Warren Hollister Dam is regulated and regularly inspected by the Division of Safety of Dams.

3.8.2 Environmental Impacts

Methods of Analysis

Impacts related to hydrology, water quality, and water resources were assessed based on technical reports prepared for the proposed project, other available data (e.g., maps, soil surveys), and professional judgment.

Potential impacts resulting from implementing the proposed project were analyzed by comparing existing conditions, as described in *Environmental Setting*, with conditions during construction and/or operation of the project. The analysis assesses the direct, indirect, short-term, and long-term impacts related to surface hydrology, flood hazards, groundwater recharge, and surface and groundwater quality as described below.

- **Surface Water Hydrology:** The surface water hydrology impact analysis considered potential changes in the physical characteristics of waterbodies, impervious surfaces, and drainage patterns throughout the project area as a result of project implementation. The quantified data, conclusions, and recommendations presented in the site-specific drainage analysis (Appendix J, *Drainage Analysis*) were incorporated into the analysis of stormwater volumes and water surface elevations. The purpose of the study was to estimate stormwater runoff volumes, water surface elevations, and peak flows for existing and developed conditions to determine conceptual design options for drainage facilities that would ensure stormwater flows from the development are equal to or less than existing conditions such that there would be no increase in flood potential downstream of the project site. Three scenarios (A, B, and C) were evaluated. Scenario A is Existing Conditions. Scenario B is based on the assumptions that both Village at Marble Valley and Lime Rock Valley specific plans are fully developed with sufficient peak flow attenuation at the most downstream road crossing over Marble Creek. Scenario C is based on the assumptions that the Village at Marble Valley is developed but Lime Rock Valley is not, and that the most downstream road crossing over Marble Creek is used for attenuation.
- **Flood Hazards:** The impact analysis for flood risk considered FEMA NFIP maps to determine whether the project area overlaps with existing designated 100-year floodplains. The analysis also incorporates the quantified results presented in the drainage analysis (Appendix J, *Drainage Analysis*) pertaining to runoff volumes and water surface elevations. Dam failure mapping prepared by the County for Cameron Park Lake was reviewed to ascertain flood-prone locations in the project area.
- **Groundwater Recharge:** Impacts on groundwater recharge were assessed qualitatively by comparing existing sources of recharge with recharge capabilities following project implementation (Youngdahl Consulting Group 2012).
- **Surface and Groundwater Quality:** Impacts of the proposed project on surface water and groundwater quality were analyzed using existing information on existing water quality conditions (i.e., 303[d]-listed waterbodies). These conditions were then compared with conditions under the proposed project for potential project-related sources of water contaminants generated or inadvertently released during project construction (e.g., sediments, fuel, oil, concrete) and project operation (urban runoff). The potential for water quality objectives to be exceeded and beneficial uses to be compromised as a result of the proposed project was also considered.

Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the proposed project would be considered to have a significant effect if it would result in any of the conditions listed below.

- Violate any water quality standards or WDRs or otherwise substantially degrade surface water or groundwater quality.
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would:

  i) Result in substantial erosion or siltation onsite or offsite;

  ii) Substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite;

  iii) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

  iv) Impede or redirect flood flows.
- In a flood hazard, tsunami, or seiche zone, risk release of pollutants due to project inundation.
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Impacts and Mitigation Measures

Impact WQ-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water or groundwater quality (less than significant with mitigation)

Construction-related earth-disturbing activities would introduce the potential for increased erosion, runoff, and sedimentation, with subsequent effects on water quality. During site grading, trenching, and other construction activities such as the potential screening and sorting of fill materials [spoils] deposited around the quarry, areas of bare soil would be exposed to erosive forces during rainfall events. Bare soils are much more likely to erode than vegetated areas because of the lack of dispersion, infiltration, and retention properties created by covering vegetation. The extent of the impacts depends on soil erosion potential, type of construction practice, extent of disturbed area, timing of precipitation events, and topography and proximity to drainage channels. In addition, construction equipment and activities would have the potential to leak hazardous materials, such as oil and gasoline, and potentially affect surface water or groundwater quality. Improper use or accidental spills of fuels, oils, and other construction-related hazardous materials such as pipe sealant, solvents, and paints could also pose a threat to the water quality of local waterbodies. These potential leaks or spills, if not contained, would be considered a significant impact on groundwater and surface water quality. If precautions are not taken to contain or capture sediments and accidental hazardous spills, construction activities could produce substantial pollutants in stormwater runoff and could adversely affect existing surface water quality in Marble Creek and its tributaries.

Construction of road and bridge crossings near and within waterbodies may result in discharges of metals and other contaminants in sediment. In-water construction activities would directly disturb sediment along the creekbed and result in a temporary increase in turbidity in the immediate area and potentially downstream. Concrete, vehicle fluids, and other fluids may be easily released into the creek during construction, as well. These discharges may have adverse impacts on beneficial uses.

However, because the project would disturb more than 1 acre of land, a SWPPP with an associated pre-determined risk level would be required as part of compliance with the NPDES Construction General Permit. The purpose of a SWPPP is to reduce the amount of construction-related pollutants that are transported by stormwater runoff to surface waters. The SWPPP would identify specific BMPs, which include temporary erosion control measures to reduce sedimentation and turbidity of surface runoff from disturbed areas within the project area, and leak and spill protection for heavy equipment and hazardous materials use, among others.

VMVSP Policy 6.6 requires the use of construction BMPs and compliance with permits and regulations that are applicable to construction activity. In addition to compliance with the latest NPDES and other water quality requirements (i.e., Construction General Permit, Small MS4 Permit, WDRs for dewatering), the proposed project would be required to comply with the County's Stormwater Quality Ordinance No. 5022, as noted under *Regulatory Setting* in Section 3.8.1, *Existing Conditions*.

Construction dewatering in areas of shallow groundwater may be required during excavation. The project contractor would determine onsite whether dewatering is necessary. In the event groundwater is encountered during construction, dewatering would be conducted locally, and according to Central Valley Water Board dewatering requirements, as described under *Regulatory Setting* in Section 3.8.1, *Existing Conditions*. In areas where groundwater is shallow or perched and there is potential to affect riparian habitat, features would be installed using the vibration method[1], which minimizes subsurface disruption. The contractor would perform routine inspections of the construction area to verify that the water quality control measures are properly implemented and maintained; the contractor would also conduct observations of the water (e.g., check for odors, discoloration, or an oily sheen on groundwater). Other pre-discharge sampling and reporting activities required by the Central Valley Water Board are typically conducted, if necessary. The final selection of water quality control measures would be subject to review by the Central Valley Water Board. With implementation of the water quality control measures, there would be no violations of water quality objectives or WDRs.

The project would involve operation and maintenance of a mixed-use community consisting of residential, commercial, retail, agricultural, and open space uses. These land uses and operational activities could increase existing or generate new levels of potential pollutants of concern within the project area, such as trash, sediments, pesticides, bacteria, nutrients, metals, oils, and other toxins. These pollutants could reach surface waters in the vicinity through storm drains or direct discharge into Marble Creek or Deer Creek. Operation and maintenance activities under the proposed project would generate pollutants of concern from landscape maintenance, building maintenance, the storage of materials and substances, and vehicle use. However, good housekeeping practices, such as regular trash collection and sweeping, would continue to be implemented onsite.

[1] Different than standard pumping techniques and cut-off wall installation, the vibration method uses a stainless steel vibrating device and a vibrating screen to remove water from the soil via vibration and gravity.

The project would result in increased impervious area and result in increased stormwater runoff. Runoff from impervious surfaces could contain nonpoint pollution sources associated with automobiles, trash, cleaning solutions, and landscaped areas. Stormwater runoff from the proposed project area would be directed to a stormwater collection system that will comply with the requirements of the County's NPDES and MS4 Permit in place at the time of subsequent development approvals. The Storm Drain Master Plan (Appendix J, *Drainage Analysis*) includes a detention basin along Marble Creek at a downstream road crossing within the project area. The detention basin would reduce the volume and speed of stormwater runoff and treat stormwater runoff through biological uptake and natural soil filtration processes.

In addition to urban runoff, one other potential impact on water quality would be the discharge of dredged or fill material into waters of the United States. These discharges could affect beneficial uses of the wetlands, such as riparian and wildlife habitat. As described in Section 3.3, *Biological Resources*, the project would result in permanent onsite impacts on (fill of) a maximum of 6.029 acres of waters consisting of wetlands (1.886 acres) and other waters (4.143 acres) in the project area, and on a maximum of approximately 7.779 acres of waters, including wetlands, in the offsite improvement areas. At a minimum, the project would compensate for loss of wetlands and other waters at a minimum of a 1:1 ratio or as permitted by USACE, resulting in at least the same amount of wetlands that currently exist within the project area and benefiting wildlife in the project vicinity. Construction requiring removal of wetlands would be subject to USACE jurisdiction under Section 404 of the CWA, and to CDFW and Central Valley Water Board jurisdiction under California Department of Fish and Game Code Section 1602 and CWA Sections 401 and 402. Wetland loss or removal without avoidance, minimization, or compensation would constitute a significant impact. Implementation of Mitigation Measures BIO-1a, BIO-1b, BIO-1c, and BIO-3a would reduce potential water quality impacts on wetlands and other waters to a less-than-significant level by protecting wetlands, providing training, and avoidance.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands

Impact WQ-2: 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)

Water for the residential and nonresidential uses in the project would be provided by EID. No groundwater would be used. Therefore, the project would not deplete groundwater supplies. In the unlikely event dewatering is required during construction, it would be temporary in nature, of limited extent, and would not affect offsite wells or groundwater levels.

Project components such as roads and houses would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. Infiltration rates vary depending on the

overlying soil types. In general, sandy and silty soils (which compose a majority of the project area) have higher infiltration rates and can contribute to significant amounts of groundwater recharge; clay soils tend to have lower percolation potentials; and impervious surfaces such as pavement significantly reduce infiltration capacity and increase surface water runoff. The amount of new pavement and the extent to which it affects infiltration depends on the site-specific soil type.

The project area is underlain by bedrock, and groundwater discharges to the surface as seeps, rather than as recharge. Therefore, the net change in groundwater recharge potential would be limited. In addition, the project would not utilize groundwater resources. Furthermore, the Marble and Deer Creek floodplain are likely to have the greatest potential for recharge of the groundwater aquifer, and this area would remain designated open space under the VMVSP (Marble Valley Company, LLC 2023). Finally, the proposed project would preserve more than 50% of its associated acreage (1,284 acres) in open space, thereby protecting valuable natural resources (including oak woodlands, Marble and Deer Creeks, intermittent tributaries, wetlands, and steep hillsides) that contribute to groundwater recharge. Therefore, the project would not impede sustainable groundwater management of the basin. This impact would be less than significant. No mitigation is required.

Impact WQ-3i: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite (less than significant with mitigation)

The proposed project would directly affect up to 0.640 acre of perennial creek, 0.846 acre of seasonal creek, 1.588 acres of intermittent drainage, 0.134 acre of drainage ditch, and 0.935 acre of quarry pond (see Impact BIO-4 in Section 3.3, *Biological Resources*). This could affect drainage patterns. Site preparation activities such as grading and excavation to construct building pads and roadways would alter the overall existing overland flow drainage patterns. Alterations in the natural landscape and drainages could increase the potential for changes in water flow in onsite and offsite drainages, creeks, and streams that could, in turn, affect erosion and the amount of sediment in the watercourse ("hydromodification"). Construction activities also contribute to this potential effect because they would leave areas of exposed soil that could be subject to wind or water erosion, and stormwater runoff could potentially transport sediment-laden runoff to local drainages. Increased sediment loads have the potential to degrade water quality and reduce the capacity of drainages to convey water. This potential is increased when earth-moving activities and development footprints are close to riparian areas and drainages. The County requires a minimum setback of 50 feet from all perennial streams and 25 feet from intermittent streams, wetlands, or sensitive riparian habitat (Zoning Ordinance 130.30.030, G). Actual setbacks for the VMVSP area would be determined during the Section 404 permitting process in consultation with USACE (see Impacts BIO-2 and BIO-4). The proposed riparian corridor enhancements along the main drainage channels (Deer Creek and Marble Creek) would help reduce erosion potential through the inclusion of new wetland plantings and regrading the open space area adjoining the creek to facilitate the enhancements.

The VMVSP also includes policies specifically directing protection of natural drainage courses and riparian zones. VMVSP Policy 6.3 requires that natural drainage courses be avoided and incorporated into the overall storm drainage system design, except where road, trail, or utility crossings would preclude this. Under VMVSP Policy 6.4, trails located within open space areas or corridors must be designed to include soil erosion control measures to minimize sedimentation of nearby creeks and maintain the natural state of drainage courses.

Project components such as roads and residential and nonresidential buildings would create new impervious surfaces. These surfaces would alter drainage patterns on the site but would also reduce the amount of soil that could be exposed to erosion. Stormwater runoff from developed surfaces would be conveyed to the project's storm drain system, which would be designed in accordance with the Small MS4 Permit Section E.12.f hydromodification requirements. This would ensure the proposed project's effect on drainage patterns would not cause or exacerbate the rate of sedimentation or siltation in a manner that would adversely affect the function of natural onsite or offsite drainages, streams, or creeks. This impact would be less than significant. No mitigation is required.

The potential erosion effects associated with operation of the proposed detention basin (Figure 3.8-1) on Marble Creek at the southernmost road crossing would constitute a significant impact, which is discussed in the analysis of embankment stability in Impact GEO-3 in Section 3.5, *Geology, Soils, Minerals, and Paleontological Resources.* The drainage system would redirect stormwater through culverts to an emergency spillway. Though designed to accommodate a 100-year event, it is possible that high flows would overtop the roadway and result in erosion of the embankment and corresponding impacts on water quality. Implementation of Mitigation Measure GEO-3d would reduce potential erosion impacts to a less-than-significant level by implementing appropriate roadway embankment design for flood protection.

Mitigation Measure GEO-3d: Evaluate and implement appropriate detention basin roadway embankment design to address geotechnical stability and flood protection

Impact WQ-3ii: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite (less than significant with mitigation)

Project components, such as roads and residential and nonresidential buildings, would add impermeable surfaces, resulting in altered flow patterns, and increased amounts of stormwater runoff. The conversion of permeable surfaces and the installation of permanent structures would require stormwater drainage management measures to avoid onsite and offsite flooding impacts.

The County Drainage Manual (El Dorado County 2020) requires that a hydrologic and hydraulic analysis be submitted for all proposed drainage facilities. In addition, under General Plan Policy 6.4.1.2, the County is required to identify and delineate flood-prone study areas discovered during the completion of the master drainage studies or plans. A preliminary hydrologic and hydraulic study (Appendix J, *Drainage Analysis*) was prepared for the project and identified the potential flooding hazard impacts of the proposed project due to project-generated stormwater runoff. The County's existing Small MS4 Permit requires development projects to control the volume, rate, and duration of runoff to avoid downstream flooding (including Deer Creek downstream of the project area). In addition, VMVSP Policy 8.5 requires that the project prevent the increase in potential flood hazard or damage to surrounding properties.

The VMVSP also considers the prior or concurrent development of the Lime Rock Valley Specific Plan (LRVSP) for stormwater management (Marble Valley Company, LLC 2023). If the VMVSP project area is developed first, the LRVSP project area could use the storage provided in the detention basin in the VMVSP project area to attenuate peak stormwater runoff to a level that would not affect facilities along Deer Creek downstream of the confluence of Deer Creek and Marble Creek.

The detention basin would have sufficient volumes to accommodate flows from VMVSP and LRVSP combined (Appendix J, *Drainage Analysis*).

The road-crossing culvert associated with this basin has been sized to reduce peak flows from Marble Creek in the VMVSP project area to the extent that there would be no increase in peak flow downstream along Deer Creek.

The County Drainage Manual (El Dorado County 2020) requires that a final hydrologic and hydraulic analysis be submitted for all proposed drainage facilities. The project applicant will be required to submit the final hydrologic and hydraulic analysis prior to the County issuance of a grading permit.

The proposed project would include a detention basin at the southernmost road crossing over Marble Creek within the project area. The location of the proposed detention basin is shown in Figure 3.8-2 and described in Chapter 2, *Project Description*. The embankment associated with this basin would provide 53 af of storage volume and would be designed for hydrological and hydraulic conditions associated with a 100-year storm. A 7-foot-wide by 5-foot-high box culvert would be constructed at the road crossing to attenuate (meter) the flows. In addition, a second high-level culvert will be part of the embankment for each crossing, located at the 100-year water level at the upstream side of the embankment. This will act as an emergency spillway in an extreme event larger than the 100-year storm or if debris restricts high flow.

The detention basin would be an impoundment created by the southernmost road crossing over Marble Creek within the project area, where sufficient storage is available along Marble Creek to attenuate flows. However, the roadway embankment could be subject to damage or failure during large storm events if the roadway is overtopped or if debris clogs the culverts in the embankment. This could result in onsite and potentially offsite flooding, which would be a potentially significant impact. Implementation of Mitigation Measure GEO-3d would reduce this impact to a less-than-significant level by implementing appropriate roadway embankment design for flood protection.

Mitigation Measure GEO-3d: Evaluate and implement appropriate detention basin roadway embankment design to address geotechnical stability and flood protection

Impact WQ-3iii: Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff (less than significant)

Storm Drainage System Capacity

Project components such as roadways, building rooftops, and hardscaping would create new impervious surfaces that result in an increase in stormwater runoff. There is currently no storm drainage system in the project area, and a system would be installed as part of the proposed project. This system would have sufficient capacity for the project. As noted in Impact WQ-4, hydrologic and hydraulic analysis for the project (Appendix J, *Drainage Analysis*) show that post-development flows would be attenuated by the incorporation of the culvert and embankment at the road crossing. This flow attenuation would ensure that the capacity of stormwater drainage systems would not be exceeded. Storm drainage system capacity impacts would be less than significant.

Postconstruction Stormwater Runoff Water Quality

Upon completion of the project, components such as roads and residential and nonresidential buildings would create new impervious surfaces. This condition would result in an incremental

reduction in the amount of natural soil surface available for infiltration of rainfall and runoff, potentially generating additional runoff during storm events. In addition, the increase in impervious surfaces, along with the increase in surface water runoff, could increase the nonpoint-source discharge of pollutants. Anticipated runoff contaminants include sediment, pesticides, oil and grease, nutrients, metals, bacteria, and trash. Contributions of these contaminants to stormwater and non-stormwater runoff could degrade the quality of receiving waters. During the dry season, vehicles and other urban activities release contaminants onto the impervious surfaces, where they can accumulate until the first storm event. During this initial storm event, or first flush, the concentrated pollutants would be transported in runoff to stormwater drainage systems. Contaminated runoff waters could flow into the stormwater drainage systems that discharge into Marble and Deer Creeks and ultimately could degrade the water quality of Deer Creek and the Cosumnes River.

The County's Small MS4 Permit Section E.12, County SWMP (El Dorado County 2004b), the County Drainage Manual (El Dorado County 2020), and Stormwater Quality Ordinance No. 5022 require the proposed project to manage hydromodification and avoid adverse water quality impacts on onsite drainages, including Marble Creek and Deer Creek. To accomplish this, the proposed project's drainage system would be designed so the post-development runoff would not exceed pre-development runoff rates, durations, and volumes from the project area (Marble Valley Company, LLC 2023). VMVSP Policies 6.6 and 8.7 require treatment of urban runoff in accordance with County standards and the use of BMPs. Source control BMPs could include conserving natural areas, protecting slopes and channels, and minimizing impervious areas. Treatment control BMPs may include use of vegetated swales and buffers, detention basins, wet ponds, or constructed wetlands, and infiltration basins. Water quality pond sizing and locations would be refined when more detailed site plans have been developed (Appendix J, *Drainage Analysis*). As part of the riparian corridor enhancements along the drainage channel, the open space area adjoining the channel would be regraded to incorporate wetland enhancement and water quality features.

VMVSP Policies 8.8 and 9.47 require that the project incorporate LID design strategies. Consistent with these policies and the requirements of the Small MS4 Permit, the proposed project would incorporate LID methods consistent with the current edition of the *Stormwater Quality Design Manual for the Sacramento and South Placer Regions*, or comparable guidelines, into site design. LID technology incorporates site design and stormwater management to maintain the site's pre-development runoff rates and volumes. Examples of LID measures include sidewalk storage, vegetated swales, buffers and strips, tree preservation, permeable pavers, and impervious surface reduction and disconnection. Selection and implementation of these measures would occur on a project-by-project basis and would be placed throughout the planning areas. The specific LID measures would depend on project size and stormwater treatment needs. Success criteria and performance standards would be developed and provided to the County as part of grading/improvement plans. The County would be responsible for ensuring the proposed source and treatment control BMPs conform to the requirements of the Small MS4 Permit Section E.12 and Stormwater Quality Ordinance No. 5022 prior to issuing grading and building permits. In addition, under VMVSP Policy 9.48, limiting the use of pesticides, herbicides, and similar products in landscape maintenance, along with integrated pest management techniques, would be encouraged through homeowner education and as part of maintenance of publicly accessible areas.

Implementation of the County's requirements for stormwater quality would ensure compliance with the Central Valley Water Board Basin Plan, which specifies water quality objectives and beneficial

use requirements. Water quality impacts during project occupancy would be less than significant. No mitigation is required.

Impact WQ-3iv: Impede or redirect flood flows (less than significant)

During construction, the drainage pattern of the site or area may be temporarily and slightly altered with grading associated with building pads and roads; however, construction equipment would be relocated to minimize potential flood risks or flood flows. In addition, the project would implement BMPs to control construction site runoff, ensure proper stormwater control and treatment, reduce the discharge of pollution to the storm drain system, and ensure sufficient storm drain capacity for the project. A drainage plan would be required for approval by the County for onsite measures consistent with the County Drainage Manual and other applicable stormwater standards and requirements.

The project area does not include FEMA 100-year flood hazard areas. However, the drainage study prepared for the project (Appendix J, *Drainage Analysis*) identified flood-prone areas. No structures would be located within those areas. Therefore, flood flows would not be impeded or redirected. Upstream dam or levee failure and ensuing inundation may also pose a risk to the project area. A small reach of Deer Creek within the project area may be inundated in the event of failure of the dam at Cameron Park Lake. However, the area that could be inundated would remain as undeveloped open space. Accordingly, flood flows would not be impeded or redirected. Because the County participates in the NFIP, it must ensure that the project meets federal standards for flood protection. The County's Emergency Operations Plan contains response plans for floods resulting from dam failure and the County's Flood Damage Prevention Ordinance contains methods and provisions for preventing flood damage.

To treat runoff from additional new impervious surface, the proposed project would include an onsite detention basin that would temporarily store up to 53 af of stormwater during a 100-year storm event. This treatment BMP would reduce the volume of runoff entering the storm drainage system. The detention basin would have sufficient volumes to accommodate flows from VMVSP and LRVSP combined (Appendix J, *Drainage Analysis*). New drainage structures would ultimately improve drainage patterns. As discussed above, a second high-level culvert will be part of the embankment for each crossing, located at the 100-year water level at the upstream side of the embankment. In addition, VMVSP Policy 8.5 requires that the project prevent the increase in potential flood hazard or damage to surrounding properties. The proposed project would not impede or redirect flood flows. Impacts would be less than significant, and no mitigation is required.

Impact WQ-4: In a flood hazard, tsunami, seiche zone, risk release of pollutants due to project inundation (less than significant)

Because of its distance from the ocean and other waterbodies, the project area is at not at risk of inundation from a tsunami or seiche. In the event of a flood hazard, to reduce the risk of a pollutant release, the proposed project would comply with the requirements of local water quality programs and associated municipal stormwater-related NPDES permits (e.g., MS4 Permit) as well as County ordinances and General Plan policies to manage flood risk and water quality. Compliance with these requirements would minimize risks related to a release of pollutants due to project inundation in a flood hazard. The project would not release pollutants as a result of inundation by flood, tsunami, or seiche. Therefore, impacts would be less than significant.

Impact WQ-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan (no impact)

Project implementation would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Permittees are required to comply with the appropriate water quality objectives for the region. Commonly practiced BMPs would be implemented to control construction site runoff and to reduce the discharge of pollutants to storm drain systems from stormwater and other nonpoint-source runoff. As part of compliance with permit requirements during ground disturbing or construction activities, implementation of water quality control measures and BMPs would ensure that water quality standards would be achieved, including the water quality objectives that protect designated beneficial uses of surface water and groundwater, as defined in the Central Valley Water Board Basin Plan. The NPDES Construction General Permit also requires stormwater discharges not to contain pollutants that cause or contribute to an exceedance of any applicable water quality objectives or water quality standards, including designated beneficial uses. Although the project area is not within a recognized groundwater subbasin, implementation of the appropriate General Plan policies would require the protection of groundwater recharge areas and groundwater resources, as required by a sustainable groundwater management plan. There would be no impact.

Impact WQ-6: Impacts on hydrology, water quality, and water resources resulting from offsite improvements, including General Plan Policy TC-Xf traffic improvements (less than significant with mitigation)

Offsite improvements, as described in Chapter 2, *Project Description*, include the development of offsite infrastructure necessary to serve the project and traffic improvements required under General Plan Policy TC-Xf. Construction impacts on water resources resulting from offsite improvements would be similar to those described for onsite impacts. The projects would be required to implement applicable water quality protection (i.e., Construction General Permit, Small MS4 Permit, WDRs for dewatering). The impact of groundwater depletion or interference with groundwater recharge would be less than significant because the improvements would generally be linear features and would not include large areas of impervious surfaces. In accordance with the County Drainage Manual, a hydrologic and hydraulic analysis would be submitted with designs for the offsite roadway improvements, including General Plan Policy TC-Xf traffic improvements. Those improvements would incorporate storm drainage features to ensure runoff can be accommodated in the drainage system without causing or exacerbating flooding. Proper measures to maintain water quality after construction would be required (i.e., source and treatment control measures contained in the County SWMP [El Dorado County 2004b], the County Drainage Manual [El Dorado County 2020], Section E.12 of the Small MS4 Permit, and the Stormwater Quality Control Ordinance No. 5022).

There are no 100-year floodplains in the offsite improvement areas. Upstream dam failure or levee failure and ensuing inundation poses a minimal risk to the offsite improvement areas as El Dorado County is at a low risk for dam failure and offsite improvements would not include occupies structures. The offsite improvement areas are not at risk of inundation from a tsunami or seiche due to their distance from the ocean or other waterbodies, and there are no ground stability issues that would expose the offsite improvement areas to mudflow hazards.

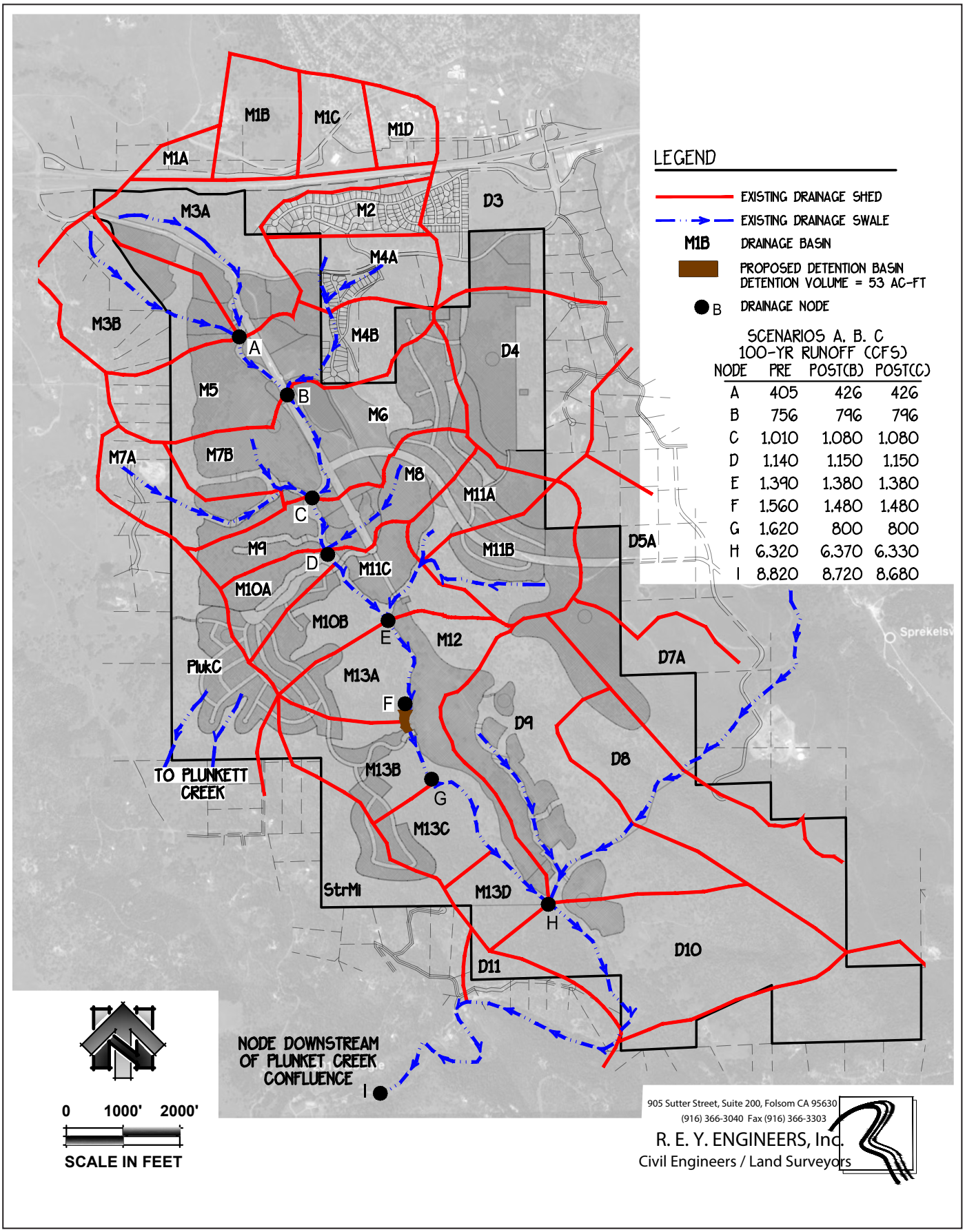
Further, as discussed under Impact WQ-6, Mitigation Measures BIO-1a, BIO-1b, BIO-1c, and BIO-3a would reduce construction impacts on wetlands and other waters to a less-than-significant level.

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands



ICF Graphics... 00667.12 (7-5-2018)

Figure 3.8-1
Existing Drainage Features

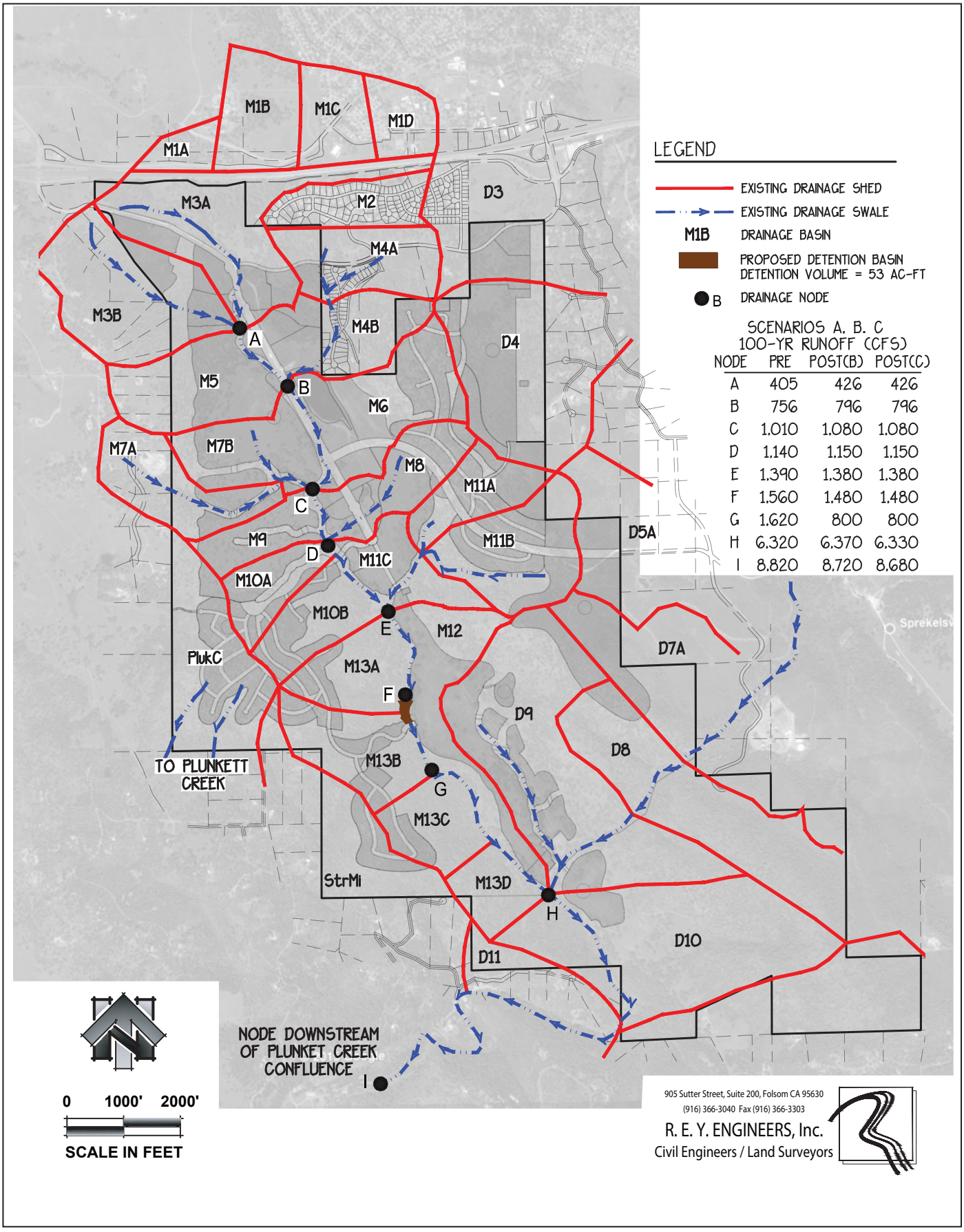


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Figure 3.8-2
Stormwater Drainage

3.9 Land Use Planning and Agricultural Resources

This section describes the regulatory and environmental setting, as well as identified impacts and mitigation measures, for land use planning and agricultural resources from implementation of the Village of Marble Valley Specific Plan (VMVSP; proposed project).

The information presented here, and the analysis of impacts is based on research and analysis performed by ICF and the following documents listed below. These documents are available in their entirety for review at the El Dorado County Planning Division.

- *El Dorado County General Plan* (County General Plan) (El Dorado County 2004).
- *El Dorado County General Plan, Land Use Element (El Dorado County 2019).*
- *Marble Valley Tentative Subdivision Map and Master Plan Environmental Impact Report* (EIP Associates 1997).
- *Draft Village of Marble Valley Specific Plan* (Marble Valley Company, LLC 2023).

3.9.1 Existing Conditions

Regulatory Setting

State

California Planning Law—General Plans

State law requires El Dorado County (County) (as well as all other cities and counties in the state) to "adopt a comprehensive, long-term general plan for the physical development of the county" (Government Code 65300). The general plan is considered to be the County's "constitution," containing development and conservation policies that will guide its long-term development. State law mandates that the general plan address land use, housing, circulation, open space, conservation, noise, and safety, as well as any other issues that may be of interest to the county. The land use element of the general plan identifies the allowable types, density, and intensity of land uses through its list of residential, commercial, agricultural, industrial, and other land use designations. The land use diagram (map) identifies the locations of these existing and future land uses, as well as the communities within which they will be located.

California Planning Law—Specific Plans

State law authorizes a county to adopt one or more specific plans "for the systematic implementation of the general plan for all or part of the area covered by the general plan" (Government Code 65450). A specific plan must be consistent with the general plan and contain the following components (Government Code 65451).

- Text and diagrams describing the distribution, location, and extent of the uses of land, including open space, within the area covered by the plan.
- The proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other

essential facilities proposed to be located within the area covered by the plan and needed to support the land uses described in the plan.

- Standards and criteria by which development will proceed, and standards for the conservation, development, and utilization of natural resources, where applicable.
- A program of implementation measures including regulations, programs, public works projects, and financing measures necessary to carry out the previously listed components.

Farmland Mapping and Monitoring Program

The Farmland Mapping and Monitoring Program (FMMP) is a non-regulatory program of the California Department of Conservation that inventories the state's important farmlands and tracks the conversion of farmland to other land uses. The FMMP publishes reports of mapped farmland and conversions every 2 years. The FMMP categorizes farmland on the basis of its soil quality, the availability of irrigation water, current use, and slope, among other criteria. The categories of farmland identified in the FMMP are listed below.

- **Prime Farmland**. Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- **Farmland of Statewide Importance**. Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- **Unique Farmland**. Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated but may include nonirrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the 4 years prior to the mapping date.
- **Farmland of Local Importance**. Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.
- **Grazing Land**. Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities.

The FMMP also identifies non-agricultural lands.

- **Urban and Built-Up Land**. Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures.
- **Other Land**. Land not included in any other mapping category. Common examples include low-density rural developments, brush, timber, wetland, and riparian areas not suitable for livestock grazing, confined livestock, poultry, or aquaculture facilities, strip mines, borrow pits, and waterbodies smaller than 40 acres. Vacant and non-agricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

FMMP data is helpful in analyzing whether agricultural conversion is occurring within a county, and at what rate.

California Land Conservation Act of 1965 (Williamson Act) and Farmland Security Zone Act

In El Dorado County, forest and timberland are important resources, and several state programs that support these resources are relevant to the county. However, no timber or forest lands occur on the project site, so these programs are not relevant and are not discussed here.

The California Land Conservation Act of 1965 (Government Code 51200 et seq.), also known as the Williamson Act, protects farmland from conversion to other uses by offering owners of agricultural land a property tax incentive to maintain their land in agricultural use. Under the Williamson Act, landowners contract with the county (or city) in which their property is located, promising to maintain the land in agriculture or compatible use for a minimum period of 10 years. In return, the property tax on the land is based on its productive value rather than its assessed value.

According to the County Assessor's records, no portions of the project site are covered by Williamson Act contracts (California Department of Conservation 2017).

Local

El Dorado County 2004 General Plan, and Amendments

The County General Plan identifies the density, intensity, type, and pattern of land uses in the unincorporated areas of the county. Land use within lands under County jurisdiction is subject to regulation under the County General Plan, and the Zoning Ordinance. The adopted County General Plan states the following.

> It is the explicit intent of the Plan, through the appropriate application of these planning concept areas, to: (1) foster a rural quality of life; (2) sustain a quality environment; (3) develop a strong diversified, sustainable local economy; (4) plan land use patterns which will determine the level of public services appropriate to the character, economy, and environment of each region; and (5) accommodate the County's fair share of the regional growth projections while encouraging those activities that comprise the basis for the County's customs, culture, and economic stability.

Most unincorporated areas of the county fall within areas designated as Community Regions under the County General Plan, where growth will be directed and facilitated; Rural Centers, where growth and commercial activities under the County General Plan will be directed to serve the larger Rural Regions; and Rural Regions, where the County General Plan calls for resource-based activities to be located, and which, under the County General Plan, are to be enhanced while accommodating reasonable growth. The project site is not within a Community Region or specific plan area. The project site was previously approved for development under the Marble Valley Master Plan and is within the El Dorado Irrigation District (EID) service area. The project site is within a Rural Region.

General Plan Objective 2.1.3 and Policy 2.1.3.1 describe the basic intent of Rural Regions.

> OBJECTIVE 2.1.3: Rural Regions
>
> Provide a land use pattern that maintains the open character of the County, preserves its natural resources, recognizes the constraints of the land and the limited availability of infrastructure and public services, and preserves the agricultural and forest/timber area to ensure its long-term viability for agriculture and timber operations.

> Policy 2.1.3.1 All lands not contained within the boundaries of a Community Region or a Rural Center are classified as Rural Regions.

The General Plan anticipates that Rural Regions will accommodate about 25% of the county's future growth, with the majority of that growth contained in the designated Community Regions and Rural Communities.

County General Plan policies that are relevant to the proposed project are listed in Appendix B, *Consistency with El Dorado County General Plan Policies*.

The importance of agriculture and forestry to the county is reflected in the County General Plan's Agriculture and Forestry Element. Through this element, the County has adopted extensive policies relating to the conservation, management, and utilization of the county's agricultural and forest lands "as fundamental components of the County's rural character and way of life."

While grazing has occurred in the past at the project site, no commercial agriculture, timberland, or forest land occurs on the project site or in the vicinity, and no lands within the project site are designated or zoned for agriculture, timberland, or forest land.

El Dorado County Zoning Ordinance

Although the County General Plan establishes policies to guide the County's land use decision-making, the Zoning Ordinance consists of enforceable regulations on the use of county land. The unincorporated area is broken into various residential, commercial, industrial, agricultural, and other "zones," with the standards and regulations applicable to each particular type of zone described in the Zoning Ordinance. Zoning maps illustrate how the zoning districts are distributed throughout the county.

Existing General Plan Land Use Designations and Zoning

Table 3.9-1 presents existing general plan land use designations and zoning for the project site. The existing land use designations and zoning reflect the approved Marble Valley Master Plan. No portions of the project site are designated or zoned for agriculture, timberland, or forest uses.

Table 3.9-1. Existing Land Use Designations and Zoning

Assessor's Parcel No.	Area (acres)	Land Use	Zoning	Max No. Units Under Approved Master Plan
087-200-74	160	LDR	OS & RE-5 (PD)	21
119-020-56 to -57	524	LDR	OS & RE-5 (PD)	95
119-030-13 to -19	1,636	LDR	OS & RE-5 (PD)	282
119-330-01	21	TR	RE-5	0
Total	+/- 2,341			398

PD = planned development overlay zone.

General Plan Land Use

LDR = Low-Density Residential (1 dwelling unit per 5 acres [1 du/5 ac]).

TR = Tourist Recreational.

Zoning

OS = Open Space.

RE-5 = Estate Residential 5-acre Residential District (1 du/5 ac).

The following presents the General Plan description of the land use designations currently applied to the project site.

Low-Density Residential (LDR). This land use designation establishes areas for single-family residential development in a rural setting. In Rural Regions, this designation shall provide a transition from Community Regions and Rural Centers into the agricultural, timber, and more rural areas of the County and shall be applied to those areas where infrastructure such as arterial roadways, public water, and public sewer are generally not available. This land use designation is also appropriate within Community Regions and Rural Centers where higher density serving infrastructure is not yet available.

The maximum allowable density shall be one dwelling unit per 5.0 acres. Parcel size shall range from 5.0 to 10.0 acres. Within Community Regions and Rural Centers, the LDR designation shall remain in effect until a specific project is proposed that applies the appropriate level of analysis and planning and yields the necessary expansion of infrastructure.

Tourist Recreational (TR). This land use designation is to provide areas for tourist and resident serving recreational uses, transit, and seasonal lodging facilities, and supporting commercial activities. The land use category would have differing intensities of use based on the location. In the Community Regions and Rural Centers where infrastructure exists or can be extended, the uses permitted would be more intense and commercial in nature. In the Rural Regions, uses will be encouraged and defined that are compatible with the rural residential nature of those regions. Types of uses would include campgrounds, golf courses, ski areas, snow parks, riding stables, trail heads, museums, and other similar recreational and sightseeing activities. Lodging uses would include RV parks and other appropriate transit lodging. Tourist recreational activities, facilities, and industries shall be allowed throughout the County; however, specific activities and facilities shall be identified through zoning and permitted by right or special use permit, as appropriate.

The following presents the zoning ordinance description of the zoning currently applied to the project site.

Estate Residential 5-acre Residential District (RE-5). The purpose of the RE-5 districts is to provide for the orderly development of land having sufficient space and natural conditions compatible to residential and accessory agricultural and horticultural pursuits and provide for the

protection from encroachment of unrelated uses tending to have adverse effects on the development of the areas so designated.

The Planned Development (–PD) Combining Zone. The PD Combining Zone implements the General Plan by providing innovative planning and development techniques that allow the use of flexible development standards; provide for a combination of different land uses which are complimentary, but may not in all aspects conform to the existing zoning regulations; allow clustering of intensive land uses to minimize impacts on various natural resources; avoid cultural resources where feasible; promote more efficient utilization of land; reflect the character, identity and scale of local communities; protect suitable land for agricultural uses; and minimize use compatibility issues and environmental impacts.

Open Space (OS). The OS Zone is applied to set aside for primarily open space purposes including, but not limited to, the protection of rare and endangered plant or animal habitat; wildlife habitat, such as critical winter deer range and migration corridors; sensitive riparian areas; oak woodlands; visual resources as a part of a development plan or along a designated scenic corridor; and watersheds and groundwater recharge areas. Intensive agriculture is not compatible, although low intensity agriculture such as seasonal grazing may be compatible. Recreational uses that have little impact and do not require substantial permanent structures or facilities are also compatible.

The OS Zone can also designate land set aside to protect agricultural lands covered by an open space easement or as a part of a development plan in an Agricultural District, as identified on the General Plan land use maps, or on other identified agricultural lands.

Where the OS Zone is applied as part of a development plan, the uses allowed under the development plan permit are allowed, including a full range of recreational facilities.

Where the County determines it is necessary or in the public interest, limited infrastructure, including but not limited to, roads, water, wastewater.

El Dorado County Subdivision Ordinance

Title 120 of the El Dorado County Municipal Code governs the division of any and all land within the unincorporated territory of the county. Pursuant to the Subdivision Map Act, subdivisions of land into more than four parcels requires prior approval by the County of a tentative map subdivision. Sale of those lots can take place only after the conditions of approval have been met and the County has approved the final map.

Design and Improvement Standards Manual

Conformity with the *Design and Improvement Standards Manual* (El Dorado County 1990) is a requirement of the County General Plan. This manual addresses standards for development and construction related to land use, roadway design, and development. The manual is currently being updated.

Senate Bill 375 and the Sustainable Communities Strategy

In 2008, California passed the Sustainable Communities and Climate Protection Act, Senate Bill (SB) 375. SB 375 requires each region of the state with a metropolitan planning organization to develop a sustainable communities strategy (SCS) as part of the metropolitan transportation plan (MTP) as part of its regional transportation plan which identifies policies and strategies to reduce per-capita greenhouse gas emissions from passenger vehicles and light trucks. The SCS is intended to encourage an integrated approach to land use and transportation planning that not only reduces vehicle travel, but accommodates an adequate supply of housing, reduces impacts on sensitive habitat and farmland, increases resource use efficiency, and promotes a thriving regional economy.

The SCS is similar to the Sacramento Area Council of Government's (SACOG's) already adopted Blueprint, which implements smart growth principles, mixed-use development, and more transit choices as an alternative to low-density development. The adopted MTP/SCS is identified by SACOG as "the Sacramento region's first MTP/SCS adopted under SB 375 and the second plan to link a regional growth pattern and smart land use principles to the transportation system."

The 2020 MTP/SCS contains the following four overall goals, as described in the document (Sacramento Area Council of Governments 2019). The document contains supporting policies for each goal.

- Build vibrant places for today's and tomorrow's residents.
- Foster the next generation of mobility solutions.
- Modernize the way we pay for transportation infrastructure.
- Build and maintain a safe, reliable, and multimodal transportation system.

Marble Valley Master Plan

The proposed project is located at the site of the previously approved 398-lot Marble Valley Master Plan (PD96-0004). The Master Plan allows development of up to 398 single-family residential units on approximately 264 acres. The Master Plan included large areas of open space totaling approximately 1,840 acres spread throughout the project site, including 71 acres of open space along U.S. Highway (US) 50. The plan also included dedication of 22 acres for a Cultural Arts Center, a 13-acre elementary school site, and an 11-acre community park site, all located near the Marble Valley Road entrance to the project site. The site design for the approved plan included development of home sites, clustered in groups of 2–28 parcels, with open space areas around and between the residential parcels (EIP Associates 1997).

Environmental Setting

The site comprises a series of sloping hills surrounding the main valley (Marble Valley) and a minor valley associated with the corridor of Deer Creek, a perennial stream that flows north to south through the property. The project site is currently undeveloped. It was used in the past for quarrying and grazing. Figure 2-3 shows the proposed project site and existing land uses.

The proposed project site is bounded by the Cambridge Oaks residential development and US 50 to the north; Marble Ridge residential development and Valley View Specific Plan area to the west; Ryan Ranch residential development to the southwest; Sun Ridge to the south; and Cameron Estates, the proposed Lime Rock Valley Specific Plan development, Deer Creek Wastewater Treatment Plant operated by EID, and Royal Equestrian Estates to the east. Figure 2-3 shows surrounding land uses.

As shown on Figure 3.9-1, small areas of Farmland of Local Importance are located on the valley floor. Large portions of the project site are designated by the FMMP as Grazing Land. The remainder of the site is Other Land. Table 3.9-2 lists the FMMP designations of the project site and vicinity.

Table 3.9-2. Farmland Mapping and Monitoring Program Designations

FMMP Farmland Type	Acres
Urban and Built-Up Land	0
Grazing Land	1,744
Farmland of Local Importance	65
Other Land	532
Total	2,341

FMMP = Farmland Mapping and Monitoring Program

3.9.2 Environmental Impacts

This section examines the proposed project, describes the methods used to determine its impacts on land use planning and agriculture, lists the criteria used to conclude whether an impact would be significant, and assess the significance of impacts.

Methods of Analysis

Land use analysis was based on research by ICF, including review of relevant planning documents and available information regarding existing and planned land uses on the project site and in the vicinity. Information on agricultural and timber resources was obtained from the FMMP and from review of County General Plan and zoning designations, as well as a project site visit and review of the project vicinity using aerial photographs.

A policy inconsistency is considered to be a significant adverse environmental impact when it is related to a policy adopted for the purpose of avoiding or mitigating an environmental effect and it is anticipated that the inconsistency would result in a significant adverse physical impact as a result of the proposed project. This Draft environmental impact report (EIR) evaluates the environmental effects of the proposed project in light of policies that pertain to environmental impacts. Appendix B, *Consistency with El Dorado County General Plan Policies*, provides a policy-by-policy analysis. Any associated physical impacts are discussed in this Draft EIR under specific topical sections, such as noise, air quality, and transportation and circulation, as appropriate.

Thresholds of Significance

In accordance with Appendix G of the State California Environmental Quality Act Guidelines, the proposed project would be considered to have a significant effect if it would result in any of the conditions listed below.

- Physically divide an established community.
- 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.
- 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.
- Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract.

- Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code [PRC] 12220(g)), timberland (as defined by PRC 4526), or timberland zoned Timberland Production (as defined by Government Code 51104(g)).
- Result in the loss of forest land or conversion of forest land to non-forest use.
- Involve other changes in the existing environment that, 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.

Impacts and Mitigation Measures

Impact LU-1: Physically divide an established community (no impact)

The project site is currently undeveloped. Adjacent developed communities, such as Cameron Estates, have their own integrity and identity as communities. The VMVSP would result in the development of residential and commercial uses, and open space, as well as associated infrastructure. Access to the site would be provided via the extension of Marble Valley Road on the west and a connection to Deer Creek Road on the east. New internal roadways would also be constructed. All roads on the project site are currently unimproved dirt or gravel roads. As such, development of the proposed Village of Marble Valley would potentially create better linkages between communities, but it would not physically divide any established community. No impact would occur.

Impact LU-2: 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 (less than significant)

El Dorado County General Plan

As discussed in Section 2.3.1, *Project Entitlements*, of this Draft EIR, the proposed project includes amendments to the County General Plan land use designations and zoning amendments, including a change to make the project site part of the El Dorado Hills Community Region. That the project site is not now within a Community Region means that the proposed project would not be consistent with the County General Plan goals of focusing development within Community Regions; however, it is within EID's service area, which is consistent with the County General Plan goals of utilizing available infrastructure and providing cost-effective public services.

The project is also inconsistent with the site's existing Rural Residential (RR) general plan designation because it proposes residential densities greater than allowed in the RR designation. The proposed project is consistent with the existing general plan where proposed park and open space uses coincide with the existing Open Space (OS) designation.

The project includes a General Plan amendment to expand the boundaries of the El Dorado Hills Community Region south and east to include the project site (see Figure 2-4). General Plan Policy 2.1.1.6 provides that the boundaries of existing Community Regions may be modified through the General Plan amendment process. Policies of the County General Plan relevant to Community Regions are presented in Appendix B, *Consistency with El Dorado County General Plan Policies*, with which the project is consistent. If the project is approved, the proposed development would be consistent with the amended General Plan. This impact assessment evaluates the environmental effects of the proposed project in light of policies that pertain to environmental impacts. The

physical effects of the proposed changes in land use are addressed in the remainder of this EIR. The impact would be less than significant.

Metropolitan Transportation Plan/Sustainable Communities Strategy

The 2016 MTP/SCS (Appendix E-3, *Land Use Forecast Background Documentation*) included the Marble Valley Master Plan, and noted that the VMVSP is pending and, if adopted, "would supersede the currently approved Marble Valley Master Plan, but would not change the MTP/SCS forecast." The 2020 MTP/SCS does not include the Marble Valley Master Plan or VMVSP. However, the proposed project is located within the Developing Communities type and is consistent with the MTP/SCS's intent of providing a mix of new housing products in these areas. The 2020 MTP/SCS forecasts for dwelling units in the Developing Communities type for the region is larger than what the regional housing demand forecasts predict for 2040. Therefore, the approval of VMVSP would result in additional dwelling unit capacity in the Developing Community type and would not alter the MTP/SCS's forecasts on what could be developed by 2040. The impact would be less than significant.

Impact LU-3: 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 (no impact)

No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance occur on the project site. There would be no impact.

Impact LU-4: Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract (no impact)

No agricultural zoning exists on the project site, and no portions of the project site are covered by Williamson Act contracts. There would be no impact.

Impact LU-5: Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code Section 12220[g]), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g]) (no impact)

No forest or timberland exists on the project site. There would be no impact.

Impact LU-6: Result in the loss of forest land or conversion of forest land to non-forest use (no impact)

No forest land exists on the project site or vicinity. There would be no impact.

Impact LU-7: Involve other changes in the existing environment that, 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 (less than significant)

No forest land exists at the project site or in the vicinity.

Farmland types in the vicinity of the project site are similar to those at the site. Some small areas of Farmland of Local Importance, including vineyards, are located in the vicinity of the project site.

Some Grazing Land is also located in the vicinity. Land uses in the vicinity of the project site are primarily rural residential. Development of the project site as proposed, which would include small areas of agricultural uses, primarily vineyards, would not restrict existing agricultural uses or affect an area of large-scale commercial agriculture, resulting in indirect conversion of farmland to non-agricultural uses. The impact would be less than significant. No mitigation is required.

Impact LU-8: Result in impacts related to land use as a result of offsite improvements or General Plan Policy TC-Xf traffic improvements (less than significant)

As described in Chapter 2, *Project Description*, offsite improvements would be required to connect the project area to infrastructure. Development of the offsite infrastructure necessary to serve the project and traffic improvements required under General Plan Policy TC-Xf would not physically divide any established community and there would be no impact. Infrastructure improvements for water and sewer would be within existing road rights-of-way and underground and traffic improvements would affect existing facilities.

Development of the offsite infrastructure necessary to serve the project and traffic improvements required by General Plan Policy TC-Xf would not result in the conversion of farmland and there would be no impact. The extent to which this infrastructure may result in a growth-inducing impact on the intervening lands is discussed in Chapter 5, *Other CEQA Considerations*.

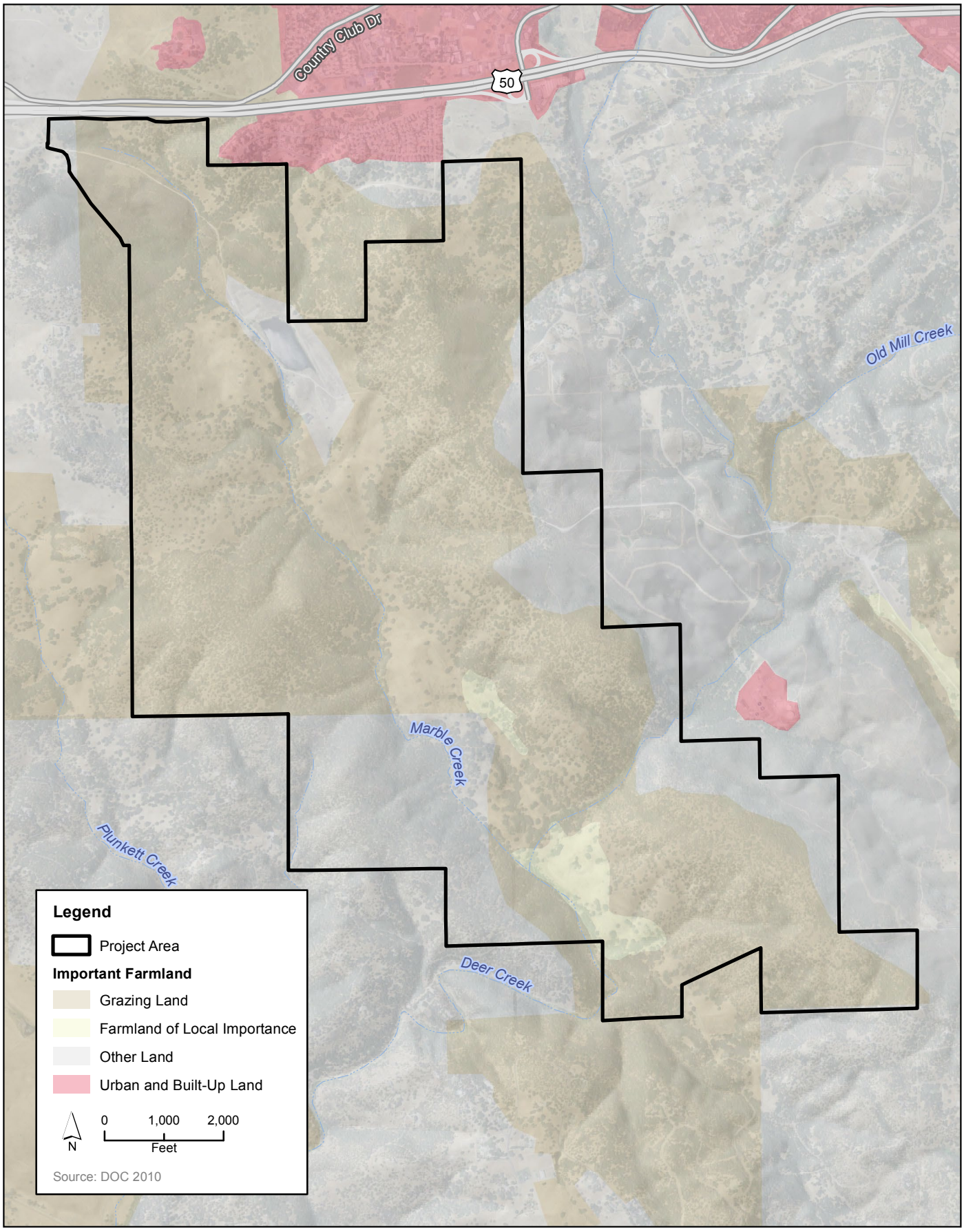

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Figure 3.9-1
Important Farmland

3.10 Noise and Vibration

This section describes the environmental setting and regulatory setting for noise in El Dorado County as it pertains to implementation of the Village of Marble Valley Specific Plan (VMVSP; proposed project). It also describes the noise impacts that would result from implementation of the project and provides mitigation for significant impacts.

3.10.1 Noise Terminology

Noise

Noise is commonly defined as unwanted sound that annoys or disturbs people and potentially causes an adverse psychological or physiological effect on human health. Because noise is an environmental pollutant that can interfere with human activities, evaluation of noise is necessary when considering the environmental impacts of a proposed project.

Sound is mechanical energy (vibration) transmitted by pressure waves over a medium such as air or water. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level is the most common descriptor used to characterize the loudness of an ambient (existing) sound level. Although the decibel (dB) scale, a logarithmic scale, is used to quantify sound intensity, it does not accurately describe how sound intensity is perceived by human hearing. The human ear is not equally sensitive to all frequencies in the entire spectrum, so noise measurements are weighted more heavily for frequencies to which humans are sensitive in a process called *A-weighting*, referred to as *A-weighted decibels* (dBA). Table 3.10-1 defines sound measurements and other terminology used in this resource section, and Table 3.10-2 summarizes typical A-weighted sound levels for different noise sources.

In general, human sound perception is such that a change in sound level of 1 dB cannot typically be perceived by the human ear, a change of 3 dB is barely noticeable, a change of 5 dB is clearly noticeable, and a change of 10 dB is perceived as doubling or halving the sound level, if sound levels increase or decrease, respectively.

Different types of measurements are used to characterize the time-varying nature of sound. These measurements include the equivalent sound level (L_{eq}), the minimum and maximum sound levels (L_{min} and L_{max}), percentile-exceeded sound levels (such as L_{10}, L_{20}), the day-night sound level (L_{dn}), and the community noise equivalent level (CNEL). L_{dn} and CNEL values differ by less than 1 dB. As a matter of practice, L_{dn} and CNEL values are considered to be equivalent and are treated as such. These measurements are defined in Table 3.10-1.

For a point source such as a stationary compressor or construction equipment, sound attenuates (lessens in intensity) based on geometry at a rate of 6 dB per doubling of distance. For a line source such as free flowing traffic on a freeway, sound attenuates at a rate of 3 dB per doubling of distance (California Department of Transportation 2013). Atmospheric conditions including wind, temperature gradients, and humidity can change how sound propagates over distance and can affect the level of sound received at a given location. The degree to which the ground surface absorbs acoustical energy also affects sound propagation. Sound that travels over an acoustically absorptive

surface such as grass attenuates at a greater rate than sound that travels over a hard surface such as pavement. The increased attenuation is typically in the range of 1–2 dB per doubling of distance. Barriers such as buildings and topography that block the line of sight between a source and receiver also increase the attenuation of sound over distance.

Table 3.10-1. Definition of Sound Measurements

Sound Measurements	Definition
Decibel (dB)	A unitless measure of sound on a logarithmic scale, which indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micro-pascals.
A-Weighted Decibel (dBA)	An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
C-Weighted Decibel (dBC)	The sound pressure level in decibels as measured using the C-weighting filter network. The C-weighting is very close to an unweighted or *flat* response. C-weighting is only used in special cases when low-frequency noise is of particular importance. A comparison of measured A- and C-weighted level gives an indication of low-frequency content.
Maximum Sound Level (L_{max})	The maximum sound level measured during the measurement period.
Minimum Sound Level (L_{min})	The minimum sound level measured during the measurement period.
Equivalent Sound Level (L_{eq})	The equivalent steady-state sound level that in a stated period of time would contain the same acoustical energy.
Percentile-Exceeded Sound Level (L_{xx})	The sound level exceeded *xx*% of a specific time period. L_{10} is the sound level exceeded 10% of the time. L_{90} is the sound level exceeded 90% of the time. L_{90} is often considered to be representative of the background noise level in a given area.
Day-Night Level (L_{dn})	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
Community Noise Equivalent Level (CNEL)	The energy average of the A-weighted sound levels occurring during a 24-hour period with 5 dB added to the A-weighted sound levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
Peak Particle Velocity (Peak Velocity or PPV)	A measurement of ground vibration defined as the maximum speed (measured in inches per second) at which a particle in the ground is moving relative to its inactive state. PPV is usually expressed in inches/second.
Frequency: Hertz (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure.

Table 3.10-2. Typical A-weighted Sound Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	—110—	Rock band
Jet flyover at 1,000 feet		
	—100—	
Gas lawnmower at 3 feet		
	—90—	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	—80—	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower, 100 feet	—70—	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	—60—	
		Large business office
Quiet urban daytime	—50—	Dishwasher in next room
Quiet urban nighttime	—40—	Theater, large conference room (background)
Quiet suburban nighttime		
	—30—	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	—20—	
		Broadcast/recording studio
	—10—	
	—0—	

Source: California Department of Transportation 2013.
dBA = A-weighted decibel

Human Response to Noise

Noise can have a range of health and other effects on people, including hearing damage, sleep interference, speech interference, performance interference, physiological responses, and annoyance. Each of these is briefly described below.

- **Hearing Damage**. A person exposed to high noise levels can suffer either gradual or traumatic hearing damage. Gradual hearing loss occurs with repeated exposure to excessive noise levels and is most commonly associated with occupational noise exposures in heavy industry or other very noisy work environments. Traumatic hearing loss is caused by sudden exposure to an extremely high noise level, such as a gunshot or explosion at very close range. The potential for noise-induced hearing loss is not generally a concern in typical community noise environments. Noise levels in neighborhoods, even in very noisy airport environs, are not loud enough to cause hearing loss.

- **Sleep Interference**. Exposure to excessive noise levels at night has been shown to cause sleep disturbance. Sleep disturbance refers not only to awakening from sleep but also to effects on the quality of sleep such as altering the pattern and stages of sleep. World Health Organization guidelines recommend noise limits of 30 dBA L_{eq} (8-hour average) for continuous noise and 45 dBA L_{max} for single sound events inside bedrooms at night to minimize sleep disturbance (Berglund et. al.).
- **Speech Interference**. Speech interference can be a problem in any situation where clear communication is desired but is often of particular concern in learning environments (such as schools) or situations where poor communication could jeopardize safety. Normal conversational speech inside homes is typically in the range of 50 to 65 dBA, and any noise in this range or louder may interfere with speech (Pearsons et. al.). As background noise levels rise, the intelligibility of speech decreases and the listener fails to recognize an increasing percentage of the words spoken. A speaker may raise his or her voice in an attempt to compensate for higher background noise levels, but this in turn can lead to vocal fatigue for the speaker.
- **Performance Interference**. Excessive noise has been found to have various detrimental effects on human performance, including information processing, concentration, accuracy, reaction times, and academic performance. Intrusive noise from individual events can also cause distraction. These effects are of obvious concern for learning and work environments.
- **Physiological Responses**. Acute noise has been shown to cause measurable physiological responses in humans, including changes in stress hormone levels, pulse rate, and blood pressure. The extent to which these responses cause harm or are signs of harm is not clearly defined, but it has been postulated that they could contribute to stress-related diseases, such as hypertension, anxiety, and heart disease. However, research indicates links between environmental noise and permanent health effects are generally weak and inconsistent. Statistically significant health risks have been found for extended exposure to very high noise levels, such as for workers exposed to high levels of industrial noise for 5 to 30 years (Berglund et. al.).
- **Annoyance**. The subjective effects of annoyance, nuisance, and dissatisfaction are possibly the most difficult to quantify, and no accurate method exists to measure these effects. This difficulty arises primarily from differences in individual sensitivity and habituation to sound, which can vary widely from person to person. What one person considers tolerable can be unbearable to another of equal hearing acuity. An important tool in estimating the likelihood of annoyance due to a new sound is by comparing it to the existing baseline or "ambient" environment to which that person has adapted. In general, the more the level or tonal (frequency) variations of a sound exceed the previously existing ambient sound level or tonal quality, the less acceptable the new sound will be.

In most cases, effects from sounds typically found in the natural environment would be limited to annoyance or interference. Physiological effects and hearing loss would be more commonly associated with human-made noise, such as in an industrial or occupational setting.

Blast Noise and Vibration

Blasting may be required as part of the proposed project. The two primary environmental effects of blasting are groundborne vibration and airblast. The following subsections discuss each of these effects and the standards commonly used to assess the impacts of blasting.

Ground Vibration

Blasting and operation of heavy construction equipment, particularly pile driving equipment and other impact devices (e.g., pavement breakers), create seismic waves that radiate along the surface of and downward into the ground. These surface waves can be felt as ground vibration. Vibration from operation of this equipment can result in effects ranging from annoyance of people to damage of structures. Variations in geology and distance result in different vibration levels containing different frequencies and displacements. In all cases, vibration amplitudes decrease with increasing distance.

Perceptible groundborne vibration is generally limited to areas within a few hundred feet of construction activities. As seismic waves travel outward from a vibration source, they cause rock and soil particles to oscillate. The actual distance that these particles move is usually only a few ten-thousandths to a few thousandths of an inch. The rate or velocity (in inches per second) at which these particles move is the commonly accepted descriptor of the vibration amplitude, referred to as the peak particle velocity (PPV).

Vibration amplitude attenuates over distance and is a complex function of how energy is imparted into the ground and the soil or rock conditions through which the vibration is traveling. The following equation is used to estimate the vibration level at a given distance for typical soil conditions (Federal Transit Administration 2018). PPV_{ref} is the reference PPV at 25 feet (Table 3.10-3).

$$PPV = PPV_{ref} \times (25/Distance)^{1.5}$$

Table 3.10-3 summarizes typical vibration levels generated by construction equipment (Federal Transit Administration 2018) at the reference distance of 25 feet and other distances as determined using the attenuation equation above.

Table 3.10-3. Vibration Source Levels for Construction Equipment

Equipment	PPV at 25 Feet	PPV at 50 Feet	PPV at 75 Feet	PPV at 100 Feet	PPV at 175 Feet
Pile driver (sonic/vibratory)	0.734	0.2595	0.1413	0.0918	0.0396
Hoe ram[a] or large bulldozer	0.089	0.0315	0.0171	0.0111	0.0048
Large bulldozer	0.089	0.0315	0.0171	0.0111	0.0048
Loaded trucks	0.076	0.0269	0.0146	0.0095	0.0041
Jackhammer	0.035	0.0124	0.0067	0.0044	0.0019
Small bulldozer	0.003	0.0011	0.0006	0.0004	0.0002

Source: Federal Transit Administration 2018.
PPV = peak particle velocity
[a] Representative of rock ripper.

Tables 3.10-4 and 3.10-5 summarize guidelines developed by the California Department of Transportation (Caltrans) for damage and annoyance potential from transient and continuous vibration that is usually associated with construction activity. Equipment or activities typical of continuous vibration include: excavation equipment, static compaction equipment, tracked vehicles, traffic on a highway, vibratory pile drivers, pile-extraction equipment, and vibratory compaction equipment. Equipment or activities typical of single-impact (transient) or low-rate repeated impact vibration include: impact pile drivers, blasting, drop balls, "pogo-stick" compactors, and crack-and-seat equipment (California Department of Transportation 2020).

Table 3.10-4. Vibration Damage Potential Threshold Criteria Guidelines

	Maximum PPV (inches/second)	
Structure and Condition	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: California Department of Transportation 2020.
Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.
PPV = peak particle velocity

Table 3.10-5. Vibration Annoyance Potential Criteria Guidelines

	Maximum PPV (inches/second)	
Human Response	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

Source: California Department of Transportation 2020.
Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.
PPV = peak particle velocity

Airblast

Energy released in an explosion creates an air overpressure (commonly called an *airblast*) in the form of a propagating wave. If the receiver is close enough to the blast, the overpressure can be felt as a pressure front as the airblast passes. The accompanying booming sound lasts for a few seconds.

The explosive charges used in mining and mass grading are typically contained in the ground, resulting in an airblast with frequency content below about 250 cycles per second (or 250 hertz [Hz]).

Because an airblast lasts for only a few seconds, use of L_{eq} (a measure of sound level averaged over a specified period of time) to describe blast noise is inappropriate. Airblast is properly measured and described as a linear peak air overpressure (i.e., an increase above atmospheric pressure) in pounds per square inch (psi). Modern blast monitoring equipment is also capable of measuring peak overpressure data in terms of unweighted dB. Decibels, as used to describe an airblast, should not be confused with or compared to dBA, which are commonly used to describe relatively steady-state noise levels. An airblast with a peak overpressure of 130 dB can be described as mildly unpleasant, whereas exposure to jet aircraft noise at a level of 130 dBA would be painful and deafening.

Human Response to Ground Vibration and Airblast

Human response to blast vibration and airblast is difficult to quantify. Vibration and airblast can be felt or heard well below the levels that produce any damage to structures. The duration and frequency of a blast event affect human response. Blast events are relatively short, typically several seconds for sequentially delayed blasts. Generally, as blast duration and vibration frequency increase, the potential for adverse human response increases. Studies have shown that a few blasts of longer duration will produce a less adverse human response than short blasts that occur more often.

Table 3.10-6 summarizes the average human response to vibration and airblast that may be anticipated when a person is at rest in quiet surroundings. If the person is engaged in any type of physical activity, the sound level required for the responses indicated are increased considerably.

Table 3.10-6. Human Response to Airblast and Ground Vibration from Blasting

Response	Ground Vibration Range PPV (inches per second)	Airblast Range (dB)
Barely to distinctly perceptible	0.02–0.10	50–70
Distinctly perceptible to strongly perceptible	0.10–0.50	70–90
Strongly perceptible to mildly unpleasant	0.50–1.00	90–120
Mildly unpleasant to distinctly unpleasant	1.00–2.00	120–140
Distinctly unpleasant to intolerable	2.00–10.00	140–170

Source: California Department of Transportation 2013.
dB = decibel.

Ground Vibration and Airblast Criteria

U.S. Bureau of Mines (USBM) *Report of Investigations 8507* (U.S. Bureau of Mines 1980a) contains blasting-level criteria that can be appropriately applied to keep ground vibration well below levels that might cause damage to neighboring structures. At low-vibration frequencies, velocities of ground vibration are restricted to 0.05 inches per second. As vibration frequency increases, higher velocities are allowed, up to a maximum of 2.00 inches per second.

Conventional noise criteria (for steady-state noise sources) and limits established for repetitive impulsive noise (such as for gun-firing ranges) do not apply to air overpressures from blasting.

USBM *Report of Investigations 8485* (U.S. Bureau of Mines 1980b) and the regulations issued more recently by the U.S. Office of Surface Mining and Reclamation Enforcement specify a maximum safe overpressure of 0.013 psi (133 dB) for impulsive airblast when recording is accomplished with equipment having a frequency range of response of at least 2–200 Hz.

3.10.2 Existing Conditions

Regulatory Setting

Federal, state, and local agencies regulate different aspects of environmental noise. Generally, the federal government sets noise standards for transportation-related noise sources closely linked to interstate commerce. These sources include aircraft, locomotives, and trucks. No federal noise standards are directly applicable to the project. The state government sets noise standards for transportation noise sources such as automobiles, light trucks, and motorcycles. Noise sources associated with industrial, commercial, and construction activities are generally subject to local control through noise ordinances and general plan policies. Local general plans identify general principles intended to guide and influence development plans. State and local noise policies and regulations applicable to the project are described below.

State

California Code

Part 2, Title 24 of the California Code of Regulations "California Noise Insulation Standards" establishes minimum noise insulation standards to protect persons within new hotels, motels, dormitories, long-term care facilities, apartment houses, and dwellings other than single-family residences. Under this regulation, interior noise levels attributable to exterior noise sources cannot exceed 45 L_{dn} in any habitable room.

Local

El Dorado County General Plan

Policies and standards for noise exposures at noise-sensitive land uses during construction are outlined in the 2004 *El Dorado County General Plan* (County General Plan) Public Health, Safety, and Noise Element (amended in August 2019 [El Dorado County 2019]). The policies relevant to this project are listed in this section. The full text of these policies can be found in Appendix B, *Consistency with El Dorado County General Plan Policies*, which provides an analysis of the project's consistency with the County General Plan policies as required under the State California Environmental Quality Act (CEQA) Guidelines Section 15125.

- Goal 6.5, *Acceptable Noise Levels*, includes Objective 6.5.1, *Protection of Noise-Sensitive Development*, and Policies 6.5.1.1 and 6.5.1.2, which address standards for environmental review; Policies 6.5.1.3, 6.5.1.5, 6.5.1.6, and 6.5.1.8, which address siting, site planning, and project design; Policies 6.5.1.7, 6.5.1.9, 6.5.1.10, 6.5.1.12, and 6.5.1.13, which address impacts and mitigation; and Policy 6.5.1.11, which addresses construction noise.

The construction noise standards for rural regions outlined in County General Plan Table 6-5 and summarized in Table 3.10-7 in this document, would be applicable to the project because the project area is in a rural area that is mostly undeveloped and is not located in either a Community Region or

rural center. There are some residences near the boundary of the project area, however, so the residential noise limits in a Rural Region would be most applicable to project construction noise. However, Policy 6.5.1.11 of the General Plan states that the noise standards outlined in these tables will not apply to project construction as long as the construction occurs between 7 a.m. and 7 p.m. Thus, construction noise is generally exempt from the noise standards if it occurs within the specified hours. The noise standards, shown in Table 3.10-7, are discussed here as a guideline for assessing the impacts of the proposed project's construction activities. Because proposed project construction would take several years, it is atypical from normal, shorter-duration construction projects; therefore, this analysis assesses the project in detail and does not consider the project to be exempt from the construction noise standards by default.

Table 3.10-7. Maximum Allowable Noise Exposure for Construction Noise in Rural Regions and Adopted Plan Areas

		Noise Level (dB)	
Land Use Designation	Time Period	L_{eq}	L_{max}
All Residential (MFR, HDR, MDR)	7 a.m.–7 p.m.	50	60
	7 p.m.–10 p.m.	45	55
	10 p.m.–7 a.m.	40	50
Commercial, Recreation, and Public Facilities (C, TR, PF)	7 a.m.–7 p.m.	65	75
	7 p.m.–7 a.m.	60	70
Rural Land, Natural Resources, Open Space, and Agricultural Lands (RR, NR, OS, AL)	7 a.m.–7 p.m.	65	75
	7 p.m.–7 a.m.	60	70

Source: El Dorado County 2019: Table 6-5.

AL = agricultural lands
C = commercial
dB = decibel
HDR = high-density residential
L_{eq} = equivalent sound level
L_{max} = maximum sound level
MDR = medium-density residential
MFR = multifamily residential
NR = natural resources
OS = open space
PF = public facilities
RR = rural residential
TR = tourist recreational

Operational noise standards that would be applicable to the project are outlined in County General Plan Tables 6-1 and 6-2 for transportation and non-transportation noise sources, respectively. These tables are presented in this document as Tables 3.10-8 and 3.10-9.

Table 3.10-8. Maximum Allowable Noise Exposure for Transportation Noise Sources

Land Use	Outdoor Activity Areas[a] L_{dn}/CNEL, dB	Interior Spaces	
		L_{dn}/CNEL, dB	L_{eq}, dB[b]
Residential	60[c]	45	–
Transient lodging	60[c]	45	–
Hospitals, nursing homes	60[c]	45	–
Theaters, auditoriums, music halls	–	–	35
Churches, meeting halls, schools	60[c]	–	40
Office buildings	–	–	45
Libraries, museums	–	–	45
Playgrounds, neighborhood parks	70	–	–

Source: El Dorado County 2019: Table 6-1.

CNEL = community noise equivalent level
dB = decibel
L_{dn} = day-night sound level
L_{eq} = equivalent sound level.

[a] In Communities and Rural Centers, where the location of outdoor activity areas is not clearly defined, the exterior noise-level standard shall be applied to the property line of the receiving land use. For residential uses with front yards facing the identified noise source, an exterior noise-level criterion of 65 dB L_{dn} shall be applied at the building facade, in addition to a 60 dB L_{dn} criterion at the outdoor activity area. In Rural Regions, an exterior noise-level criterion of 60 dB L_{dn} shall be applied at a 100-foot radius from the residence unless it is within Platted Lands where the underlying land use designation is consistent with Community Region densities in which case the 65 dB L_{dn} may apply. The 100-foot radius applies to properties that are 5 acres and larger; the balance will fall under the property line requirement.

[b] As determined for a typical worst-case hour during periods of use

[c] Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn}/CNEL may be allowed provided that available exterior noise-level reduction measures have been implemented and interior noise levels are in compliance with this table.

Table 3.10-9. Maximum Allowable Noise Exposure for Non-Transportation Noise Sources

	Daytime 7 a.m.–7 p.m.		Evening 7 p.m.–10 p.m.		Night 10 p.m.–7 a.m.	
Land Use	Community	Rural	Community	Rural	Community	Rural
Hourly L_{eq}, dB	55	50	50	45	45	40
Maximum level, dB	70	60	60	55	55	50

Source: El Dorado County 2019: Table 6-2.

Notes: Each of the noise levels specified above shall be lowered by 5 dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise-level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

The County can impose noise-level standards which are up to 5 dB less than those specified above based upon determination of existing low ambient noise levels in the vicinity of the project site.

In Community areas the exterior noise-level standard shall be applied to the property line of the receiving property. In Rural Areas the exterior noise-level standard shall be applied at a point 100 feet away from the residence. The above standards shall be measured only on property containing a noise-sensitive land use as defined in Objective 6.5.1. This measurement standard may be amended to provide for measurement at the boundary of a recorded noise easement between all affected property owners and approved by the County.

For the purposes of the Noise Element, transportation noise sources are defined as traffic on public roadways, railroad line operations and aircraft in flight. Control of noise from these sources is preempted by Federal and State regulations. Control of noise from facilities of regulated public facilities is preempted by California Public Utilities Commission regulations. All other noise sources are subject to local regulations. Non-transportation noise sources may include industrial operations; outdoor recreation facilities; heating, ventilation, and air-conditioning units; schools; hospitals; commercial land uses; other outdoor land use; etc.

dB = decibel
L_{eq} = equivalent sound level

El Dorado County Ordinance Code

Chapter 9.16, Noise, of the El Dorado County Ordinance Code, defines and prohibits "loud and raucous noise." Pursuant to the code, the production of loud and raucous noise that unreasonably interferes with the peace and quiet of private property is prohibited.

Environmental Setting

This section discusses existing land uses and the existing noise conditions in the project vicinity.

Surrounding Land Uses

Locations where people reside or where the presence of noise could adversely affect the use of the land are generally considered sensitive land uses. Typical sensitive receptors include residents, school children, hospital patients, and the elderly.

While the project area itself consists of undeveloped, rural land, there are isolated single-family residences along the western, southern, and eastern perimeters. North of the project area is a community of single-family residences along Crazy Horse Road. Other sensitive land uses near the project area include: Choices Transitional Services, a supported living facility for developmentally disabled persons (0.16 mile from project boundary); the Faith Episcopal Church (0.23 mile from project boundary); the Holy Trinity Church and School (0.20 mile from the project boundary); Blue Oak Elementary School (0.38 mile from the project boundary); and Camerado Spring Middle School (0.34 mile from the project boundary), all of which are north of the project area and, with the exception of Choices Transitional Services, north of U.S. Highway (US) 50.

The El Dorado Irrigation District Deer Creek Wastewater Treatment Plant (WWTP) is adjacent to the southeastern part of project area and may generate noise during the wastewater treatment process. However, the part of the project area adjacent to the WWTP will not contain any sensitive land uses, because it will be uninhabited open space area. The closest proposed residential area is 2,000 feet west of the treatment plant.

Existing Noise Environment

Short-Term Noise Monitoring

In order to characterize the existing noise environment in the project study area, short-term measurements of 15 minutes in duration were conducted in the vicinity of the project area. ICF selected the noise monitoring sites to document existing ambient noise levels at representative locations in the project area where most of the new noise-sensitive land uses would be located. Locations were identified throughout the project area, including locations near US 50, Deer Creek Road, the proposed school site, and in isolated portions of the project area, to accurately capture the range of existing noise levels.

Short-term monitoring was conducted on Tuesday, January 14, 2014, and Friday, February 21, 2014, using a Larson-Davis Model 812 Precision Type 1 sound level meter (serial number 0239). The meter was positioned on a tripod at a microphone height of 1.5 meters (5 feet) above the ground. Sound levels and audible noise sources were recorded on field data sheets at each position. The short-term measurement positions are indicated as ST-1 through ST-4 in Figure 3.10-1.

Measurements were conducted at four locations throughout the project area on January 14, 2014. Local traffic noise was the dominant noise source observed during the measurement periods. Measured L_{eq} noise levels for the measurement periods at each site ranged from 38.7 to 50.9 dBA. Temperature, wind speed, and humidity were recorded manually during the short-term monitoring session using a Kestrel 3000 portable weather station. On January 14, skies were clear during measurements at all sites. Temperatures were in the range of 57–69 degrees Fahrenheit (°F), with relative humidity in the range of 38–57%. Relative humidity values were at the higher end of the range in the morning and the lower end of the range in the afternoons. Wind speeds were less than 1 mile per hour during all measurements.

Table 3.10-10 summarizes the short-term sound level measurements. The noise levels measured in 2014 represent a conservative assessment of ambient noise, because, if they have changed at all, noise levels would have increased since 2014 due to increased development in the county and the corresponding traffic. Consequently, using noise levels from 2014 would be more protective of the existing noise environment than using noise levels from a later date.

Table 3.10-10. Summary of Short-Term Sound Level Measurements, January 14, 2014 (ambient noise levels)

Receivers	Location	Time	Duration (minutes)	Measured Sound Level dBA L_{eq}
ST-1	0.75 Mile West of Deer Creek Road	10:53	15	39.4
ST-2	West of Marble Valley Lake	09:58	15	39.0
ST-3	South of Deer Creek Road	12:22	15	38.7
ST-4	North of existing Marble Valley Road	9:03	15	50.9

Note: Measurements were conducted by ICF staff.
dBA = A-weighted decibel
L_{eq} = equivalent sound level

Traffic Noise Modeling

Traffic noise in the project area vicinity was modeled using PM peak-hour traffic volumes and the Federal Highway Administration's (FHWA) Traffic Noise Model (Federal Highway Administration 2011). Based on 24-hour traffic patterns on both surface roads and US 50 it was determined that L_{dn} values from traffic are within 1 dB of peak hour L_{eq} values. Accordingly, reported L_{dn} values are based directly on the calculated peak hour L_{eq} values. Table 3.10-11 presents L_{dn} values at 50 feet from the roadway center, along with the distances to the 60 L_{dn} contour line for all roadway segments in the project area. The contour line was calculated based on an attenuation rate of 4.5 dBA per doubling of distance, which is appropriate for line source traffic and project site conditions. Table 3.10-11 also shows the noise increase increment that would result in a significant impact as indicated in County General Plan Policy 6.5.1.12.

Table 3.10-11. Existing Traffic Noise on Roadway Segments in the Project Vicinity

Roadway	Segment Location	L_{dn} (dBA) at 50 Feet from Roadway Centerline	Distance to 60 L_{dn} Contour (feet)	Significant Noise Increase Increment (dBA)[a]
Bass Lake Road	Green Valley Road to Bridlewood Drive	63.6	87	3
	Bridlewood Drive to Serrano Pkwy	65.6	118	1.5
	Serrano Pkwy to Hollow Oak Drive	68.9	197	1.5
	Hollow Oak Drive to Country Club Drive	69.2	206	1.5
	Country Club Drive to US 50	69.8	226	1.5
Cambridge Road	Green Valley Road to Oxford Road	61.2	60	3
	Oxford Road to Knollwood Drive	64.0	93	3
	Knollwood Drive to Country Club Drive	63.9	91	3
	County Club Drive to Merrychase Drive	65.2	111	1.5
	Merrychase Drive to Flying C Road	60.1	51	3
Flying C Road	Crazy Horse Road to Deer Creek Road	51.9	14	5
Cameron Park Drive	Green Valley Road to Alhambra Drive	67.2	150	1.5
	Alhambra Drive to Oxford Road	69.7	223	1.5
	Oxford Road to Hacienda Drive	70.3	241	1.5

Roadway	Segment Location	L_{dn} (dBA) at 50 Feet from Roadway Centerline	Distance to 60 L_{dn} Contour (feet)	Significant Noise Increase Increment (dBA)[a]
	Hacienda Drive to US 50	70.3	241	1.5
Country Club Drive	Bass Lake Road to Merry Chase Drive	63.1	81	3
	Merrychase Drive to Knollwood Drive	60.0	50	3
	Knollwood Drive to Cambridge Road	59.7	48	5
	Cambridge Road to Royal Drive	59.9	50	5
	Royal Drive to Cameron Park Drive	60.8	57	3
Durock Road	US 50 to Business Drive	65.6	119	1.5
	Business Drive to S. Shingle Road	64.1	94	3
Existing Marble Valley Road[b]	East of Marble Ridge Road	69.7	NA	1.5
US 50	West of Latrobe/El Dorado Hills	82.0	1,458	1.5
	Between EDH and Silva Valley Parkway	80.8	1,226	1.5
	Between Silva Valley Parkway and Bass Lake Road	80.9	1,239	1.5
	Between Bass Lake Road and Cambridge Road	80.5	1,155	1.5
	East of Cambridge Road	80.5	1,157	1.5

Source: ICF and Federal Highway Administration Traffic Noise Model 2.5 Lookup Tables.
dBA = A-weighted decibels
EDH = El Dorado Hills

[a] Noise increase increments for existing conditions, which would be considered significant if the project's traffic noise increase were to meet or exceed these values, based on County General Plan Policy 6.5.1.12.

[b] Noise at this location is based on freeway traffic on US 50. Although Marble Valley Road east of Marble Ridge Road has low existing vehicle traffic volumes, the ambient noise environment at this location is dominated by traffic noise from US 50.

Mather Field Aircraft Operations Overflight Noise

Mather Airport is approximately 15 miles southwest of the project area. The project site is not within the planning area for the *Mather Airport Land Use Compatibility Plan* (ESA 2022), nor is it within the 60 dB CNEL contour for airport operations. The main cargo jet aircraft arrival approach path into Mather Field from the east passes over El Dorado Hills north of US 50 and follows a route implemented by the Federal Aviation Administration in 2012 ("AMRVR ONE STAR") (ESA Airports 2014). This route is approximately 4 miles north of the project area.

Noise-level data were determined as part of the *Mather Airport Master Plan* planning process for use in aircraft noise modeling and included eight locations in eastern Sacramento County and four locations in western El Dorado County along flight paths. There were two locations in El Dorado Hills and two locations in Rescue. The closest to the project site was at Oak Ridge High School, which is located approximately 5 miles northwest of the project site. The second location was at a residence at 354 Glen Ridge Court, approximately 3 miles northwest of the project site. The results of the measurements indicate that noise levels from aircraft on final approach in the westbound

direction can be distinctly audible in the immediate El Dorado Hills area north of US 50 and east and west of El Dorado Hills Boulevard (Sacramento County 2014).

Some arriving jet aircraft also fly over areas south of US 50, including the project area, as well as from other directions. Of all arrivals into the airport, only 2.85% of daytime arrivals, 1.94% of evening arrivals, and 18.44% of nighttime arrivals follow routes over the project area, based on statistical analysis of flight track use. As part of the noise modeling studies for the *Mather Airport Master Plan* planning process, it was assumed the AMRVR ONE STAR route would transition from 50 percent of calendar year 2012 to 100% of the time in the future scenarios (ESA Airports 2014). That is, the frequency of arrivals over the project area would be expected to decrease in the future.

Cameron Airpark

The northeast corner of the project area is located approximately 2 miles from the Cameron Airpark public use airport. Locations within the CNEL 55 dB or higher noise contours are in the High Noise/Risk Zone, according to the *Cameron Airpark Airport Land Use Compatibility Plan* (El Dorado County 2012). The project area is not located within the CNEL 55 dB contours of the airport. In addition, the project area is located outside of the airport influence area, as defined in the compatibility plan (El Dorado County 2012). Because of these considerations, noise from the airport would not affect land uses in the project area.

3.10.3 Environmental Impacts

Methods of Analysis

The noise impacts that would affect new land uses at the project site were evaluated based on the *California Building Industry Association [CBIA] v. Bay Area Air Quality Management District*, Supreme Court Case No. S213478 (CBIA v. BAAQMD) court case, which established that the effects of the environment on a project are not considered impacts unless the project exacerbates the hazard or, in this case, worsens the noise effect. Where the project would exacerbate existing noise effects, the impacts of the environment on new project land uses are analyzed.

Short-term noise-level measurements were taken at representative locations within the project area where new noise-sensitive land uses would be located to document existing ambient noise levels (Table 3.10-10 and Figure 3.10-1). Traffic noise in the project vicinity was modeled using PM peak-hour traffic volumes from the project's transportation impact assessment (Appendix K, *Transportation Impact Analysis*) and the FHWA Traffic Noise Model (Federal Highway Administration 2011). Existing plus project and near-term plus project conditions were modeled to determine the project's impact with respect to traffic noise relative to existing conditions and near-term future conditions in 2027.

Noise levels associated with project-related construction activities were evaluated by summing the noise levels of the three loudest pieces of equipment that would operate on the project site (i.e., paving equipment, grader, and scraper). The noise level for each of the loudest equipment types was determined using standard construction equipment data from FHWA. The resulting noise levels were then compared to the significance thresholds.

Vibration from construction equipment was evaluated using methods recommended by Caltrans (California Department of Transportation 2013) and the Federal Transit Administration (Federal Transit Administration 2018) using source levels and criteria in Tables 3.10-3, 3.10-4, and 3.10-5.

Airblast and vibration generated by blasting was evaluated using methods recommended by Caltrans (California Department of Transportation 2013) and criteria specified by USBM (U.S. Bureau of Mines 1980a, 1980b).

Noise from stationary sources includes noise generated by residential activity and commercial and other non-residential uses. This would be primarily limited to noise generated by heating, ventilation, and air conditioning (HVAC). Specific details on HVAC equipment to be used have not been determined. However, information on typical equipment was used to evaluate potential impacts.

Events at the proposed Monolith Event Center could also be a source of noise. Specific details on the type of activities and where they would be located have not been determined. Information on typical active park uses was used to assess impacts.

Aircraft overflight noise has been evaluated based on information in the 2004 County General Plan Environmental Impact Report (EIR) (El Dorado County 2003) and data developed for the *Mather Airport Master Plan*. For Mather Airport, potential noise issues were also considered in the context of the General Plan EIR and the California Supreme Court decision in December 2015 in CBIA v. BAAQMD.

Mather Airport Noise

As stated under *Environmental Setting* in Section 3.10.2, *Existing Conditions*, the project area is 15 miles northeast of Mather Airport. It is not within the planning area of the *Mather Airport Land Use Compatibility Plan* (ESA 2022), nor is it within the 60 dB CNEL contour for airport operations.

The 2004 County General Plan EIR (El Dorado County 2003) stated that new development under the County General Plan could be subject to aircraft noise and that development within El Dorado Hills is in an area that is already considered to be affected by single event levels, or sound exposure levels (SELs), because of aircraft overflights associated with the operation of Mather Airport in Sacramento County. The County General Plan EIR concluded this impact would be significant and unavoidable because, as the 2004 General Plan EIR states, "exposure of noise-sensitive receptors to aircraft noise levels, including SELs, could still occur" (El Dorado County 2003:5.10-41).

However, since certification of the General Plan EIR, as described in more detail in Section 3.2, *Air Quality*, the California Supreme Court established in CBIA v. BAAQMD that agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents.

Implementation of the VMVSP would not increase the number or frequency of aircraft arrivals at Mather Airport or result in land use changes that would affect arrival routes such that aircraft-related noise levels would increase or change noise contours at any location. Further, as described under *Environmental Setting* in Section 3.10.2, *Existing Conditions*, the project area, unlike the El Dorado Hills area north of US 50, is south of US 50 and not in the primary arrival flight track into Mather Airport. For these reasons, evaluation of the potential for Mather Airport operations noise levels to result in significant impacts on future occupants of the project area is not required for purposes of this Draft EIR.

Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the project would be considered to have a significant effect if it would result in any of the conditions listed below.

- 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 County General Plan or noise ordinance as a result of construction activities.
- Generation of excessive groundborne vibration or groundborne noise levels.
- For a project located within the vicinity of a private airstrip or an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

Impacts and Mitigation Measures

Impact NOI-1a: 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 County General Plan or noise ordinance as a result of construction activities (significant and unavoidable)

Construction of the project would require the equipment shown in Table 3.10-12. For each equipment type in Table 3.10-12, the corresponding acoustical usage factor (the percentage of time the equipment is typically in operation) and L_{max} value at 50 feet are also presented. Construction would occur between 7 a.m. and 7 p.m., Monday through Friday, and between 8 a.m. and 5 p.m. on weekends and federally recognized holidays.

Table 3.10-12. Typical Construction Noise Emission Levels

Equipment	Acoustical Use Factor	L_{max} at 50 Feet	Impact Device?
Air compressor	40%	78	No
Backhoe	40%	78	No
Concrete mixer truck	40%	79	No
Crane	16%	81	No
Dozer	40%	82	No
Excavator	40%	81	No
Generator set	50%	81	No
Grader[a]	40%	85	No
Loader	40%	79	No
Paver	50%	77	No
Paving equipment	20%	90	No
Plate compactor	20%	83	No
Pump	50%	81	No
Roller	20%	80	No
Scraper	40%	84	No
Tractor	40%	84	No
Truck	40%	75	No
Welder	40%	74	No

Source: Federal Highway Administration 2006.
L_{eq} = equivalent sound level
L_{max} = maximum sound level
[a] Representative of rock ripper.

As discussed in *Methods of Analysis*, the reasonable worst-case noise level resulting from construction of the project was evaluated by summing the noise levels of the three loudest pieces of equipment that would likely operate at the same time (paving equipment, grader, and scraper) using the standard construction equipment data shown in Table 3.10-12. The combined L_{max} and combined L_{eq} were determined to be 92 dBA and 86 dBA at 50 feet, respectively. This represents a conservative scenario as it assumes that the three loudest equipment pieces would be operating in the same location simultaneously, which would be an unlikely event.

Table 3.10-13 shows the estimated sound levels from construction activities as a function of distance, based on calculated point-source attenuation over "soft" (i.e., acoustically absorptive) ground. These construction activities would generate new noise sources that currently do not exist.

Table 3.10-13. Calculated Construction Noise Emission Levels

Distance between Source and Receiver (feet)	Geometric Attenuation (dB)	Ground Effect Attenuation (dB)	Calculated L_{max} Sound Level (dBA)	Calculated L_{eq} Sound Level (dBA)
50	0	0.0	92	86
100	-6	-1.5	84	79
200	-12	-3.0	77	71
300	-16	-3.9	72	67
400	-18	-4.5	69	64
500	-20	-5.0	67	61
600	-22	-5.4	65	59
700	-23	-5.7	63	58
800	-24	-6.0	62	56
900	-25	-6.3	61	55
950	***-26***	***-6.4***	***60***	*54*
1,200	-28	-6.9	57	52
1,400	***-29***	***-7.2***	56	***50***
1,600	-30	-7.5	54	49
1,800	-31	-7.8	53	47
2,000	-32	-8.0	52	46
2,500	-34	-8.5	49	44
3,000	-36	-8.9	47	42

Note: Numbers in bold italic indicate construction noise from the project would exceed the County General Plan thresholds for equivalent sound level (L_{eq}) and maximum sound level (L_{max}) (see Table 3.10-9) for daytime hours at receptors within 1,400 feet and 950 feet of construction.
dB = decibel
dBA = A-weighted decibel

As discussed under *Regulatory Setting* in Section 3.10.2, *Existing Conditions*, construction between 7 a.m. and 7 p.m. is generally exempt from the construction noise standards. However, because of the proposed project's multi-year construction schedule, construction activities are examined in detail and are not considered to be exempt by default. Comparing the noise levels in Table 3.10-13 to the County General Plan non-transportation noise standards for residential land uses shows that construction noise would exceed the L_{eq} and L_{max} thresholds (50 dB and 60 dB) for daytime hours at existing offsite receptors within 1,400 feet and 950 feet of the construction equipment, respectively. Consequently, sensitive land uses within 1,400 feet of the project area could be exposed to noise levels that exceed El Dorado County's (County) noise standards (County General Plan Policy 6.5.1.11, Table 6-3). Additionally, project construction activities have the potential to result in an increase that, in addition to being above the noise exposure limits, would result in a substantial increase on its own. As shown in Table 3.10-10, existing noise levels in the project vicinity range from 39 to 51 dBA L_{eq}. and thus, the increase in noise from construction would be well above these noise levels. Although the County does not have a threshold to evaluate the increase in noise from construction activities, existing sensitive receptors would nevertheless experience a noticeable and substantial increase in ambient noise levels during the construction activities.

Sensitive land uses include the western and eastern areas in the Cambridge Oaks neighborhood and an isolated residence off of Beasley Drive on the northern side of the project area. Other sensitive land uses within 1,400 feet of the project area include isolated residences on the western boundary of the project area along Marble Ridge Road and Diablo Trail; isolated residences on the southern boundary of the project area along China Diggins Road and Ryan Ranch Road; and isolated residences on the eastern boundary of the project area along Flying C Court, Native Lane, Dove Meadow Court, and Flying C Road. Because the proposed project would be phased over several years, there is the potential for construction to occur next to newly occupied residences in the project area. Construction could be as close as 50 to 100 feet from the new residences; these residences could experience even greater noise levels than those identified for existing offsite receptors. Thus, this impact would be significant. Given the subjective nature of the human response to noise, it is not possible to conclusively determine whether health effects resulting from construction noise could occur. However, it is possible that people residing near the Project site could experience health effects resulting from the noise levels that exceed the County's noise standards and that would represent a large increase relative to ambient noise levels. The potential health effects that could occur are described above in *Human Response to Noise*. The effects more likely to occur are typically considered less serious (e.g. annoyance), while other effects are less likely to occur and would be more serious (e.g. hearing damage).

The project area is also bounded on the east by the proposed Lime Rock Valley Specific Plan (LRVSP), which has not yet been approved and is undeveloped; therefore, there are currently no existing sensitive land uses. If LRVSP is developed prior to VMVSP, however, there would be sensitive land uses (i.e., residences within the LRVSP) that could be affected by construction noise. Low- and medium-density residential uses on the western edge of the LRVSP could be located adjacent to construction activities occurring in the eastern portion of the VMVSP. It is not likely that LRVSP residences would be located closer than 50 feet from active construction activities for the VMVSP; thus, 50 feet represents a worst-case scenario distance for both existing residences described above and future potential residences that would be part of the LRVSP.

Implementing noise-reducing construction practices, as specified in Mitigation Measure NOI-1a, would reduce noise levels affecting surrounding existing sensitive land uses, including residences constructed as part of the project that have the potential to be affected by subsequent construction activities, by limiting construction hours to the daytime hours to prevent the exceedance of the more stringent nighttime noise standards. In addition, locating equipment away from sensitive land uses, requiring sound-control devices on equipment, utilizing noise-reducing enclosures, and other practices would be expected to reduce the noise affecting sensitive land uses by 5–10 dB. Depending on the distance between construction and the receptor, this could reduce noise to levels below the County daytime noise standards but may not be feasible at all locations. Additionally, even if noise is below the County daytime noise standard, the increase in noise at existing sensitive land uses would likely be noticeable and substantial even with the noise-reducing measures, especially at distances as close as 50 feet. With mitigation, the health effects from noise exposure are less likely to occur, such as sleep interference, because construction would be limited to the daytime hours. Nevertheless, it is not possible to conclusively determine that no health effects would occur, because of the subjective nature of the human response to noise. Given the noise levels with mitigation and the fact that construction would occur over several years in proximity to existing and new residences, the construction noise impact is considered significant and unavoidable.

Mitigation Measure NOI-1a: Employ noise-reducing construction practices

The construction contractor shall employ noise-reducing construction practices so that construction noise does not exceed construction noise standards specified in County General Plan Table 6-5 (Table 3.10-7) to the extent feasible.

Measures that can be used to limit noise include, but are not limited to, those listed below.

- Prohibiting noise-generating construction activity between 7:00 p.m. and 7:00 a.m. on weekdays and 5:00 p.m. to 8:00 a.m. on weekends and federally recognized holidays.
- Locating equipment as far as feasible from noise-sensitive uses.
- Requiring that all construction equipment powered by gasoline or diesel engines have sound-control devices that are at least as effective as those originally provided by the manufacturer and that all equipment be operated and maintained to minimize noise generation.
- Not idling inactive construction equipment for prolonged periods (i.e., more than 2 minutes).
- Prohibiting gasoline or diesel engines from having unmuffled exhaust.
- Scheduling construction activities and material hauling that may affect traffic flow to off-peak hours and using routes that would affect the fewest number of people.
- Using noise-reducing enclosures around noise-generating equipment (minimum 15 dB insertion loss).
- Constructing temporary barriers between noise sources and noise-sensitive land uses or taking advantage of existing barrier features (terrain, structures) to block sound transmission.

Prior to the issuance of grading and building permits, the project applicant shall submit to the County a list of measures for controlling noise and for responding to and tracking complaints pertaining to construction noise. These measures shall include the following.

- A procedure and phone numbers for notifying the County and the Sheriff's Department of complaints (during regular construction hours and off-hours).
- Signs posted at the boundaries of the construction area describing noise complaint procedures and a complaint hotline number to be answered at all times during construction.
- Designation of an onsite construction complaint and enforcement manager for the project. The complaint and enforcement manager would be responsible for following up with complainants, ascertaining whether there is a violation of the County's construction noise standards associated with a specific complaint through noise monitoring, and ceasing construction work in the local area where the complaint applies until the noise issue has been rectified.

Impact NOI-1b: 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 County General Plan or noise ordinance from project-generated traffic within the VMVSP project area (significant and unavoidable)

Traffic-Related Noise at Project Uses

During the operational phase of the project, new noise-sensitive land uses within the project area could be exposed to noise generated by project traffic. Based on the CBIA v. BAAQMD court case described above, an analysis that evaluates the impacts of the environment on new land uses constructed by a project is not typically required, unless the project would exacerbate the existing environmental effect. Because the project would add to traffic volumes on existing roadways and would add new land uses, it has the potential to exacerbate existing environmental noise effects. As such, a determination of the significance of impacts on new project uses is made. Traffic noise levels generated under the existing plus project condition and near-term plus project condition are summarized in Table 3.10-14.

The County's noise exposure limits for transportation noise have been adopted to prevent noise-sensitive land uses from being located near loud transportation corridors. As such, this sub-section focuses on the exposure of new noise-sensitive land uses to transportation noise relative to the noise exposure limits from the County's General Plan (from Table 3.10-8), rather than the increase in traffic noise levels relative to existing conditions. Future noise-sensitive land uses are not part of the existing conditions, so the increase in ambient noise from project implementation is not relevant to those sensitive receptors, because future receptors will only experience the future environmental conditions with the project and not existing conditions. *Traffic-Related Noise at Offsite Locations*, below, evaluates the increase in traffic noise from project implementation that existing sensitive land uses would experience.

The L_{dn} values in Table 3.10-14 were determined by using peak-hour traffic volumes on County roads and US 50. Traffic volumes from the PM peak hour were used because the volumes were generally higher than the AM peak-hour volumes. The FHWA Traffic Noise Model 2.5 Lookup Tables were used in conjunction with the traffic volumes to determine L_{eq} values at 50 feet from the centerline of each roadway segment. As discussed above, peak-hour traffic L_{eq} noise levels represent L_{dn} noise levels based on 24-hour traffic patterns in the project area. Table 3.10-14 presents L_{dn} values associated with existing plus project and near-term plus project conditions along with distances to the 60 L_{dn} contour.

The data for existing plus project and near-term plus project conditions in Table 3.10-14 indicate that proposed sensitive land uses within a maximum of about 441 feet of Marble Valley Parkway (residences, public schools, and parks), within 345 feet of Marble Lake Boulevard and Lime Rock Valley Road (residences, parks), and within about 1,600 feet of US 50 (a public school) could be exposed to exterior traffic noise that exceeds the County's compatibility standard of 60 L_{dn} for residential and school uses and 70 L_{dn} for playground and park uses. Assuming nominal building shell attenuation of 15 dB, interior noise levels at locations along these roadways could exceed the 45 L_{dn} interior noise standard. The following are proposed sensitive land use areas that could be exposed to existing plus project traffic noise exceeding County compatibility standards (Figure 3.10-2).

- South of Marble Valley Parkway, along Marble Lake Boulevard.
- Areas adjacent to the north and south sides of Lime Rock Valley Road, east of Marble Lake Boulevard.
- South of US 50, extending just south of Marble Valley Parkway and Deer Creek Road.

Table 3.10-14. Existing Plus Project and Near-Term Plus Project Traffic Noise on Roadway Segments in the Project Vicinity

		Existing + Project		Near-Term + Project	
Roadway	Segment Location	L_{dn} (dBA) at 50 Feet from Roadway Centerline	Distance to 60 L_{dn} Contour (feet)	L_{dn} (dBA) at 50 Feet from Roadway Centerline	Distance to 60 L_{dn} Contour (feet)
Bass Lake Road	Green Valley Road to Bridlewood Drive	63.8	90	64.4	99
	Bridlewood Drive to Serrano Pkwy	66.2	130	66.5	137
	Serrano Pkwy to Hollow Oak Drive	69.9	230	69.0	199
	Hollow Oak Drive to Country Club Drive	70.2	239	70.5	250
	Country Club Drive to US 50	71.2	280	70.6	253
Cambridge Road	Green Valley Road to Oxford Road	61.5	63	61.9	67
	Oxford Road to Knollwood Drive	64.4	98	64.9	106
	Knollwood Drive to Country Club Drive	64.8	104	65.1	109
	County Club Drive to Merrychase Drive	65.7	120	67.3	345
	Merrychase Drive to Flying C Road	64.8	105	66.0	153
Flying C Road	Crazy Horse Road to Deer Creek Road	63.3	83	65.3	125
Cameron Park Drive	Green Valley Road to Alhambra Drive	67.2	151	67.7	164
	Alhambra Drive to Oxford Road	69.8	225	70.2	238
	Oxford Road to Hacienda Drive	70.3	242	70.5	252
	Hacienda Drive to US 50	70.4	247	70.9	265
Country Club Drive	Bass Lake to Merry Chase Drive	64.5	100	64.7	103
	Merrychase Drive to Knollwood Drive	61.3	61	61.5	63
	Knollwood Drive to Cambridge Road	60.7	55	61.4	62
	Cambridge Road to Royal Drive	60.3	52	61.6	64
	Royal Drive to Cameron Park Drive	60.8	56	62.3	71
Durock Road	US 50 to Business Drive	65.8	122	66.8	142
	Business Drive to S. Shingle Road	64.2	95	65.1	110
Marble Valley Parkway	East of Marble Ridge Road	75.5	540	74.0	429
Marble Lake Blvd	South of Marble Valley Pkwy[a]	72.6	345	72.6	345
Lime Rock Valley Road	East of Marble Lake Blvd[a]	72.6	345	72.6	345
US 50	West of Latrobe/El Dorado Hills	82.6	1,612	81.9	1,449
	Between EDH and Silva Valley Pkwy	81.9	1,451	81.4	1,331
	Between Silva Valley Pkwy and Bass Lake Road	82.1	1,487	81.8	1,422
	Between Bass Lake Road and Cambridge Road	81.1	1,274	80.8	1,216
	East of Cambridge Road	81.0	1,265	81.1	1,268

Roadway	Segment Location	Existing + Project: L_{dn} (dBA) at 50 Feet from Roadway Centerline	Existing + Project: Distance to 60 L_{dn} Contour (feet)	Near-Term + Project: L_{dn} (dBA) at 50 Feet from Roadway Centerline	Near-Term + Project: Distance to 60 L_{dn} Contour (feet)

Source: ICF and Federal Highway Administration Traffic Noise Model 2.5 Lookup Tables.

Blvd = Boulevard
dBA = A-weighted decibels
EDH = El Dorado Hills
L_{dn} = day-night sound level
Pkwy = Parkway
US 50 = U.S. Highway 50

[a] Traffic noise for these future segments was estimated based on the expected project-generated trips in the PM peak hour (3,355) and the expected trip distribution for the Marble Valley Parkway segment (81%) from the traffic impact analysis for the proposed project (Appendix K, *Transportation Impact Analysis*).

The noise impact associated with the exposure of new residences and other sensitive land uses (i.e., schools) within the project area would, therefore, be significant. Mitigation Measure NOI-1b includes a variety of potential treatments that can be employed to reduce noise. These treatments include the use of solid barriers, setbacks from roadways, and enhanced noise insulation in new construction. These treatments would be expected to reduce noise by 5–15 dB depending on the specific treatment or combination of treatments. Combinations of treatments would be employed to ensure compliance with applicable noise compatibility standards. This mitigation measure would, therefore, reduce this impact to a less-than-significant level for residential uses, primarily through the use of noise barriers. Figure 3.10-2 provides a preliminary indication as to where noise barriers may be needed based on the noise analysis. The extent to which noise barriers would be needed and where they would be located would be determined as a part of Mitigation Measure NOI-1b. The specific locations of noise barriers and types of noise-reducing treatments would be developed with consideration to site topography, exact distances from sources (e.g., HVAC equipment, roadways) to receivers (e.g., backyards, residential building facades), lines of sight between sources and receivers (e.g., accounting for shielding from trees, buildings), and other detailed considerations. Such considerations require a detailed assessment of the site that is consistent with the level of detail available at the map stage and not the environmental review stage. Because the noise compatibility standards for playgrounds and parks is 70 L_{dn}, traffic noise on Marble Valley Parkway and Marble Lake Boulevard could result in noise above this threshold at playgrounds and parks along these roadways, based on Table 3.10-14. However, noise would attenuate to below 70 L_{dn} and the vast majority of the park and playground uses along Marble Valley Parkway and Marble Lake Boulevard would experience noise below 70 L_{dn}. Thus, sound walls at these locations may not be practical given the limited extent of the uses that would experience noise above the standards. Nevertheless, Figure 3.10-2 shows the areas where sound walls, or other mitigation, could potentially be necessary based on the compatibility standards. The noise control plan will determine the need for noise-reducing treatments at these locations and which treatment will be most practical for each specific use. Because noise levels would be reduced to less than the compatibility standards with Mitigation Measure NOI-1b, it is unlikely that new residents or users of the recreational areas at the Project site would experience any health effects resulting from traffic noise exposure.

Mitigation Measure NOI-1b: Prepare and implement a noise control plan

The applicant shall prepare a design-level operational noise control plan that identifies all project features and treatments that shall be implemented to be in compliance with County noise standards listed in County General Plan Tables 6-1 and 6-2 (Tables 3.10-8 and 3.10-9 in this Draft EIR). The noise control plan shall be developed by an acoustical design professional. The design features and treatments shall ensure that exterior and interior noise levels at new proposed uses are in compliance with the noise standards. The report shall be submitted to the County for review and approval at the tentative map stage for the project. Depending on the noise exposure for a particular site, such treatments may include, but are not limited to those listed below, as recommended by the acoustical design professional. This measure is applicable to new noise-sensitive land uses within the project area that would experience noise that exceeds the County's compatibility standard or are otherwise affected by project-generated noise.

a) Construction of solid noise barriers and/or landscaped earthen berms between noise sources and receivers, where setbacks are insufficient to reduce noise to acceptable levels. The specific locations and heights of barriers shall be determined by a qualified acoustical consultant when the locations of residences and noise sources are finalized and prior to tentative map approval. Figure 3.10-2 shows potential locations for noise barriers required to mitigate roadway noise. The barriers shall be of sufficient height and composition to reduce noise levels at the closest sensitive receptor to levels required by County standards (General Plan Table 6-1). Barriers are anticipated to be at least 8 feet in height.

b) Installation of enclosures around noise-generating mechanical equipment at commercial land uses sufficient to reduce noise levels to meet County standards for stationary noise sources.

c) Provide maximum setbacks or barriers on proposed lots within the project area facing noise sources to maximize attenuation of noise over distance.

d) Orient outdoor use areas such that they do not have a direct line of sight to adjacent residences within the project area, to the extent feasible.

e) Installation of noise-reducing treatment in new buildings:

    - High-performance sound-rated double-glazed windows.
    - Sound-rated doors.
    - Sound-rated exterior wall constructions.
    - Special acoustical details for vents.
    - Acoustical caulking at all exterior facade penetrations.
    - Sound-rated roof ceiling constructions.
    - Adequate mechanical ventilation so that windows and doors may be kept closed at the discretion of the building occupants to control environmental noise intrusion.

Traffic-Related Noise at Offsite Locations

Tables 3.10-15 and 3.10-16 compare traffic noise modeling results between existing and existing plus project conditions and between near-term and near-term plus project conditions, respectively. As noted above, this sub-section focuses on the increase in traffic noise between existing conditions and future conditions that would result from project implementation, because existing sensitive receptors would be exposed to that increase in noise. The exposure of existing noise-sensitive land uses to noise levels about the County's compatibility standard of 60 L_{dn} is also evaluated. The discussion above under *Traffic-Related Noise at Project Uses* focuses only on future sensitive land uses that will be constructed as part of the project and the potential for future receptors to be exposed to noise greater than 60 L_{dn}.

At all offsite roadways except Marble Valley Parkway, Flying C Road, and Cambridge Road, traffic noise L_{dn} values are predicted to increase by less than 2 dBA as a result of the project. At Marble Valley Parkway, east of Marble Ridge Road, traffic noise L_{dn} is expected to increase by nearly 6 dB with respect to existing conditions and more than 2.5 dB with respect to near-term future conditions. At this location, an increase in L_{dn} of less than 1.5 dBA would not be considered a significant increase under County General Plan Policy 6.5.1.12.[1] On Flying C Road between Crazy Horse Road and Deer Creek Road, traffic noise L_{dn} is expected to increase by more than 11 dB with respect to both existing and near-term future conditions. At this location, an increase in L_{dn} of less than 5 dBA would not be considered a significant increase. Additionally, project traffic noise on Cambridge Road between Merrychase Drive to Flying C Road would increase by more than 4.5 dBA for both existing and near-term future conditions, which is more than the applicable threshold at this location (3 dBA). However, there are no sensitive land uses in the immediate vicinity of this roadway that would be exposed to a substantial increase in noise. Thus, at nearly all affected roadways in the project area, there would be a less-than-significant increase in traffic noise as a result of the project, because the increases in noise would not be considered noticeable. A noise increase that is not noticeable is not likely to result in health effects in individuals living near the Project site.

Traffic-Related Noise at 2080 Marble Valley Road and 4091 Flying C Road

The increases in traffic noise levels at Marble Valley Parkway, east of Marble Ridge Road, and at Flying C Road between Crazy Horse Road and Deer Creek Road would be greater than the applicable thresholds of 1.5 and 5 dBA and would be significant impacts at the single-family residences located at 2080 Marble Valley Road and 4091 Flying C Road (Table 3.10-11), respectively. These impacts would occur for the existing plus project and near-term plus project conditions. Mitigating traffic noise at these residences that are adjacent to the public roadways could be accomplished by installing (at the applicant's expense) acoustical insulation (e.g., acoustically designed double-paned windows) and a berm or sound wall. Acoustical insulation would reduce interior noise levels, but a berm or sound wall, which would be required to reduce noise levels at outdoor areas of the property, would need to be of such a height (approximately 8 feet) that it would become visually intrusive. Additionally, a berm or sound wall, to be effective at reducing exterior noise levels, would need to obstruct access to the residences' driveway, which would not be feasible. As such, exterior noise levels at the property lines could not be mitigated to levels that would meet County standards. The increase in interior noise levels at 2080 Marble Valley Road would be mitigated through the

[1] In the near-term future condition without the project, the significant increase level would be 1.5 dBA, because, in the absence of the project, background noise levels are expected to increase to 65 dBA.

implementation of noise treatments at the existing residence, as specified in Mitigation Measure NOI-1c. Given that the residence at 4091 Flying C Road is located approximately 160 feet from the roadway centerline and the distance to the 60 L_{dn} contour is less than that distance for both existing and near-term future conditions, traffic noise at the building facade would be less than 60 L_{dn} and interior noise levels would be consistent with County standards, assuming nominal building shell attenuation of 15 dB (60 L_{dn} – 15 dB = 45 L_{dn}).

However, because the increase in exterior noise at the property lines or outdoor areas would still be significant at these locations (i.e., greater than 60 L_{dn}) and cannot be feasibly mitigated to a less-than-significant level, the exposure of the existing residences located at 2080 Marble Valley Road and 4091 Flying C Road to increased traffic noise as a result of project implementation would be a significant and unavoidable impact. Because the cause of the impact is the increase in noise at outdoor areas of the property, it would be less likely for health effects, such as sleep disturbance, to occur. The noise exposure and thus any health effects would be temporary, because the residents of the property are more likely to spend most of the time in indoor areas, where noise levels would be lower.

Table 3.10-15. Existing Plus Project Traffic Noise on Roadway Segments in the Project Area Vicinity

Roadway	Segment Location	Existing L_{dn} (dBA) at 50 Feet from Roadway Centerline	Existing + Project L_{dn} (dBA) at 50 Feet from Roadway Centerline	Change in Traffic Noise Due to Project-Generated Traffic (dBA)
Bass Lake Road	Green Valley Road to Bridlewood Drive	63.6	63.8	0.2
	Bridlewood Drive to Serrano Pkwy	65.6	66.2	0.6
	Serrano Pkwy to Hollow Oak Drive	68.9	69.9	1.0
	Hollow Oak Drive to Country Club Drive	69.2	70.2	1.0
	Country Club Drive to US 50	69.8	71.2	1.4
Cambridge Road	Green Valley Road to Oxford Road	61.2	61.5	0.4
	Oxford Road to Knollwood Drive	64.0	64.4	0.4
	Knollwood Drive to Country Club Drive	63.9	64.8	0.9
	County Club Drive to Merrychase Drive	65.2	65.7	0.6
	Merrychase Drive to Flying C Road	60.1	64.8	4.7
Flying C Road	Crazy Horse Road to Deer Creek Road	51.9	63.3	11.4
Cameron Park Drive	Green Valley Road to Alhambra Drive	67.2	67.2	0.0
	Alhambra Drive to Oxford Road	69.7	69.8	0.0
	Oxford Road to Hacienda Drive	70.3	70.3	0.0
	Hacienda Drive to US 50	70.3	70.4	0.1
Country Club Drive	Bass Lake Road to Merry Chase Drive	63.1	64.5	1.4
	Merrychase Drive to Knollwood Drive	60.0	61.3	1.3
	Knollwood Drive to Cambridge Road	59.7	60.7	0.9
	Cambridge Road to Royal Drive	59.9	60.3	0.3
	Royal Drive to Cameron Park Drive	60.8	60.8	0.0
Durock Road	US 50 to Business Drive	65.6	65.8	0.2
	Business Drive to S. Shingle Road	64.1	64.2	0.1
Marble Valley Pkwy	East of Marble Ridge Road	69.7	75.5	5.9
US 50	West of Latrobe/El Dorado Hills	82.0	82.6	0.7
	Between EDH and Silva Valley Pkwy	80.8	81.9	1.1
	Between Silva Valley Pkwy and Bass Lake Road	80.9	82.1	1.2
	Between Bass Lake Road and Cambridge Road	80.5	81.1	0.6
	East of Cambridge Road	80.5	81.0	0.6

Source: ICF and Federal Highway Administration Traffic Noise Model 2.5 Lookup Tables.
dBA = A-weighted decibels
EDH = El Dorado Hills
L_{dn} = day-night sound level
US 50 = U.S. Highway 50

Table 3.10-16. Near-Term Plus Project Traffic Noise on Roadway Segments in the Project Area Vicinity

Roadway	Segment Location	Near-Term L_{dn} (dBA) at 50 Feet from Roadway Centerline	Near-Term + Project L_{dn} (dBA) at 50 Feet from Roadway Centerline	Change in Traffic Noise Due to Project-Generated Traffic (dBA)
Bass Lake Road	Green Valley Road to Bridlewood Drive	63.6	64.4	0.8
	Bridlewood Drive to Serrano Pkwy	65.6	66.5	0.9
	Serrano Pkwy to Hollow Oak Drive	68.9	69.0	0.1
	Hollow Oak Drive to Country Club Drive	69.2	70.5	1.3
	Country Club Drive to US 50	69.8	70.6	0.7
Cambridge Road	Green Valley Road to Oxford Road	61.2	61.9	0.8
	Oxford Road to Knollwood Drive	64.0	64.9	0.9
	Knollwood Drive to Country Club Drive	63.9	65.1	1.2
	County Club Drive to Merrychase Drive	66.6	67.3	0.7
	Merrychase Drive to Flying C Road	61.3	66.0	4.6
Flying C Road	Crazy Horse Road to Deer Creek Road	53.8	65.3	11.5
Cameron Park Drive	Green Valley Road to Alhambra Drive	67.2	67.7	0.5
	Alhambra Drive to Oxford Road	69.7	70.2	0.4
	Oxford Road to Hacienda Drive	70.3	70.5	0.3
	Hacienda Drive to US 50	70.3	70.9	0.6
Country Club Drive	Bass Lake Road to Merry Chase Drive	63.1	64.7	1.6
	Merrychase Drive to Knollwood Drive	60.0	61.5	1.6
	Knollwood Drive to Cambridge Road	59.7	61.4	1.7
	Cambridge Road to Royal Drive	59.9	61.6	1.7
	Royal Drive to Cameron Park Drive	60.8	62.3	1.5
Durock Road	US 50 to Business Drive	65.6	66.8	1.2
	Business Drive to S. Shingle Road	64.1	65.1	1.0
Marble Valley Pkwy	East of Marble Ridge Road	71.3	74.0	2.6
US 50	West of Latrobe/El Dorado Hills	81.8	81.9	0.2
	Between EDH and Silva Valley Pkwy	80.9	81.4	0.4
	Between Silva Valley Pkwy and Bass Lake Road	81.4	81.8	0.4
	Between Bass Lake Road and Cambridge Road	81.0	80.8	-0.2
	East of Cambridge Road	80.9	81.1	0.2

Source: ICF and Federal Highway Administration Traffic Noise Model 2.5 Lookup Tables.
dBA = A-weighted decibels
EDH = El Dorado Hills
L_{dn} = day-night sound level
US 50 = U.S. Highway 50

Mitigation Measure NOI-1b: Prepare and implement a noise control plan

Mitigation Measure NOI-1c: Prepare and implement a noise control plan for 2080 Marble Valley Road and 4091 Flying C Road

The applicant shall prepare a design-level operational noise control plan that identifies all treatments that will be implemented at the residences located at 2080 Marble Valley Road and 4091 Flying C Road such that the increase in project-generated noise within the residence does not exceed 1.5 dBA L_{dn}, pursuant to County General Plan Policy 6.5.1.12. The noise control plan shall be developed by an acoustical design professional. The noise-reducing treatments shall be employed in an effort to reduce interior noise levels to be in compliance with noise standards. The report shall be submitted to the County for review and approval at the first tentative map stage for that phase of development, depending on the time in which Marble Valley Parkway is extended from the west or east. The treatments for the residences at 2080 Marble Valley Road and 4091 Flying C Road shall be installed at no cost to the homeowner and may include, but are not limited to, those listed below, as recommended by the acoustical design professional and agreed to by the owner of each home.

Installation of noise-reducing treatment in new buildings:

- High-performance sound-rated double-glazed windows.
- Sound-rated doors.
- Special acoustical details for vents.
- Acoustical caulking at all exterior facade penetrations.
- Adequate mechanical ventilation so that windows and doors may be kept closed at the discretion of the building occupants to control environmental noise intrusion.

In the event that one or both homeowners decline to accept these changes, then the impact will remain significant and unavoidable. In the event that the homeowner has agreed to this treatment, but noise-reducing treatments cannot reasonably reduce the interior noise level below the noise standards, then the impact will remain significant and unavoidable.

Impact NOI-1c: 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 County General Plan or noise ordinance for stationary or non-transportation noise sources during project operation (less than significant with mitigation)

Noise from non-transportation sources would include onsite noise generated by residences and commercial and other non-residential uses that would be primarily limited to HVAC and other minor building noise. Depending on the size of the equipment, HVAC equipment can produce sound levels in the range of 70–75 dBA at 50 feet (Hoover and Keith 2000). Because the project proposes commercial uses to be located adjacent to residential uses, stationary sources, if any, associated with commercial uses could result in noise that exceeds the County's compatibility standards for stationary noise sources. Additionally, there are existing scattered residences located in the vicinity of or adjacent to office park and public school uses in the northern portion of the project area. These residences could be affected by noise from stationary equipment at either the office park or school uses, as these uses would have sizable HVAC equipment. The increase in noise could be noticeable and substantial, in addition to exceeding the County's compatibility standards. Additionally, because

the project could exacerbate existing noise levels from stationary sources, it is necessary to evaluate the effect that this noise increase could have on new project uses that are considered sensitive to noise.

Active park uses are also proposed for Marble Lake and may include sports fields for baseball, softball, and soccer. These activities would be a source of noise that could affect new residential uses within the project area and adjacent to the park. There are no existing residential uses near Marble Lake; however, in the future, there could be residences adjacent to the project area and south of Marble Valley Parkway. These residences would be adjacent to the lake but not near the park area (i.e., the area where the noise would occur). Because there are no existing residential uses near Marble Lake, it is not necessary to evaluate the incremental increase in noise from project operation.

The extent to which noise from these activities could affect adjacent uses within the project area depends on many factors, including the proximity of the active uses to the residences, the type and number of active uses, and the time of day that active uses would occur. These specific details have not yet been determined. Analysis of active park uses conducted for similar projects indicates that active ball field use produces a sound level of about 60 dBA L_{eq} at 100 feet and an active soccer field produces a sound level of about 69 dBA L_{eq} at 100 feet. This indicates that active park uses could result in noise that exceeds the County's daytime and evening non-transportation noise standards of 55 dBA L_{eq} and 50 dBA L_{eq}, respectively. For the daytime noise standard, residences or other sensitive land uses within 400 feet of the sports field could be exposed to noise over 55 dBA L_{eq}, assuming a noise level of 69 dBA L_{eq} at 100 feet for a soccer game during daytime hours.

The noise impacts associated with the exposure of new and existing residences to non-transportation sources of noise would be significant, because the County's noise standards could be exceeded, and the project could contribute a substantial increase in noise relative to existing conditions. However, Mitigation Measures NOI-1b and NOI-1d include a variety of potential treatments that can be employed to reduce noise. These treatments include prohibitions on when noisy activities can occur, use of setbacks, and use of barriers between noise sources and receivers. In the case of HVAC, the noise control plan, which would be implemented for Mitigation Measure NOI-1b, would ensure that HVAC equipment at commercial, office park, or public school land uses would be shielded or enclosed such that noise from the equipment meets the County standards for stationary noise sources and is not noticeable to existing residences. Thus, noise from stationary equipment would not adversely affect new residences within the project area or the existing scattered residences that are within the vicinity of the office park or public school land uses in the northern portion of the project area.

In the case of the sports fields, locating new residences an adequate distance from the fields would minimize impacts, and, where needed barriers could be constructed to reduce noise. These treatments would be expected to reduce noise by 5–15 dB depending on the specific treatment or combination of treatments. Combinations of treatments would be employed to ensure compliance with applicable noise compatibility standards and to ensure that potential noise impacts would be addressed through design. These treatments would reduce this impact to a less-than-significant level at new residences within the project area.

In addition, the Monolith Event Center would be an event center and banquet center that could accommodate as many as 500 people. The building would be used year-round for indoor and outdoor events for local charities, associations, and business groups. Outdoor activities could potentially involve the use of amplified sound for speech or music. Details on the specific types of

activities that could occur are not available at this time. However, public address systems typically need to produce a sound level that is at least 10 dB above the ambient sound level. Ambient sound in an environment with 500 people could be in the range of about 60 to 70 dBA at 50 feet. This implies that a sound system would need to produce a sound level in the range of 70 to 80 dBA at 50 feet. Using the sound attenuation rates indicated in Table 3.10-14 it would take about 315 feet for the public address system sound to drop to the daytime (7:00 a.m. to 7:00 p.m.) L_{max} ordinance threshold of 60 dBA and 500 feet to drop to the evening (7:00 p.m. to 10:00 p.m.) L_{max} ordinance threshold of 55 dBA. Because new residential uses within the project area could be located within these distances, this impact is considered significant. The location of the Monolith Event Center is adjacent to medium-density residential and near high-density residential and park uses but is not in the vicinity of any existing residences. However, the barriers shown in Figure 3.10-2 and discussed for Mitigation Measure NOI-1b, in addition to attenuating project traffic noise, would also serve to attenuate noise from the event center. Thus, public address system and crowd noise associated with the event center would be minimized by the proposed barriers. Another measure that would reduce noise includes locating noise-sensitive uses as far as practical from the outdoor event area, especially for those residences that may have a clear line of site to the event area where barriers, terrain, or structures are not present to attenuate noise. Implementation of Mitigation Measures NOI-1b and NOI-1d would result in an estimated 5–15 dB reduction in noise levels and the impact would be less than significant. With mitigation, the County noise standards would not be exceeded and the increase in noise would be reduced, and thus it is unlikely that any people would experience health effects from project-related noise exposure.

Mitigation Measure NOI-1b: Prepare and implement a noise control plan

Mitigation Measure NOI-1d: Employ measures to limit sound from outdoor events

The operators of outdoor events shall limit the use of public address systems such that sound from such systems does not exceed standards specified in County General Plan Table 6-5 (Table 3.10-7). For residences affected by non-transportation noise, this requires that sound be limited to 50 dBA L_{eq} and 60 dBA L_{max} between 7:00 a.m. and 7:00 p.m., 45 dBA L_{eq} and 55 dBA L_{max} between 7:00 p.m. and 10:00 p.m., and 40 dBA L_{eq} and 50 dBA L_{max} between 10:00 p.m. and 7:00 a.m.

Measures that can be used to limit noise include those listed below.

a) Placing limits on sound levels produced by public address systems.

b) Prohibiting use of public address systems between 10:00 p.m. and 7:00 a.m.

c) Locating noise sources at outdoor venues (i.e., public address systems, speakers, etc.) as far as practical from noise-sensitive uses.

d) Constructing barriers between outdoor venues and noise-sensitive land uses or taking advantage of existing barrier features (e.g., terrain, structures) to block sound transmission, where barriers proposed under Mitigation Measure NOI-1b are insufficient to reduce noise.

Impact NOI-2: Generation of excessive groundborne vibration or groundborne noise levels (less than significant with mitigation)

Construction Equipment

Construction of the project would not require impact devices or other equipment that is typically associated with substantial vibrational impacts. The project may require the use of a rock ripper to remove rock. A rock ripper consists of a knife-shaped tip mounted on a hydraulic arm, which is typically mounted on a bulldozer. The bulldozer drags the tip through the ground to break up rock. This is not a traditional impact device, such as pile driver or hoe ram, but it could generate some degree of ground vibration. Specific data on the vibration generated by a rock ripper are not available, but vibration is expected to be similar to or less than the vibration generated by a hoe ram.

As presented in Table 3.10-3, PPV values at 25 feet would be distinctly perceptible for the equipment that is not impact equipment. At 50 feet from the source, the PPV values fall below the barely perceptible threshold for the non-impact equipment. It is possible that construction equipment would be required within 25 feet of surrounding land uses; as a result, those land uses may be able to distinctly perceive vibrational impacts from construction. However, any perception of vibrational impacts would not be categorized as excessive. Further, most construction activity would likely occur at a distance greater than 50 feet from surrounding land uses, because the vast majority of construction activities would occur in the interior portions of the VMVSP area and not in the few specific locations where the VMVSP boundary is within 50 feet of existing residences. Therefore, vibrational impacts would be barely perceptible, according to the Caltrans guidelines. Consequently, this impact would be less than significant. No mitigation is required.

Blasting

Blasting may be required to prepare the project site for construction. The need for blasting would depend on site-specific conditions and engineering considerations that are not known at this time. Accordingly, no information on the location, type, or extent of blasting is known. Noise and vibration generated by blasting is a complex function of the charge size, charge depth, hole size, degree of confinement, initiation methods, spatial distribution of charges, and other factors. This information is not currently available. To provide a general indication of the potential for airblast and vibration impacts from blasting, airblast and vibration levels have been estimated using methods recommended in the *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (California Department of Transportation 2013) assuming a 100-pound charge and average normal confinement of the charge.

Table 3.10-17 presents estimated airblast and ground-vibration values as a function of distance based on these assumptions.

Table 3.10-17. Estimated Airblast and Ground-Vibration Levels

Distance (feet)	Peak Particle Velocity under Average Normal Confinement (inches/second)	Probable Peak Air Overpressure (dB)
100	2.5	146
250	0.58	137
500	0.19	130
750	0.10	125
1,000	0.063	122
1,250	0.044	120
1,500	0.033	118
2,000	0.021	116

Source: California Department of Transportation 2020.
dB = decibels

The results in Table 3.10-17 indicate that ground vibration from a 100-pound charge could exceed the USBM standard for potential damage of 0.5 inches/second within about 275 feet of the blast and that airblast could exceed the 130 dB USBM standard at locations within about 500 feet of a blast. Because existing residences and other structures not associated with the project, and new residences constructed as part of the project while construction is still occurring are and will be located within 500 feet of the potential blasting sites, the data in Table 3.10-15 indicate that airblast and ground-vibration impacts could be significant.

Implementation of Mitigation Measure NOI-2 would reduce this impact to a less-than-significant level by requiring measures to reduce airblast and vibration from blasting.

Mitigation Measure NOI-2: Employ measures to reduce airblast and vibration from blasting

Contractors shall retain a qualified blasting specialist to develop a site-specific blasting program report to assess, control, and monitor airblast and ground vibration from blasting. The report shall be reviewed and approved by the County prior to issuance of a blasting permit. The report shall include, at a minimum, the following measures.

a) The contractor shall use current state-of-the-art technology to keep blast-related vibration at offsite residential, other occupied structures and well sites as low as possible, consistent with blasting safety. In no instance will blast vibration, measured on the ground adjacent to a residential or other occupied structure or well site be allowed to exceed the frequency-dependent limits specified in the Alternative Blasting-Level Criteria contained in USBM Report of Investigations 8507 (U.S. Bureau of Mines 1980a).

b) The project contractor shall use current state-of-the-art technology to keep airblast at offsite residential and other occupied structures as low as possible. In no instance will airblast, measured at a residence or other occupied structure, be allowed to exceed the 0.013-psi (133-dB) limit recommended in USBM Report of Investigations 8485 (U.S. Bureau of Mines 1980b).

c) The project contractor shall monitor and record airblast and vibration for blasts within 1,000 feet of residences and other occupied structures to verify that measured levels are

within the recommended limits at those locations. The contractor shall use blasting seismographs containing three channels that record in three mutually perpendicular axes and which have a fourth channel for recording airblast. The frequency response of the instrumentation shall be from 2 to 250 Hz, with a minimum sampling rate of 1,000 samples per second per channel. The recorded data must be such that the frequency of the vibrations can be determined readily. If blasting is found to exceed specified levels, blasting will cease, and alternative blasting or excavation methods shall be employed that result in the specified levels not being exceeded. All recorded data shall be provided to the County for review.

d) Airblast and vibration monitoring shall take place at the nearest offsite residential or other occupied structure. If vibration levels are expected to be lower than those required to trigger the seismograph at that location, or if permission cannot be obtained to record at that location, recording shall be accomplished at some closer site in line with the structure. Specific locations and distances where airblast and vibration are measured shall be documented in detail along with measured airblast and vibration amplitudes.

e) Blasting shall be prohibited between 7:00 p.m. and 7:00 a.m. on weekdays and 5:00 p.m. to 8:00 a.m. on weekends and federally recognized holidays.

Impact NOI-3: For a project located within the vicinity of a private airstrip or an airport land use plan area, or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels (less than significant)

The project area is not located in the vicinity of a private airstrip. The northeast corner of the project area is located approximately 2 miles from the Cameron Airpark public use airport; however, noise from this airport would not likely affect future plan area land uses as the project area is not located within the CNEL 55 dB contours of the airport. Areas within the CNEL 55 dB or higher noise contours are located in the High Noise/Risk Zone, according to the *Cameron Airpark Airport Land Use Compatibility Plan* (El Dorado County 2012). In addition, the project area is located outside of the airport influence area, as defined in the compatibility plan (El Dorado County 2012). Additionally, because the project would not exacerbate existing noise effects from aircraft or airport uses, an evaluation of the impacts on new project uses is not required. Because of these considerations, the impact would be less than significant.

Impact NOI-4: Result in noise impacts due to activities associated with project offsite improvements (significant and unavoidable)

Development of the project would require a number of infrastructure improvements at offsite locations, including improvements to water lines, sewer connections, overcrossings, and roadways, which could result in impacts related to both construction and operation of the proposed project.

Construction

The construction noise impacts associated with offsite improvements would likely be similar to the impacts within the project area. Similar construction equipment would be utilized for the construction activities in the project area and in the offsite locations, resulting in comparable noise levels on any given day. However, the duration of project construction activities would be several years, as discussed in Impact NOI-1a, while the offsite improvement activities would occur over a much shorter timeframe (i.e., months). To be conservative, noise impacts from proposed project

construction are considered to be significant because of the long-term nature of construction, while offsite improvement activities would resemble more typical construction activity (as opposed to a years-long construction schedule, which could be considered semi-permanent). Thus, because the activities would occur during the daytime hours, the offsite improvement activities would be exempt from the construction noise limits pursuant to County General Plan Policy 6.5.1.11. However, to ensure that the increase in noise from construction is minimized, Mitigation Measure NOI-1a is applicable for the offsite improvements, though not required to reduce the impact to a less-than-significant level. Health effects are thus not likely to occur in people exposed to noise during construction.

With regard to groundborne vibration, because of the nature of the offsite improvements (i.e., water and wastewater infrastructure, roadway improvements) it is unlikely that pile driving, or other substantial ground-impact activities would be included in the offsite construction activities, so vibrational impacts would be minimal. Blasting, if necessary for the offsite improvements, could cause ground vibration impacts at surrounding land uses. However, vibration impacts would be mitigated to a less-than-significant level by Mitigation Measure NOI-2, which is discussed for onsite construction activities.

Further, the offsite improvements would not result in any new land uses, so there would be no new sensitive land uses that could be affected by the construction noise impacts.

Operation

Water and sewer pipelines typically do not generate noticeable noise, so there would be no substantial source of permanent, stationary operational noise as a result of the offsite water and sewer pipeline improvements. The addition or extension of Marble Valley Parkway, Marble Lake Boulevard, and Lime Rock Valley Road would result in an increase in traffic noise on these roadways and on connecting roadways (i.e., Cambridge Road and Flying C Road). The traffic on these roadways would introduce substantial increases in traffic noise where such noise is currently limited. Noise at offsite locations as part of the roadway extensions was evaluated under Impact NOI-1b and was found to be a significant and unavoidable impact. Consequently, the impact of the roadway extensions is considered to be significant and unavoidable. Given the subjective nature of the human response to noise, it is not possible to conclusively determine whether health effects resulting from offsite operational noise could occur. However, it is possible that people residing near the offsite improvements could experience health effects resulting from increases in traffic noise levels. The potential health effects that could occur are described above in *Human Response to Noise*. The effects more likely to occur are typically considered less serious (e.g. annoyance), while other effects are less likely to occur and would be more serious (e.g. hearing damage).

Cumulative noise resulting from the roadway extensions is evaluated in the cumulative plus project scenario described in Chapter 5, *Other CEQA Considerations*.

Mitigation Measure NOI-2: Employ measures to reduce airblast and vibration from blasting

Impact NOI-5: Result in impacts related to noise as a result of General Plan Policy TC-Xf traffic improvements (less than significant)

As described in Chapter 2, *Project Description*, offsite traffic improvements required by General Plan Policy TC-Xf would be implemented into the project as mitigation measures. The implementation of these measures is evaluated for their potential impacts related to noise and vibration.

Construction

The construction noise impacts associated with traffic improvements would likely be similar to the impacts within the project area. Similar construction equipment would be utilized for the construction activities in the project area and in the traffic improvement locations, resulting in comparable noise levels on any given day. However, the duration of project construction activities would be several years, as discussed in Impact NOI-1a, while the traffic improvement activities would occur over a much shorter timeframe (i.e., months). To be conservative, proposed project construction is considered to be significant because of the long-term nature of construction, while traffic improvement activities would resemble more typical construction activity (as opposed to a years-long construction schedule, which could be considered semi-permanent). Thus, because the activities would occur during the daytime hours, the traffic improvement activities would be exempt from the construction noise limits pursuant to County General Plan Policy 6.5.1.11. However, to ensure that the increase in noise from construction is minimized, Mitigation Measure NOI-1a is applicable for the offsite improvements, though not required to reduce the impact to a less-than-significant level.

With regard to groundborne vibration, because of the nature of traffic improvements (improvements to existing intersections and off- and on-ramps) it is unlikely that pile driving, or other substantial ground-impacting activities would be necessary; therefore, vibrational impacts would be minimal.

Furthermore, the traffic improvements would not result in any new land uses, so there would be no new sensitive land uses that could be affected by the construction noise.

Operation

Traffic improvements would result in reduced congestion and, therefore, slightly increased vehicle speed on the roadways. With higher vehicle speeds, noise could increase slightly. However, the traffic noise analysis uses the posted speeds to determine noise levels, which is a conservative approach. Thus, any congestion that occurs on roadways is not reflected in the noise levels, because the posted speed is a more conservative scenario.

Because the traffic improvements would not generate any traffic themselves and would increase vehicle speeds closer to but not above the posted speed limit, there would be no additional impacts from the traffic improvements.

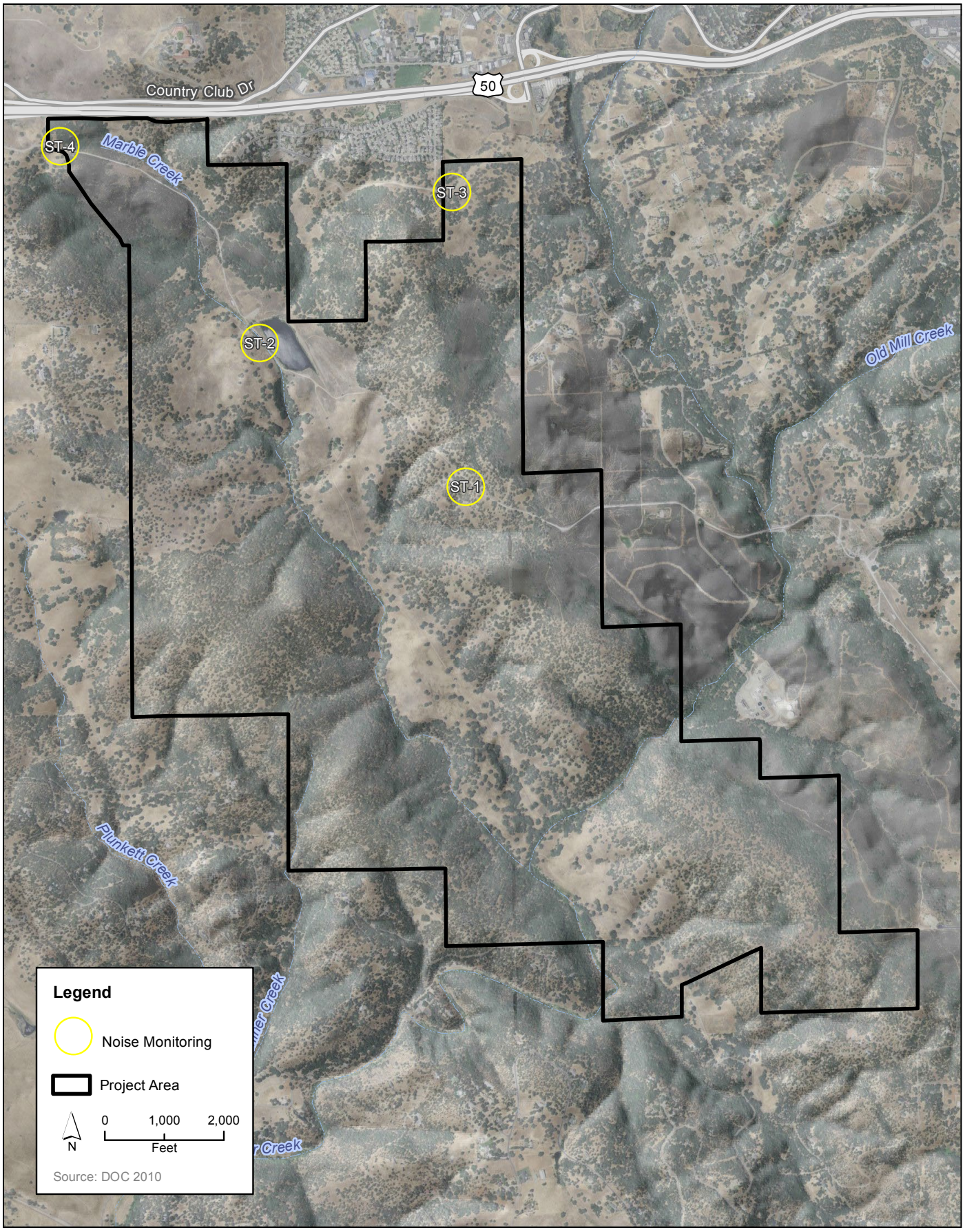

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Figure 3.10-1
Noise Monitoring Locations in the Project Area

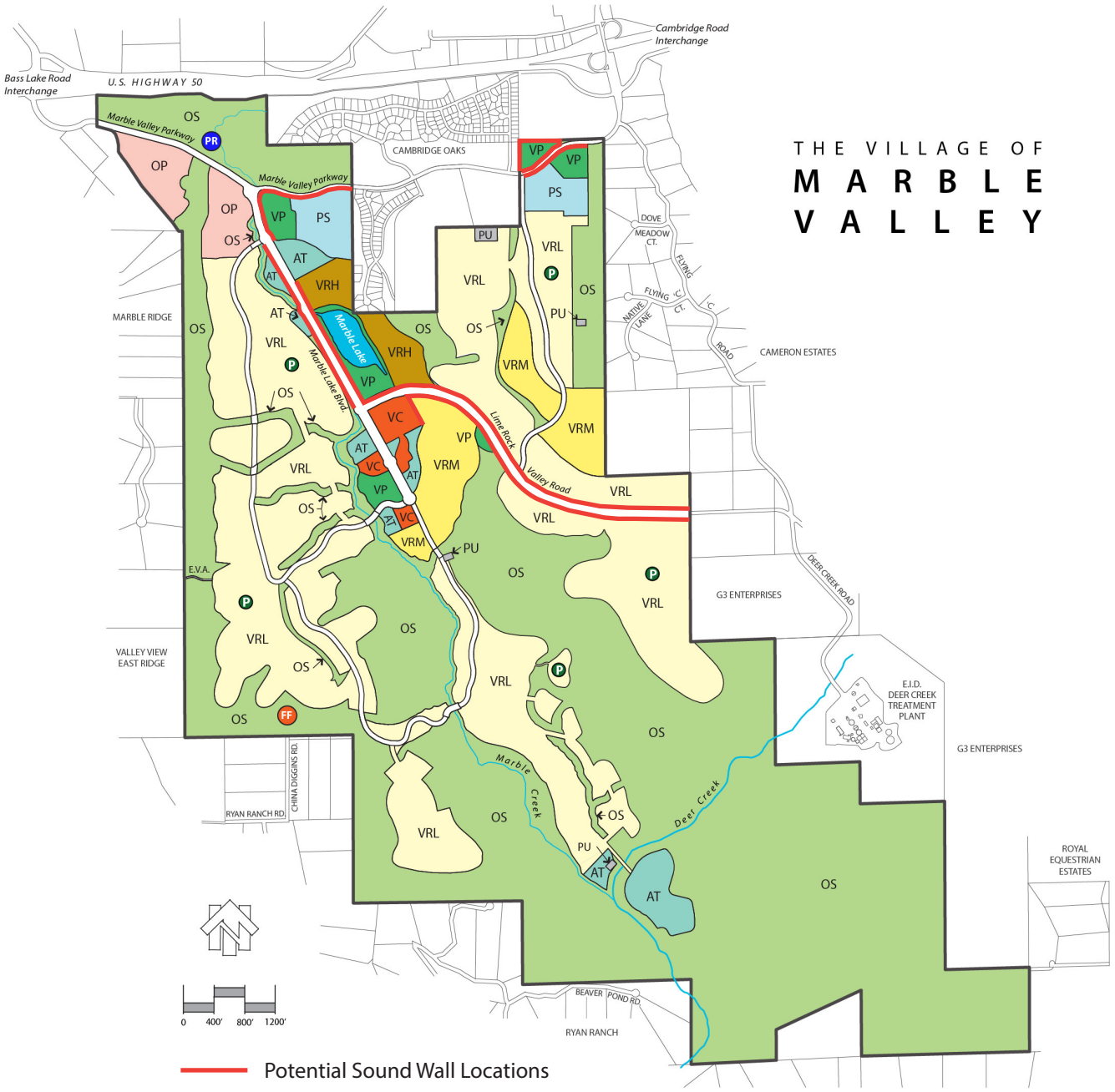

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Figure 3.10-2
Potential Sound Wall Locations

3.11 Population and Housing

This section describes the regulatory and environmental setting for population and housing in El Dorado County as it pertains to the Village of Marble Valley Specific Plan (VMVSP; proposed project). It also describes impacts on population and housing that would result from implementation of the proposed project.

3.11.1 Existing Conditions

Regulatory Setting

Population and housing patterns and development in El Dorado County are guided by state housing element law (Government Code 65580–65590), the Sacramento Area Council of Governments' (SACOG) *2021-2029 Regional Housing Needs Plan* (RHNP) (Sacramento Area Council of Governments 2020), and the *El Dorado County General Plan* (County General Plan) Housing Element. Applicable state and local population and housing regulations and policies related to the proposed project are described in the following subsections.

State

At the state level, the California Department of Housing and Community Development (HCD) administers population and housing policy and laws, including the review of local general plan housing elements. State housing element law (Government Code 65580–65590), requires HCD to determine the relative share of existing and projected housing needs for each county in California. HCD uses California Department of Finance (DOF) population projections and historic growth trends to estimate the relative share of California's projected population growth that would occur in each county. Where there is a regional council of governments (COG), HCD provides the regional housing need information to the COG. For El Dorado County, HCD provides this information to SACOG, of which El Dorado County (County) is a member. SACOG, in turn, assigns a share of the identified regional housing need to each of its member counties and cities through its Regional Housing Needs Allocation (RHNA) and RHNP process.

Local

Regional Housing Needs Allocation and Regional Housing Needs Plan

The State of California requires every county and city to plan for and accommodate its fair share of regional growth through the RHNA process. As part of the RHNA process, HCD issues a Regional Housing Needs Determination, which includes an overall housing needs number, as well as a breakdown of the number of units required in four household income categories, every 8 years. The distribution of the county's overall allocation into four income categories, defined by state law, is intended to facilitate the equitable distribution of lower income households throughout the county's communities.

Using this information, SACOG must develop a RHNP and administer the RHNA process in its six-county region, including El Dorado County, the five other member counties (Placer, Sacramento,

Sutter, Yolo, and Yuba), and their respective cities. HCD's intent, through implementation of the RHNA process, is to promote the following objectives.

- Increase the housing supply and the mix of housing types, tenure, and affordability in all cities and counties within the region in an equitable manner.
- Promote infill development and socioeconomic equity, the protection of environmental and agricultural resources, and the encouragement of efficient development patterns.
- Promote an improved intraregional relationship between jobs and housing.

The RHNA, part of SACOG's 2021–2029 RHNP, establishes the total number of housing units and expected growth that each member city and county must plan for within the 8-year planning period of its general plan housing element. The SACOG 2021–2029 RHNP, adopted on March 19, 2020, formally allocates to SACOG cities and counties their fair share of the region's projected housing needs. SACOG's total housing allocation for the current planning period of October 31, 2021, through October 31, 2029 is 153,512 dwelling units (Sacramento Area Council of Governments 2020).

El Dorado County General Plan

The County General Plan Economic Development Element and 2021-2029 Housing Element include the following relevant goals, objectives, and policies. The full text of these goals, objectives, and policies can be found in Appendix B, *Consistency with El Dorado County General Plan Policies*, which provides an analysis of the project's consistency with County General Plan policies as required under State California Environmental Quality Act (CEQA) Guidelines Section 15125.

Economic Development Element

- Goal 10-1, *Cooperation*, includes Objective 10.1.9, *Jobs-Housing Relationship*, which addresses monitoring the jobs-housing balance within the county with a focus on creation of employment opportunities and associated Policies 10.1.9.1, 10.1.9.2, and 10.1.9.3.

2021-2029 Housing Element

State housing element law, enacted in 1969, mandates that local governments in California adopt housing elements as part of their general plans and submit draft and adopted elements to HCD for review of compliance with state law. The County General Plan 2021-2029 Housing Element, reviewed by HCD in August 2021, guides the County's decisions related to unincorporated El Dorado County's housing needs through October 2029. The 2021–2029 Housing Element contains the following relevant goals and policies; the text of which can be found in Appendix B, *Consistency with El Dorado County General Plan Policies*.

The County is currently in the process of completing a housing element update for 2021-2029. The 2021–2029 Housing Element was approved August 31, 2021, and amended March 22, 2022.

- Goal HO-1 addresses provision of housing to meet the needs of existing and future residents in all income categories and includes Policy HO-1.1.
- Goal HO-2 addresses provision of quality residential environments for all income levels.
- Goal HO-4 addresses meeting the housing needs of special groups of county residents.
- Goal HO-6 addresses assurances related to equal access to affordable housing without discrimination and includes Policy HO-6.1.

Environmental Setting

This section provides a description of the existing conditions related to population and housing within El Dorado County and the project area.

Population

California experienced substantial population growth from 1990 to 2020, increasing by nearly 10 million people to a total population of 39,109,070 (California Department of Finance 2007, 2023a). El Dorado County has historically been one of California's fastest-growing regions, though growth has slowed over the past decade. During the 30-year period from 1990 to 2020, the County's population increased by approximately 52%. The population of El Dorado County's unincorporated area grew by 64% during the 1990 to 2020 period. DOF estimated that as of July 1, 2023, the countywide population of El Dorado County was 187,285, and the unincorporated area held 159,722 of these residents (California Department of Finance 2023a; El Dorado County 2022). For the 25-year period of 2020 to 2045, the county's population is expected to decrease by 9% from 191,032 to 174,271 (California Department of Finance 2023c) Table 3.11-1 shows the population growth experienced by El Dorado County from 1990 to 2020, and Table 3.11-2 presents the anticipated growth for El Dorado County through 2045.

Table 3.11-1. El Dorado County Population Growth 1990–2020

Year	Countywide Population	Percent Change		Unincorporated Area Population	Percent Change	
		Incremental	Cumulative		Incremental	Cumulative
1990	125,995	–	–	96,849	–	
2000	156,299	24	24	123,080	27	27
2010	181,058	16	44	149,266	21	54
2020	191,032	6	52	158,788	6	64

Sources: California Department of Finance 2007, 2023b, and 2023c; El Dorado County 2022.

Table 3.11-2. El Dorado County Population Growth Projections 2020–2045

Year	Estimated El Dorado County Population	Percent Change	
		Incremental	Cumulative
2020	191,032	-	-
2025	186,186	-3	-3
2030	185,434	<-1	-3
2035	183,477	-1	-4
2040	179,456	-2	-6
2045	174,271	-3	-9

Sources: California Department of Finance 2023c

Housing

Countywide

Countywide, the DOF estimates indicate that there were 76,649 occupied housing units and a vacancy rate of 19.6% in 2023, and 75,320 occupied housing units and a vacancy rate or 19.4% in 2022 (California Department of Finance 2023d). The high countywide vacancy rate, averaged across cities and the unincorporated area, reflects the high number of seasonal vacation housing in the city of South Lake Tahoe, where the 2023 vacancy rate was 42.8% (California Department of Finance 2023d). According to DOF, in 2023, there was a total of 74,357 dwelling units in the unincorporated area of the county, of which 65,290 were single-family detached units, 839 were single-family attached units, 1,597 were multifamily structures with two to four units, 3,312 were multifamily structures with five or more units, and 3,319 were mobile homes (California Department of Finance 2023d). A total of 73,815 dwelling units were estimated to be occupied in the unincorporated area in 2022, reflecting a vacancy rate of 14.6%.

West Slope

In 2019 the County updated its residential growth projections for use in the County's Travel Demand Model, which is a land use planning tool to project the amount and distribution of growth for the west slope of El Dorado County[1] through the year 2040 (BAE Urban Economics 2020). The BAE Urban Economics study reported that in 2018 there were 54,921 existing housing units. For 2025 it is projected there would be 57,085 housing units, and for 2040, the study estimated that there would be 62,014 housing units, leaving a difference of approximately 5,000 housing units to be built between 2025 and the 2040 planning horizon. Actual new units in any given year would vary from projections because of economic fluctuations and other factors; however, the overall growth rate is assumed to apply over the planning horizon. Based on a continuation of the county's historic west slope growth trend over the 2018 to 2040 time period yields an annual average growth rate of 0.55% (BAE Urban Economics 2020).

Most of El Dorado County's recent growth, both residential and commercial, has taken place in the vicinity of El Dorado Hills. The eastern section of El Dorado Hills, where the VMVSP has been proposed, is characterized by primarily low-density residential and commercial development (El Dorado County 2022).

Average Household Size

Average household size is determined by dividing the total number of occupied housing units by the population. The adopted County General Plan 2021-2029 Housing Element indicates that in 2020, the average household size countywide was 2.09 people per occupied unit, and that the average household size in the unincorporated area of El Dorado County was 2.21 people per occupied unit. Data from the El Dorado Hills census and the 2018–2022 American Community Survey indicate the average household size within the El Dorado Hills Community Region Designated Place (CDP) was 2.84 while the average household size for the county as a whole was 2.52, which are more appropriate given the less rural nature of the area. However, the factors used in this analysis are those determined in the fiscal analysis, which are more conservative. These factors are as follows: 3.06 people per unit for single-family low-density residential, 2.61 people per unit for single-family medium-density residential, and 2.49 people per unit for multifamily residential.

[1] Excluding the city of Placerville.

Population and Housing—Village of Marble Valley Specific Plan Area

The approved Marble Valley Master Plan allows for the development of residential units. However, no residential structures were constructed. The project area is bordered by residential developments to the north, east, south, and west.

Regional Housing Needs Allocation

On November 21, 2019, the SACOG Board adopted the Cycle 6 2021–2029 RHNA Methodology, and the 2021–2029 RHNP was adopted on March 19, 2020 (Sacramento Area Council of Governments 2020). Table 3.11-3 shows unincorporated El Dorado County's RHNA by income level through 2029. The total RHNA for unincorporated El Dorado County is 4,994, which is divided among four defined income groups[2] (Sacramento Area Council of Governments 2020). As shown in Table 3.11-3, unincorporated El Dorado County's greatest housing need is in the *above-moderate* income category.

Table 3.11-3. Unincorporated El Dorado County Regional Housing Needs Allocation for 2021–2029

Income Group	Units	Percent of Total
Very Low	1,350	27.0
Low	813	16.0
Moderate	840	16.8
Above Moderate	1,991	39.8
Total	4,994	100

Source: Sacramento Area Council of Governments 2020.

3.11.2 Environmental Impacts

Methods of Analysis

The analysis of the proposed project's impacts on population and housing was conducted using a review of the most current population and housing statistics and projections available for El Dorado County, with data specific to unincorporated El Dorado County when obtainable. These statistics include U.S. Census data, SACOG's 2021–2029 RHNP projections, the County General Plan 2021–2029 Housing Element data, and DOF's estimates and projections. The following factors were used to estimate population: 3.06 people per single-family low-density residential unit, 2.61 people per single-family medium-density residential unit, and 2.49 people per multifamily residential unit.

Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the proposed project would be considered to have a significant effect if it would result in any of the conditions listed below.

- Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure).

[2] Very low income = less than 50% of median family income (MFI). Low income = 50 to 80% of MFI. Moderate income = 80 to 120% of MFI. Above moderate income = above 120% of MFI.

- Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

Impacts and Mitigation Measures

Impact POP-1: Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure) (significant and unavoidable)

The proposed project would develop 1,057 acres with up to 3,222 residential units. As described in Chapter 2, *Project Description*, existing Estate Residential zoning for the project site would allow development of minimum 5-acre lots. Implementation of the proposed project would allow development of 2,824 more housing units than would be permitted under the site's current zoning. The total projected population as a result of the proposed project is 9,227, as shown in Table 3.11-4.

Table 3.11-4. Projected Population Resulting from VMVSP

Proposed Land Use Designation	Average People per Unit	Number of Units	Projected Residents (rounded)
VRL	3.06	1,963	6,007
VRM	2.61	708	1,848
VRH	2.49	551	1,372
Total		3,222[a]	9,227

VRL = Village Residential – Low.
VRM = Village Residential – Medium.
VRH = Village Residential – High.

[a] 14 units within Agriculture Tourism (AT) are associated with a bed-and-breakfast-type accommodation and, therefore, are not considered in permanent population estimates.

As noted above in Table 3.11-2, the countywide population was forecast to decrease by approximately 5,500 from the years 2020 to 2030, and by more than 16,000 from 2020 to 2045. The additional 9,227 residents resulting from the proposed project would not constitute substantial population growth.

As described throughout other sections of Chapter 3, *Impact Analysis*, development of housing and commercial uses and associated population increases, and construction of infrastructure extensions would contribute to significant physical impacts, including degradation of visual resources; emissions of reactive organic gases (ROG) in excess of the El Dorado County Air Quality Management District's (EDCAQMD) threshold; loss, disturbance, or interference with biological, archaeological, cultural, or paleontological resources; increased demand on public services; exposure of people to potentially unstable slopes around the North Quarry; the potential for release of naturally occurring asbestos and total petroleum hydrocarbons from onsite soils during construction activities; water quality degradation from stormwater runoff; exposure to noise; and the exceedance of park-and-ride facility capacity.

Implementation of the mitigation measures identified in Sections 3.1, *Aesthetics*, through 3.5, *Geology, Soils, Minerals, and Paleontological Resources*, and Sections 3.8, *Hydrology, Water Quality, and Water Resources*, 3.10, *Noise and Vibration*, and 3.14, *Transportation and Circulation*, would

reduce environmental impacts associated with the project's population and housing increases to a less-than-significant level, with the exception of the unavoidable project impacts listed in Section 5.4, *Significant and Unavoidable Impacts*. Because no feasible mitigation is available to avoid degradation of existing visual resources, reduce ROG emissions below the EDCAQMD's threshold or to avoid roadway-related noise, these population- and housing-induced environmental impacts would be significant and unavoidable.

The project also proposes a maximum of 475,000 square feet of commercial development, including 375,000 square feet of office park (chiefly financial and professional services, limited retail, and research and development) uses and 100,000 square feet of village commercial uses (primarily professional office and retail uses). The proposed commercial development is estimated to provide approximately 1,604 jobs (1,349 office park, 91 retail, and 164 general office jobs).[3] Development of the project would result in 1,604 additional jobs and 3,222 additional housing units in the El Dorado Hills area and is therefore not expected to substantially alter the existing state of the area's jobs/housing balance.

Development of the proposed project would require offsite infrastructure improvements, as described in Chapter 2, *Project Description*, including offsite infrastructure necessary to serve the project and traffic improvements required under General Plan Policy TC-Xf. Construction of these facilities could indirectly contribute to population growth in the area. However, the offsite water and wastewater infrastructure would be sized to facilitate development of the area's projected growth as estimated by EID. The expanded roadway network would also be sized to accommodate the project. General Plan Policy TC-Xf traffic improvements as well as any additions to the roadway network beyond those necessary for the proposed project would be constructed to accommodate the cumulative conditions anticipated by the County at the County General Plan planning horizon and would, therefore, not be a catalyst for new growth. Consequently, the proposed infrastructure would have a less-than-significant indirect impact on population growth. No mitigation is required.

Impact POP-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere (no impact)

Although residential development was approved under the Marble Valley Master Plan, homes were never constructed. Accordingly, development of the project site as proposed would not displace any existing housing units or people or necessitate the construction of replacement housing elsewhere. Instead, development under the proposed project would result in the creation of up to 2,824 additional new housing units (3,222, less the 398 units approved under the Marble Valley Master Plan) on a largely undeveloped site adjacent to existing rural residential uses. Because the proposed project would not displace any housing units, there would be no impact on existing housing units. No mitigation is required.

As discussed under Impact POP-1, the development of offsite infrastructure necessary to serve the project, including traffic improvements as stipulated under General Plan Policy TC-Xf, would be required. Construction of these facilities (e.g., new water and sewer lines, extension of public roadways and intersection improvements) would occur mostly in existing roadways and intersections and, therefore, would not displace any housing units. There would be no impact. No mitigation is required.

[3] Calculated using Institute of Transportation Engineers' standards for 375,000 square feet of office park, 50,000 square feet of retail, and 50,000 square feet of suburban general office uses.

Construction of offsite improvements, including General Plan Policy TC-Xf traffic improvements, new water and sewer lines, extension of public roadways, and intersection improvements, would occur mostly in existing roadways and intersections and would not displace people or housing. No mitigation is required.

3.12 Public Services and Utilities

This section describes the regulatory setting and environmental setting for public services (fire and police protection, schools, and libraries), public utilities (water, wastewater, stormwater, solid waste, and energy), and analyzes potential impacts that could result from implementation of the Village of Marble Valley Specific Plan (VMVSP; proposed project).

3.12.1 Existing Conditions

Regulatory Setting

Federal

There are no federal requirements for public services. Below are relevant federal regulations, plans, and policies for utilities.

Clean Water Act

Federal environmental regulations based on the Clean Water Act (CWA) have evolved to require the control of pollutants from municipal separate storm sewer systems (MS4s), construction sites, and industrial activities. Discharges from these sources were brought under the National Pollutant Discharge Elimination System (NPDES) permit process by the 1987 CWA amendments and subsequent 1990 and 1999 promulgation of stormwater regulations by the U.S. Environmental Protection Agency (USEPA). In California, USEPA has delegated the administration of the federal NPDES program to the State Water Resources Control Board (State Water Board) and the nine Regional Water Quality Control Boards (Regional Water Boards).

Energy Policy Act of 2005

The Energy Policy Act of 2005 was intended to establish a comprehensive, long-term energy policy and is implemented by the U.S. Department of Energy. The Energy Policy Act addresses energy production in the United States, including oil, gas, coal, and alternative forms of energy and energy efficiency and tax incentives. Energy efficiency and tax incentive programs include credits for the construction of new energy-efficient homes, production or purchase of energy-efficient appliances, and loan guarantees for entities that develop or use innovative technologies that avoid the production of greenhouse gases (GHG).

Safe Drinking Water Act

The Safe Drinking Water Act was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The act was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and groundwater wells. The act authorizes USEPA to set national health-based standards for drinking water to protect against both naturally occurring and human-made contaminants that may be found in drinking water. USEPA, states, and water systems then work together to make sure that these standards are met.

State

Senate Bill 610 (Chapter 643, Statutes of 2001)

Pursuant to California Water Code Section 10910, since 2001, cities and counties acting as lead agencies under the California Environmental Quality Act (CEQA) request water purveyors to prepare water supply assessments (WSA) for certain projects (as defined in Water Code 10912 and State CEQA Guidelines 15155) subject to CEQA. Projects under Senate Bill (SB) 610 are defined under Water Code Section 10912(a) as meeting specific criteria, including but not limited to proposed residential development of more than 500 dwelling units; proposed commercial, shopping center, or industrial use of certain sizes; or a project that would demand an amount of water equivalent to or greater than the amount of water required by a 500-dwelling-unit project. The primary issue for the WSA to determine is whether the projected supply for the next 20 years—based on normal, single dry, and multiple dry water years—will meet the demand projected for the project plus the existing and planned future uses, including agricultural and manufacturing uses.

California Environmental Quality Act and Case Law

Because of SB 610, CEQA documents must disclose whether a qualifying project's (as defined in Water Code 10912 and State CEQA Guidelines 15155) projected demand for water is anticipated to exceed existing and planned supplies. WSA requirements have been refined as a result of CEQA case law. In particular, the California Supreme Court stated in *Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova* (2007) 40 Cal.4th 412 (*Rancho*) that an adequate water supply analysis should contain the following elements.

- An identification of the water sources needed for full buildout.
- An assessment of the environmental impacts associated with providing water for the project.
- Where there are both short-term and long-term supplies needed, an analysis of long-term supplies and their impacts in at least a programmatic level of detail.
- An assessment of the extent to which identified water sources are "certain" or "likely" to be available. Future water supplies identified and analyzed in an environmental impact report (EIR) must be reasonably likely to prove available. Speculative sources and unrealistic paper allocation do not provide an adequate basis for decision-making under CEQA.
- When "some uncertainty" exists with respect to the availability of such supplies, the identification of possible alternative water sources and analysis of the environmental impacts of curtailing planned development due to inadequate supplies.

Regarding the last element listed above, the California Supreme Court explained that future water supplies identified and analyzed in an EIR must be reasonably likely to prove available and that, when a full analysis of future water supplies for a project leaves "some uncertainty" regarding the availability of the identified future supplies, the EIR must discuss possible replacement or alternative supply sources. In addition, the EIR must discuss the environmental effects of resorting to those alternative supply sources; it is not sufficient to simply state that future development will not go forward in the absence of a sufficient water supply.

If uncertainties inherent in long-term planning make it impossible to identify the future water sources with certainty, an EIR may satisfy CEQA if it includes an acknowledgment of the degree of uncertainty involved and discloses (1) the reasonably foreseeable water supply alternatives and

their significant environmental effects, and (2) mitigation measures to minimize each adverse impact (*Rancho* at 434).

The *Rancho* opinion outlined the following general principles governing the analysis of water supply issues in EIRs.

- An adequate environmental impact analysis for a long-range development plan cannot be limited to the water supply for the first stage of development. It must consider supplies necessary for the entire development.
- Future water supplies identified and analyzed in an EIR must be reasonably likely to prove available. Speculative sources and unrealistic allocation do not provide an adequate basis for decision-making under CEQA.
- When, despite a full analysis, "it is impossible to confidently determine that anticipated future water sources will be available," CEQA requires some discussion of possible replacement or alternative supply sources, and of the environmental consequences of resorting to those sources (*Rancho* at 432).
- An EIR for a land use plan need not demonstrate that the water supply for the project is assured through enforceable agreements with a provider and built or approved treatment and delivery facilities. To interpret CEQA as requiring firm assurances of future water supplies at early stages of the planning process would be inconsistent with the water supply statutes, which call for an assured supply only at the end of the approval process (*Rancho* at 432).
- The "ultimate question under CEQA is not whether an EIR establishes a likely source of water, but whether it adequately addresses the reasonably foreseeable impacts of supplying water to the project" (*Rancho* at 434).

A WSA was prepared for the VMVSP that meets SB 610 and CEQA case law requirements. The WSA was approved by the El Dorado Irrigation District in August 2013 (Appendix H1, *Water Supply Assessment*). The conclusions of the WSA were revalidated in October 2021 (Appendix H2, *Water Supply Assessment Revalidation Memorandum*). The WSA and revalidation memorandum are summarized below under *Water Supply, Demand, and Conservation*.

California Environmental Quality Act (CEQA) Guidelines Appendix F, Energy Conservation

CEQA requires EIRs to include a discussion of potential energy impacts and energy conservation measures. Appendix F, *Energy Conservation*, of the State CEQA Guidelines outlines energy impact possibilities and potential conservation measures designed to assist in the evaluation of potential energy impacts of proposed projects. Appendix F places "particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy" and that significant energy impacts should be "considered in an EIR to the extent relevant and applicable to the project." CEQA Guidelines were updated so that Energy is now its own section in the Appendix G, Environmental Checklist Form.

Senate Bill 1389, Chapter 568, Statutes of 2002

The California Energy Commission (CEC) is responsible for, among other things, forecasting future energy needs for the state and developing renewable energy resources and alternative renewable energy technologies for buildings, industry, and transportation. SB 1389 (Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report assessing major energy

trends and issues facing the state's electricity, natural gas, and transportation fuel sectors. The report is also intended to provide policy recommendations to conserve resources, protect the environment, and ensure reliable, secure, and diverse energy supplies. The *2023 Final Integrated Energy Policy Report*, the most recent report required under SB 1389, was adopted February 2024.

Assembly Bill 2076, Reducing Dependence on Petroleum

The CEC and California Air Resources Board are directed by Assembly Bill (AB) 2076 (passed in 2000) to develop and adopt recommendations for reducing dependence on petroleum. A performance-based goal was to reduce petroleum demand to 15% less than 2003 demand by 2020.

California Green Building Standards Code and Title 24

In January 2010, the California Building Standards Commission adopted the statewide mandatory Green Building Standards Code (CALGreen [California Code of Regulations, Title 24, Part 11]). CALGreen applies to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure. The 2022 CALGreen took effect on January 1, 2023, and includes updates for definitions, green building, and planning and design, .

CALGreen requires the installation of energy- and water-efficient indoor and outdoor infrastructure for all new projects beginning after January 1, 2011. The CALGreen Code requires residential and non-residential water efficiency and conservation measures for new buildings and structures that "establish the means of conserving water used indoors, outdoors and in wastewater conveyance."

CALGreen also requires that newly constructed buildings develop a waste management plan and recycle and/or salvage for reuse 65% of the nonhazardous construction and demolition waste generated during project construction (CALGreen 4.408 and 5.408).

The CEC adopted changes to the 2013 Building Energy Efficiency Standards contained in the California Code of Regulations, Title 24, Part 6 (also known as the California Energy Code) and associated administrative regulations in CALGreen Part 11. The 2019 Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The most significant efficiency improvements to the residential standards include the introduction of photovoltaic (PV) into the prescriptive package, improvements for attics, walls, water heating, and lighting.

California Model Water Efficient Landscape Ordinance

In 2006, the Water Conservation in Landscaping Act was enacted, which required the California Department of Water Resources (DWR) to update the Model Water Efficient Landscape Ordinance (MWELO). In fall of 2009, the Office of Administrative Law approved the updated MWELO, which required that a retail water supplier adopt the provisions of the MWELO by January 1, 2010, or enact its own provisions equal to or more restrictive than the MWELO provisions.

The provisions of the MWELO are applicable to new construction with a landscape area greater than 2,500 square feet. The MWELO provides a methodology to calculate total water use based upon a given plant factor and irrigation efficiency. Finally, MWELO requires the landscape design plan to delineate hydrozones (based upon plant factors) and then assign a unique value for each hydrozone (low, medium, and high water use). The design of landscape irrigation systems is anticipated to better match the needs of grouped plant types and thus result in more efficient outdoor irrigation.

Senate Bill 375—Sustainable Communities Strategy

SB 375 was adopted with a goal of reducing GHG emissions from cars and light trucks. Each metropolitan planning organization in California is required to develop a sustainable communities strategy as part of its regional transportation plan to meet the region's GHG emissions reduction target. Please refer to Section 3.6, *Greenhouse Gas Emissions*, for additional information on SB 375.

State Water Resources Control Board and Central Valley Regional Water Quality Control Board Permitting Authority and Basin Plan

The State Water Board and the nine Regional Water Boards have broad authority over water quality control and permitting in California. The State Water Board delegates regional authority for planning, permitting and enforcement to the Regional Water Boards including the Central Valley Regional Water Quality Control Board (Central Valley Water Board), which has jurisdiction over El Dorado Hills. The State Water Board and Regional Water Boards issue and enforce permits for wastewater treatment plants (WWTP), including waste discharge permits. The Central Valley Water Board also is responsible for implementing and updating the Basin Plan for improving and protecting water quality in the waterbodies under its jurisdiction, including the streams into which EID's WWTPs discharge. The State and Regional Water Boards implement the CWA and the Porter-Cologne Water Quality Control Act, both of which are discussed in Section 3.8, *Hydrology, Water Quality, and Water Resources*. The boards regulate water quality, but not supply.

The State Water Board has issued statewide general NPDES stormwater permits for designated types of construction and industrial activities and has adopted a statewide permit applicable to all small municipalities, including El Dorado Hills (see Section 3.8, *Hydrology, Water Quality, and Water Resources*).

The State Water Board on April 7, 2015 adopted an Amendment to the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) to Control Trash and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California. They are collectively termed the *Trash Amendments*. The State Water Board also prepared a Staff Report/Substitute Environmental Document to meet CEQA compliance requirements. The Trash Amendments will require the implementation of a consistent statewide approach for reducing environmental issues associated with trash in state waters and will be incorporated into all NPDES Permitting programs including Phase I and Phase II MS4s, Construction General Permits, and Industrial General Permits well as waste discharge requirements (WDR) and waivers to WDRs. NPDES Permittees will be required to commit to one of two tracks to achieve compliance with the Trash Amendments. Page 12 of the Substitute Environmental Document says: "**Any new development within the MS4 permittee's jurisdiction must be built to immediately comply with Track 1 or Track 2."

Subdivision Map Act

The state Subdivision Map Act (Government Code 66410 et seq.) grants the power to local jurisdictions to impose drainage improvements or drainage fees and assessments. Local jurisdictions may require the provision of drainage facilities, proper grading and erosion control, dedication of land for drainage easements, or payment of fees needed for the construction of drainage improvements. Typically, the local requirements are specified by local ordinances or plans.

The Subdivision Map Act also specifically addresses energy conservation (Government Code 66473.1) and requires that the design of a subdivision provide, to the extent feasible, for future

passive or natural heating or cooling opportunities in the subdivision. Section 66473.1(b) suggested examples of passive or natural heating (or cooling) include design of lot size and configuration to permit orientation of a structure to take advantage of southern exposure for heating and/or to take advantage of shade or prevailing breezes.

Waste Management Act

The California Integrated Waste Management Act (AB 939) became law in 1990 and mandated that every county and city in California divert 25% of its waste from landfills by 1995, and 50% by 2000 or face fines. Later legislation mandates the 50% diversion requirement be achieved every year. The act is administered by the California Department of Resources Recycling and Recovery (formerly the California Integrated Waste Management Board) and requires that each city and county prepare an integrated waste management plan. The integrated waste management plan must include source reduction and recycling elements and a household hazardous waste element. The Legislature set a goal of 75% recycling, composting or source reduction of solid waste by 2020, calling for the state and the Department of Resources Recycling and Recovery to take a statewide approach to decreasing California's reliance on landfills.

Leroy Green School Facilities Act

SB 50 (Leroy Green School Facilities Act) was approved by the voters in November 1998. SB 50 established a comprehensive program for funding school facilities based on 50% funding from the state and 50% funding from local districts, while limiting the obligation of developers to mitigate the impact of projects on school facilities. California Government Code Section 65995 et seq. establishes the statutory criteria for assessing construction fees. This section also states that the payment of school mitigation impact fees authorized by SB 50 is deemed to provide "full and complete mitigation of impacts" from the development of real property on school facilities.

Local

El Dorado County General Plan

The *El Dorado County General Plan* (County General Plan) contains goals, objectives, and policies related to services critical to the El Dorado County's (County) future growth and development (El Dorado County 2004a). The following are relevant goals, objectives, and policies. The full text of these goals, objectives, and policies can be found in Appendix B, *Consistency with El Dorado County General Plan Policies*, which provides an analysis of the project's consistency with County General Plan policies as required under State CEQA Guidelines Section 15125.

Housing Element

- Goal HO-5, *Energy Conservation*, seeks to increase the efficiency of energy and water use in new and existing homes, and includes Policy HO-5.1.

Public Services and Utilities Element

- Goal 5.1, *Provision of Public Services*, including Objective 5.1.2, *Concurrency*, which addresses the County's cooperation with service and utility providers and Policies, 5.1.2.1 and 5.1.2.2, which includes minimum levels of service (Table 5.1 of General Plan).

- Goal 5.2, *Water Supply*, which addresses the development or acquisition of water supply and includes Objective 5.2.1, *County-Wide Water Resource Program*, and Policies 5.2.1.2, 5.2.1.3, 5.2.1.4, 5.2.1.6, 5.2.1.9, 5.2.1.11, and 5.2.1.12.
- Goal 5.3, *Wastewater Collection and Treatment*, which addresses provision of wastewater infrastructure, and includes Objective 5.3.1, *Wastewater Capacity*, and Policies 5.3.1.1 and 5.3.1.7.
- Goal 5.4, *Storm Drainage*, including Objective 5.4.1, *Drainage and Flood Management Program*, and Policies 5.4.1.1 and 5.4.1.2.
- Goal 5.5, *Solid Waste*, including Objective 5.5.2, *Recycling, Transformation, and Disposal Facilities*, and Policy 5.5.2.1.
- Goal 5.6, *Gas, Electric, and Other Utilities Services*, including Objective 5.6.1, *Provide Utility Services*, and Policies 5.6.1.1 and 5.6.1.2, and Objective 5.6.2, *Encourage Energy Efficient Development*, and Policies 5.6.2.1 and 5.6.2.2.
- Goal 5.7, *Emergency Services*, including Objective 5.7.1, *Fire Protection (Community Regions)*, and Policy 5.7.1.1, Objective 5.7.3, *Law Enforcement*, and Policy 5.7.3.1, and Objective 5.7.4, *Medical Emergency Services*, and Policies 5.7.4.1 and 5.7.4.2.
- Goal 5.8, *Schools*, includes Objective 5.8.1, *School Capacity*, and Policy 5.8.1.1.
- Goal 5.9, *Libraries and Cultural Facilities*, addresses providing a quality County library system and other cultural facilities consistent with the needs of current and future residents.

Conservation and Open Space Element

- Goal 7.3, *Water Quality and Quantity*, including Objective 7.3.5, *Water Conservation*, and Policies 7.3.5.1, 7.3.5.4, and 7.3.5.5.

The County General Plan also identifies a program to implement the goals identified above and the objectives and policies under each of the goals. The implementation program identifies that the County will establish a means, either through formal agreement or identification of formal contacts, for various County agencies and departments to communicate with non-County public service and utility providers (e.g., water providers, wastewater treatment providers) regarding the planning for the provision of services and its relationship to the County General Plan and the County's long-range or capital improvement plans.

El Dorado Irrigation District Integrated Water Resources Master Plan

EID's Integrated Water Resources Master Plan (IWRMP), adopted in 2013, considers potable water and recycled water resources for the EID service area (El Dorado Irrigation District 2013a). This is the most recent plan in effect at the time of publication of this Draft EIR. The IWRMP addresses the maintenance of EID's existing water, and recycled water facilities and the development of future water resource infrastructure. In order to serve the existing and anticipated development within EID's service area, the IWRMP contains the following relevant objectives.

- Develop a reliable, long-term water resources program which considers existing water supply, future demand, hydroelectric power generation, and environmental and economic constraints.
- Define the long-term role of recycled water within the District's water resources portfolio.
- Identify and implement approaches to address future constraints, which may impact the District's service to its customers.

- Develop integrated and prioritized water, wastewater, and recycled water system capital improvements that are consistent with the District's long-term goals and objectives.

The IWRMP considers key water supply issues facing EID's service area, including reliability, infrastructure constraints, competing water resource needs, and the future role of recycled water. The IWRMP identifies existing and projected water demands and the water supplies and distribution systems that serve them, proposes and evaluates alternative future water supply solutions, and recommends a specific water resources plan to maximize water supply availability and reliability.

El Dorado Irrigation District 2022 Water Supply and Demand Report

The EID Water Supply and Demand Report is updated every 3 years to determine the current water supply and water meter availability within the El Dorado Irrigation District. Board Policy 5010, Water Supply Management, states that EID will not issue any new water meters if there is insufficient water supply. The report summarizes current water supply and total potential demand, water commitments, and historical trends in water demand. The 2022 report is the most recent report at the time of publication of this Draft EIR.

El Dorado Irrigation District Urban Water Management Plan

The Urban Water Management Planning Act (California Water Code, Division 6, Part 2.6, 10610–10657) requires urban water suppliers providing municipal water to more than 3,000 connections or supplying more than 3,000 acre-feet per year (AFY) of water to adopt and submit a plan every 5 years to DWR. EID's most recent Urban Water Management Plan (UWMP) 5-year update was adopted on June 28, 2021, and submitted to DWR as required by the Urban Water Management Planning Act. The 2020 UWMP (El Dorado Irrigation District 2021) describes EID's existing water supply sources and system, the areas it serves, and existing and projected water demands. The UWMP addresses water supply reliability and shortage contingency planning, conservation, and demand management.

El Dorado Irrigation District Wastewater Facilities Master Plan

EID issued its Wastewater Facilities Master Plan (WWFMP) in 2013. This is the most recent plan in effect at the time of publication of this Draft EIR. The plan outlines EID's long-term program for the collection and treatment of wastewater and the use of recycled water resources. The WWFMP provides recommendations and an implementation plan for the development of recommended wastewater and recycled water infrastructure to serve the growth anticipated by the County General Plan and associated specific plans (El Dorado Irrigation District 2013b). As such, the WWFMP focuses on three issues facing El Dorado County: wastewater discharge and the role of recycled water; future regulatory requirements; and infrastructure. The WWFMP includes estimates of existing and projected wastewater flows from the area served by EID's wastewater collection system. The WWFMP projects wastewater treatment needs for the EID service area based on the El Dorado County General Plan land use designations and the number of anticipated connections associated with development of the specific plans for the Bass Lake Hills, Carson Creek, El Dorado Hills, Northwest El Dorado Hills, Promontory and Valley View areas. The plan also identifies needed system expansions and upgrades to meet the projected increases in wastewater flows associated with this growth. The plan recommends a number of system enhancements such as improvements to lift stations and sewer pipelines.

The WWFMP plans for expansion of the Deer Creek WWTP from 3.6 million gallons per day (mgd) to 5.0 mgd by 2028 (El Dorado Irrigation District 2013b). The Deer Creek Wastewater Treatment Plant Expansion Project Final EIR (SCH #1996092074) for this expansion was certified in 1998 and is available for review at the County Planning Division office (ESA 1998). The WWFMP contains the following relevant objectives related to wastewater and recycled water.

- Define the long-term role of recycled water within the District's water resources portfolio.
- Develop integrated and prioritized water, wastewater and recycled water system capital improvements that are consistent with the District's long-term goals and objectives.

El Dorado Water Agency Water Resources Development and Management Plan

The 2019 El Dorado Water Agency (EDWA, Formerly El Dorado County Water Agency or EDCWA) *Water Resources Development and Management Plan* identifies water sources and demands and resource management strategies to counter droughts, wildfires, deteriorated headwaters, limited groundwater resources, and fragmented water management threats to the County (Stantec 2019). The goal of the resource management strategies presented in the plan is to proactively address changing water resources needs, regulatory requirements, and climate variability. The focused and defined role and responsibility in implementing actions for advancing these strategies would ensure effectiveness and efficiency in achieving anticipated outcomes, while promoting the agency's long-term organizational and financial sustainability. The WRDMP identifies several principal implementing agencies and their roles including EID, Georgetown Divide Public Utility District, Grizzly Flats Community Services District, Local Agency Formation Commission, South Tahoe Public Utility District, Tahoe City Public Utility District, and Tahoe Regional Planning Agency.

El Dorado Hills Fire Department Five Year Plan

The *El Dorado Hills Fire Department Five Year Plan for 2013–2018*, adopted in October 2013, serves as a projection for the department's growth over the next 5 years. This is the most recent 5 year plan in effect at the time of publication of this Draft EIR. The plan identifies historical and projected residential and commercial development in the El Dorado Hills Fire Department's (EDHFD) service area, including the location, total projected units, and population associated with residential development and the square footage and location of anticipated commercial development. The plan summarizes annual incidents and calls for service from 2007 through 2017. In the year 2020, the El Dorado Hills Fire Department responded to a total of 4,484 calls for service (El Dorado Hills Fire Department 2020). The plan identifies existing staffing and uses that, along with the development data, to predict future department staffing needs. In addition, it describes existing and proposed facilities and apparatus, including a proposed 21-acre training facility in the El Dorado Hills Business Park (El Dorado Hills Fire Department 2013).

The plan includes maps showing driving times from each of the fire district's existing stations and the proposed Business Park Station to the district's more populated areas. The maps do not reflect total response time, which includes reporting the emergency and call processing (El Dorado Hills Fire Department 2013). Driving times depicted on the maps range from 4.5 to 6.5 minutes (El Dorado Hills Fire Department 2013).

The plan describes existing and future department revenues and their sources, including property taxes and development fees. The plan notes a decrease in property tax revenues over the past 5 years due to the economic downturn and associated lack of development and indicates an increase beginning in the 2013–2014 fiscal year (El Dorado Hills Fire Department 2013). EDHFD imposes

development fees on all new development to ensure the development pays its share of capital costs associated with adequate facilities and equipment to mitigate its impacts and to ensure maintenance of the level of service provided to existing residents within its jurisdiction. The department has historically imposed development fees on a per-dwelling-unit basis, converted to a per-square-foot fee for industrial and commercial development (El Dorado Hills Fire Department 2013). The plan reflects a new fee structure, consistent with that used by the Sacramento Metropolitan Fire District and based on input from the other El Dorado County fire districts, which is based on square footage for both commercial and residential applications (El Dorado Hills Fire Department 2013). Current development impact fees for EDHFD are $1.18 per square foot for single family residential and $2.00 per square foot for retail/commercial (El Dorado County 2022).

El Dorado County Fire Protection District Five Year Plan

The *El Dorado County Fire Protection District Five Year Plan 2011–2016* serves as a set of guidelines to address identified needs over a 5-year period. The district's vision and guiding principles, history, organization, and sources of revenue are outlined, and the district's facilities, apparatus, and response to incidents are described. The plan uses this information to identify personnel and equipment needs as well as methods to address those needs.

The plan indicates that the El Dorado County Fire Protection District—also referred to as the El Dorado County Fire District or El Dorado County Fire—responds to 4.6 times more calls than the average number of responses of all 14 other fire agencies in El Dorado County (El Dorado County Fire Protection District 2011). The plan includes bar charts that show a 15.7% increase in call volume over the previous 8 years, and a 19% reduction in average response time since 2002, with an average response time of 9 minutes and 19 seconds (El Dorado County Fire Protection District 2011).

The plan also describes existing and future department revenues and their sources, including property taxes and development fees. Property taxes constitute the district's primary source of funding; the district receives 13% of the 1% Ad Valorem Tax collected by the County within the district's boundaries (El Dorado County Fire Protection District 2011). The plan notes a decrease in property tax revenues beginning in the 1992–1993 fiscal year, associated with the transfer of 10% of each special district's property tax revenue to school funding through the Educational Revenue Augmentation Fund, and indicates that the annual loss to the district exceeds $1.1 million dollars (El Dorado County Fire Protection District 2011). In addition to the Ad Valorem Tax funding, the district receives funding from voter-approved special taxes in some areas of the district; this funding provides approximately $510,000 of additional annual revenue (El Dorado County Fire Protection District 2011).

El Dorado Union High School District Master Plan

The *El Dorado Union High School District 2018 Master Plan* (2018 Master Plan), adopted in April 2018, is intended to guide the district in managing, upgrading, and modernizing its school facilities for the next 10 years. This is the most recent 5-year plan in effect at the time of publication of this Draft EIR. The 2018 Master Plan presents the district's 10-year enrollment history, current and projected enrollment and capacity for each of its schools, and an assessment of existing school facilities' adequacy and projected needs. The plan presents projected facility needs, makes recommendations, and outlines potential and projected district revenues and their sources.

Facility needs considered in the 2018 Master Plan fall into several categories, including growth, modernization, support facilities, program needs, and building and grounds upgrades. These needs are driven by a variety of factors, including student population and facility aging. The 2018 Master Plan defines growth needs as those that arise due to an increased student population associated with projected new developments that generate more students than can be accommodated in existing facilities (SchoolWorks 2018a). Modernization needs are associated with the aging of existing facilities, which state standards suggest should be modernized at 25 years of age, or 20 years for portable structures (SchoolWorks 2018a). Support facility needs refer to the ability of non-classroom areas such as libraries, kitchens, gymnasiums, restrooms, and site acreage to serve the number of students at a school (SchoolWorks 2018a). Program needs are those caused by educational program changes and building, and grounds upgrades reflect activities such as improving access for people with disabilities, roof replacement, upgrades to electrical, plumbing, heating, and air conditioning systems, and fire and safety upgrades (SchoolWorks 2018a). The 2018 Master Plan indicates a variety of needs district-wide, including a 2,400-square-foot portable foods classroom at Oak Ridge High School, the closest high school to the project site (SchoolWorks 2018a).

The 2018 Master Plan contains the following relevant strategic planning goal.

- Develop and implement Facilities Master Plan designed to maximize local and state funding sources to maintain, upgrade, and modernize facilities and technology across the District.

El Dorado Union High School District utilizes several sources of revenue, including two local sources, developer fees, and community facilities district special taxes, to pay for its facilities. The district collects developer fees on commercial/industrial projects, senior housing projects, and residential additions consisting of more than 500 square feet (SchoolWorks 2018a). Use of these funds is limited to growth-related capital facility projects and related expenses (SchoolWorks 2018a). These fees are collected one time, concurrent with County building permit issuance for such projects. In addition, the district receives 38% of special taxes collected in the El Dorado Schools Financing Authority Community Facilities District (CFD) #1, which was established in the El Dorado Hills Specific Plan area in 1992 to fund capital facilities needed to accommodate new development in the El Dorado Union High School District, the Buckeye Union School District, and the Rescue Union School District (SchoolWorks 2018a). These funds are collected annually over a long period; the district's annual CFD revenue is currently $1.9 million (SchoolWorks 2018a).

Buckeye Union School District Facility Master Plan

The Buckeye Union School District's *Facility Master Plan* was adopted in March 2016. This is the most recent plan in effect at the time of publication of this Draft EIR. The 2016 *Facility Master Plan* is intended to guide district decision-making related to future facility needs. As such, it describes the district's history and demographics, existing and future educational programming, facility needs, and potential funding sources.

The Buckeye Union School District is a district where most schools have been built in the last 20 years as the region's population exploded with numerous planned development communities, most notably Serrano and Blackstone. The 2016 *Facilities Master Plan* concentrates on maintenance and repair needs, as well as some fundamental functional deficiencies (DLR Group 2016).

The 2016 *Facilities Master Plan* projects student enrollment and facility adequacy through 2022. As of the time of its adoption in 2016, the *Facilities Master Plan* predicted that Blue Oak Elementary School, which is one of the two nearest schools to the project site, would need Americans with Disabilities Act accessibility improvements; heating, ventilation, and air conditioning replacement;

roofing replacement; and other isolated issues that require attention from a building condition improvement standpoint (DLR Group 2016). The other nearest school, Camerado Springs Middle School, would have few major building condition improvement issues that need to be addressed either immediately or in the near to mid-term future (DLR Group 2016).

The Buckeye Union School District uses multiple revenue sources, including Proposition 39 funding, general obligation bond funding, and development fees, to pay for its facilities. The 2016 *Facilities Master Plan* describes these local funding sources.

El Dorado County Subdivision Ordinance

The County Subdivision Ordinance (El Dorado County Code Title 130) requires the submission of drainage plans prior to the approval of tentative maps for proposed subdivision projects. The drainage plans must include an analysis of upstream, onsite, and downstream facilities and pertinent details, and details of any necessary offsite drainage facilities.

El Dorado County Design and Improvement Standards Manual

The *El Dorado County Design and Improvement Standards Manual* was adopted in 1990 and provides required erosion and sediment control measures applicable to subdivisions, roadways, and other development.

Western El Dorado County Storm Water Management Plan

The adopted *Storm Water Management Plan for Western El Dorado County* (SWMP) describes a program to reduce the discharge of pollutants associated with stormwater drainage system that serve western El Dorado County (El Dorado County 2004b). It identifies how the County will comply with the provisions of the WDRs for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems General Permit No. CAS000004 (Order No. 2003-0005-DWQ) (Small MS4 Permit) issued by the State Water Board. The SWMP addresses County activities, including how the County manages the planning, design, and construction of projects carried out directly by the County and under permits issued by the County; and how the County maintains facilities owned and operated by the County and activities carried out by others on properties owned by the County. It also addresses County responsibilities for implementing applicable stormwater management practices as well as training, public education, and outreach, monitoring, program evaluation, and reporting.

In May 2015, the County adopted a County-Wide Storm Water Ordinance (Ordinance No. 5022) to ensure compliance with the new Small MS4 Permit requirements in the entire unincorporated county. Chapter 8.79 of the County Code contains the stormwater regulations, which establish the County's authority to implement and enforce the SWMP and to ensure compliance with state and federal stormwater laws and regulations. It also sets forth requirements that development projects incorporate BMPs to control the volume, rate, and potential pollutant loading of stormwater runoff. As provided by Section 8.79.150.G, the required BMPs may be contained in any land use entitlement, conditions of approval, grading plans, improvement plans, or any construction or building-related permit to be issued relative to such development. The requirements became effective in June 2015.

Additionally, the State Water Board's NPDES General Permit for MS4s (Order 2013-0001-DWQ) was adopted by the State Water Board and went into effect on July 1, 2015. The proposed project qualifies as a "Regulated Project" as defined in Section E.12 of the Order and, therefore, would be required to comply with the standards provided in the Order.

County of El Dorado Drainage Manual

The *County of El Dorado Drainage Manual* was adopted in 1995 (El Dorado County 1995). It documents criteria to address the procedures of hydrology and hydraulics required for the analysis and design of drainage facilities within El Dorado County, particularly as the county urbanizes. The manual is intended to outline procedures and techniques necessary to provide a standard methodology in the performance of the analysis and design of stormwater and drainage facilities. It is largely applicable to discretionary applications such as tentative subdivision maps and parcel maps.

El Dorado County Solid Waste Management Ordinance (No. 4525)

The County's solid waste management ordinance (No. 4525) governs the accumulation, storage, collection, and disposal of solid waste generated on residential, commercial, and industrial properties within El Dorado County. The ordinance includes prohibitions and permit requirements for specific activities.

El Dorado County Construction and Demolition Debris Diversion Ordinance

The County's debris recycling ordinance, adopted in 2003, added Chapter 8.43 to the County's Ordinance Code and requires individuals or businesses demolishing or constructing projects with structure footprints exceeding 5,000 square feet in area to recycle at least 50% of the construction and demolition debris created. Prior to the issuance of a permit, the permit applicant must submit a debris recycling acknowledgment. Within 60 days of completion of the project, the applicant must submit a debris recycling report demonstrating they have diverted at least 50% of the waste generated (California Department of Resources Recycling and Recovery 2006).

El Dorado County Solid Waste Management Plan

The *El Dorado County Solid Waste Management Plan*, adopted in 2012, was designed to assist the County in reaching a future 75% landfill diversion goal (El Dorado County Environmental Management Department 2012). The plan provides a strategic roadmap to use in planning for coordinated, countywide, and jurisdiction cooperation and initiating near-, intermediate-, and long-term programs and infrastructure strategies. The plan includes the estimated potential diversion gains for each strategy and methods to track strategy progress. It also includes estimated costs and funding methods for the program and infrastructure strategies.

Environmental Setting

Public services include fire and police protection, schools, and libraries. Public utilities include water, wastewater, stormwater, solid waste, and energy.

Fire Protection

Fire protection services in El Dorado County are provided by 13 separate fire districts, one city fire department, the California Department of Forestry and Fire Protection, and the U.S. Forest Service. Two fire protection districts serve the proposed project site: the El Dorado Hills County Water District (which includes the EDHFD) serves the western portion of the project site, and the El Dorado County Fire Protection District (also referred to as the El Dorado County Fire District or El Dorado County Fire) serves the eastern portion.

The EDHFD covers approximately 112 square miles and serves a population of approximately 55,000 with five fire stations and five response zones (El Dorado Hills Fire Department 2017). The department currently has 76 paid personnel (El Dorado Hills Fire Department 2017). As stated in the *Regulatory Setting*, Policy 5.1.2.2 in the County General Plan identifies that the minimum level of service for fire district responses should be an 8-minute response to 80% of the population for a Community Region, and a 15–45-minute response time for a rural region (El Dorado County 2004). Fire Station Number 86 would serve the western portion of the project area. Fire Station Number 86, which lies approximately 1 mile northwest of the project site, has average response times in the plan area of between 4:28 and 5:27. (Hobert pers. comm.). This fire station is staffed with three fire personnel and is equipped with an advanced life support engine and a wildland urban interface engine (Hobert pers. comm.).

The El Dorado County Fire Protection District serves 281 square miles and population of 75,000 with 14 stations (El Dorado County Fire 2020). The department consists of 75 total personnel (El Dorado County Fire Protection District 2024.). Station 28 would serve the eastern portion of the project site. This fire station is located approximately 4 miles northeast of the project site. and the average response to the project site would be approximately 12.5 minutes (Alvarado, pers. comm.).

Police Protection

The proposed project would be served by the El Dorado County Sheriff's Office for law enforcement. The County Sheriff's Office is made up of the South Lake Tahoe patrol and the West Slope Patrol. The West Slope Patrol contains the Placerville team which would serve the plan area, has two lieutenants, eight sergeants and 50 deputies. There is also a substation in El Dorado Hills which is frequently staffed by volunteers and deputies and a substation in Cameron Park that opened in 2022. The Sheriff's Office service to approximately 1,800 square miles of unincorporated areas of El Dorado County, which encompasses a population of approximately 183,000 (El Dorado County Sheriff's Department 2021). The County's target service ratio is 1.0 officer per 1,000 residents (El Dorado County 2004). With a service population of 186,123 in unincorporated El Dorado County and 93 sworn officers, the current service ratio is 0.49 (or 1 officer for every 1,112 residents), which does not meet the 1.0:1,000 ratio standard (El Dorado County Sheriff's Department 2017).

Policy 5.1.2.2 in the County General Plan identifies that the minimum level of service for sheriff responses should be an 8-minute response to 80% of the population (El Dorado County 2004). In 2013, the Sheriff's Department responded to 572 priority 1 and 2 calls; 40% of these calls (228) were responded to in less than 8 minutes (El Dorado County Sheriff's Department 2014). In an effort to decrease response times to all areas of the county, the Sheriff's Office has implemented several new programs in the past few years, such as the assignment of residential deputies. In 2017, The Sheriff's Office changed from a system of assigning deputies to geographic patrol zones, to a data-driven policing model where crime events are analyzed in real time and deputies are assigned to geographic areas based on data (El Dorado County Sheriff's Department 2017).

Schools

Approximately 20% of the total households in El Dorado County have children under the age of 18 (i.e., school-age children) (U.S. Census Bureau 2020). The household size in unincorporated El Dorado County averages 2.59 people. Approximately 38,961 children ages 3 and over are enrolled in school. Approximately 2,200 (5.6%) are enrolled in preschool, 2,291 (5.9%) are enrolled in

kindergarten, 16,281 (51.8%) are enrolled in elementary school (including up to 8th grade), and 9,054 (23.2%) are enrolled in high school (U.S. Census Bureau 2022).

The County General Plan relies on each individual school district to identify its own capacity and classroom utilization rate (El Dorado County 2004:5-87). Existing and projected school enrollment and capacity for the schools closest to the project site are described below.

For 9th through 12th grades, the project site is in the El Dorado Union High School District. The district's 2020-2021 Demographics and Enrollment Projections identifies the capacity and enrollment of each school within the district (Schoolworks 2020). The El Dorado Union High School District serves approximately 6,716 students, as of 2022-2023, and includes four comprehensive high schools: El Dorado, Oak Ridge, Ponderosa, and Union Mine (SchoolWorks 2020; Education Data Partnership 2024). Table 3.12-1 show the current enrollment and capacity of these high schools. The school district has experienced an overall decline from its peak of 7,411 students in 2005–2006 to a current 2022-2023 enrollment of 6,716 (Education Data Partnership 2024). The current total capacity of the school district is 8,415 students (Schoolworks 2020). The District is projected to have a declining enrollment over the next six years, with a projected enrollment of 6,218 students in the 2026-2027 school year (Schoolworks 2020). Classroom capacity is determined by multiplying the number of classrooms, designated at full time teaching stations, by the district's classroom loading standards; a similar calculation is performed to determine the adequacy of support facilities (SchoolWorks 2020).

The proposed project site is within the attendance boundary of Union Mine High School (Marble Valley Company, LLC 2023). Although the proposed project is within the attendance boundary of Union Mine High School, the El Dorado Union High School District would determine which high school would house the students residing in the project area (Marble Valley Company, LLC 2023).

For transitional kindergarten through 8th grade, the project site falls within the boundaries of the Buckeye Union Elementary School District. Blue Oak Elementary School (modified traditional schedule transitional kindergarten through 5th grade) and Camerado Springs Middle School (modified traditional schedule 6th through 8th grades) are both located approximately 0.5 mile north of the project site and are the closest elementary and middle schools that could serve the project area, respectively. An additional elementary school, Valley View Charter Montessori (transitional kindergarten through 6th grade), opened for the 2017–2018 school year. Both schools are currently operating within capacity (Education Data Partnership 2024; Schoolworks 2018b.). Table 3.12-1 identifies student enrollment and capacity at these three schools for the 2023–2024 school year.

Table 3.12-1. Summary of 2022–2023 Student Enrollment

Elementary and Middle Schools	Current Enrollment[a]	Current Capacity[b]
Blue Oak Elementary	485	816
Camerado Springs Middle School	479	960
Valley View Elementary	694	850[c]
Total	1,658	2,626
High Schools	**Current Enrollment[a]**	**Current Capacity[d]**
Oak Ridge High School	2,516	2,530
El Dorado High School	1,224	1,568
Ponderosa High School	1,648	2,283
Union Mine High School	1,066	1,485
Total	6,454	7,866

Sources:
[a] Education Data Partnership 2024.
[b] Schoolworks 2018b.
[c] Data for 2017–2018 school year only.
[d] Schoolworks 2022.

The Buckeye Union School District currently has five elementary schools, two middle schools, and a transitional kindergarten through 8th grade charter Montessori school. The school district serves the communities of Shingle Springs, El Dorado Hills, and Cameron Park. Enrollment for this school district has shown growth since 2005: from 3,647 students in the 1996–1997 school year to 9,659 students in the 2022–2023 school year (Education Data Partnership 2024).

Both the El Dorado Union High School District and the Buckeye Union School District use several revenue sources to pay for facility needs. The districts collect taxes via the El Dorado Schools Financing Authority CFD, which provides funds for capital facilities to serve students generated by new development. Additionally, the districts collect developer fees as permits are issued for residential and commercial/industrial projects. The fees are established by the state and are considered the basic mitigation fee if justification can be shown that anticipated development within a district will affect the district with additional students. The current rate, adopted in 2018, is $0.43 per square foot of residential and $0.23 per square foot of commercial development (SchoolWorks 2018a:55).

Libraries

El Dorado County has six county libraries ranging in size from 23,000 square feet (Main Library in Placerville) to 1,200 square feet (Pollock Pines Library). A total of 67,384 square feet of library space in El Dorado County serves a population of approximately 190,465 people (0.35 square foot per person) (California State Library 2021). The nearest library to the project site, the Cameron Park Library, is approximately 0.25 mile north of U.S. Highway (US) 50 on Country Club Drive. The Cameron Park Library is a 12,528-square-foot facility that serves a population of 18,370 in the Cameron Park community, providing 0.68 square foot of library space per capita (California State Library 2021; City Library n.d.a). The 16,057-square-foot El Dorado Hills Library is on Silva Valley Parkway and serves the El Dorado Hills area (California State Library 2021). The library has more than 60,000 volumes (El Dorado County Library 2019). The El Dorado Hills Library serves a

population of 50,000, providing 0.32 square foot of library space per capita (California State Library 2021; City Library n.d.b). While the County library system does not currently have a facilities master plan, a typical standard used for planning purposes is 0.5 square foot of library space per capita (EDAW 2003a; Amos pers. comm.). Therefore, with approximately 0.35 square foot of existing library space per capita, the County has an existing deficit of library space compared to the typical standard. The Cameron Park Library has slightly library space per capita than the countywide average and the planning standard; the El Dorado Hills area, conversely, meets neither the planning standard or the existing countywide per capita library square footage.

Water Supply, Demand, and Conservation

The project site is within the EID service area for both potable and recycled water service and is subject to the district's water conservation plans. EID depends on surface water from the watersheds of the Sierra Nevada to serve existing and future customers through a complex network of storage, treatment, and transmission facilities.

Potable Water

The description of water supply for the proposed project is based on the EID-approved 2013 WSA and water supply options memorandum prepared by Tully & Young, Inc. provided in Appendix H1, *Water Supply Assessment*, and the 2021 revalidation memorandum provided in Appendix H2. The *El Dorado Irrigation District 2022 Water Supply and Demand Report* and *2020 Urban Water Management Plan* also detail water supply and the timing and need for various improvements throughout the district. Based on reviews of these recent reports and the revalidation memorandum (Appendix H2), the data and supply availability conclusions in the WSA relating to water supply and consumption remain valid.

An overall potable water delivery system is in place for the communities of El Dorado Hills and Cameron Park, including offsite transmission mains, storage tanks, and booster stations. However, no water delivery facilities are present on the project site. EID provides potable water to over 100,000 people in El Dorado County through two primary interconnected water systems in its service area—the El Dorado Hills system and the Western/Eastern system. The El Dorado Hills water system obtains its primary supplies under rights and entitlements from Folsom Reservoir, while the Western/Eastern system derives its supplies from sources under rights from the South Fork American River and Cosumnes River watersheds. The project site lies within EID's El Dorado Hills supply area.

EID has two broad categories of water assets available that could be used for the proposed project: (1) secured water assets, and (2) planned water assets. EID's secured water assets are derived from a variety of surface water sources, including pre-1914 appropriative water rights, licensed and permitted appropriative water rights, U.S. Bureau of Reclamation (Reclamation) Central Valley Project (CVP) water service contracts, and Warren Act contracts, as well as recycled water produced from treated effluent at the El Dorado Hills and Deer Creek WWTPs, described below under *Recycled Water*. EID's planned water assets consist of acquiring two additional water supplies for use within its service area to make available for the proposed project: (1) water under the El Dorado–Sacramento Municipal Utility District (SMUD) Cooperation Agreement, in cooperation with the El

Dorado Water and Power Authority,[1] and (2) a CVP water entitlement derived from El Dorado Water Agency (EDWA) Fazio water supply when needed. Upon State Water Board approval, the El Dorado–SMUD Cooperation Agreement would provide EID with 30,000 AFY of water through 2025 and 40,000 AFY thereafter. The EDWA Fazio water could provide EID with an additional 7,500 AFY of water from Folsom Reservoir; however, with EID's existing water rights, there is no near-term plan to use the Fazio water (Appendix H1, *Water Supply Assessment*:4-8). These planned water assets, although partially secured, are not yet fully available for EID's use. In normal years, the water supplies under these planned assets total 37,500 AFY. In 3 consecutive dry years, the water supplies under these planned assets total 10,625 AFY (Appendix H1, *Water Supply Assessment*:4-15).

Based on the 2013 WSA, together with EID's recycled water supply (see *Recycled Water Supply and Demand*), these district-wide secured and planned assets total 110,290 AFY in normal water years and 77,885 AFY in a single dry water year. In year 2 and year 3 of a multiple-year drought in 2035, district-wide supplies would be reduced to 73,965 and 72,465 AFY, respectively. The current district-wide water supplies for a multiple-year drought are 63,860 acre-feet (af) for year 1, 59,940 af for year 2, and 58,440 af for year 3. The current district-wide water demand is 38,984 AFY. Normal year water supplies currently available to EID with secured assets total 67,190 AFY. In dry years, the water supplies currently available to EID under the secured assets are 61,660 AFY (year 1 of multiple dry year); 57,740 AFY (year 2 of multiple dry year); and 56,240 AFY (year 3 of multiple dry year). Refer to Appendix H1, *Water Supply Assessment*, for additional details. Table 3.12-2 provides an updated water supply summary based on the 2020 UWMP.

EID acquires the Folsom Reservoir water for use in the El Dorado Hills system through a Reclamation CVP water service contract, a Warren Act contract for re-diverted Weber Reservoir and EID ditch water, and State Water Right Permit 21112 (El Dorado Irrigation District 2019). Through the Reclamation CVP contract, EID is entitled to 7,550 AFY during normal and wet years, subject to a Reclamation shortage policy that can restrict allocations during periods of water shortage to 75% of historic use (El Dorado Irrigation District 2013a). This policy allows Reclamation to limit EID's allocations to approximately 5,660 AFY or less during shortages (El Dorado Irrigation District 2013a). The 2019 Water Supply and Demand Report cites a dry year allocation of 6,775 (El Dorado Irrigation District 2019).

Warren Act contracts allow non-federal water assets to be transported through federal storage and conveyance facilities for retrieval. EID's Warren Act contract water consists of approximately 4,560 AFY of re-diverted water that historically was diverted at Weber Dam, Weber Creek, Slab Creek, and Hangtown Creek diversion ditches but now is sent downstream for diversion at Folsom Reservoir instead (El Dorado Irrigation District 2013a). Permit 21112 grants EID 17,000 AFY of water; EID is working to finalize a long-term Warren Act contract to allow diversion of this water at Folsom Reservoir (Appendix H1, *Water Supply Assessment*; El Dorado Irrigation District 2021). The only water that EID currently purchases wholesale is that associated with the Reclamation contract; however, EID plans to purchase water wholesale from EDWA, which is pursuing a Reclamation contract under Public Law 101-514 (El Dorado Irrigation District 2011). Raw water diverted from Folsom Reservoir is treated at the 26-mgd-capacity El Dorado Hills Water Treatment Plant (WTP) prior to distribution (El Dorado Irrigation District 2013a).

[1] This entity is a Joint Powers Authority consisting of El Dorado County, El Dorado County Water Agency, and El Dorado Irrigation District.

Table 3.12-2. El Dorado Irrigation Water Supply Summary 2020-2045 (values in acre-feet)

Water Right or Entitlement	Maximum Water Assets Available	Normal Year	Single Dry Year	Multiple Dry Years				
				Year 1	Year 2	Year 3	Year 4	Year 5
Existing Supplies								
Ditches / Weber Reservoir Rights (License 2184 and Pre-1914 Water Rights)	4,560	4,560	3,000	3,000	3,000	3,000	3,000	3,000
Sly Park Reservoir (Licenses 11835 and 11836)	33,400	23,000	20,920	20,920	17,000	15,500	15,500	15,500
CVP Contract 14-06-200-1375A-LTR1	7,550	7,550	3,775	3,775	3,775	1,235	1,235	1,235
Project 184 (Pre-1914 at Forebay)	15,080	15,080	15,080	15,080	15,080	15,080	15,080	15,080
Permit 21112 (Project 184 Warren Act Contract)	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000
Outingdale/ Middle Fork Consumnes (Permit 4071)	104	104	104	104	13	13	13	13
Recycled Water (non-potable)	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500
Subtotal existing	81,194	70,794	63,379	63,379	59,368	55,328	55,328	55,328
Planned Supplies								
CVP Fazio water entitlement	7,500	7,500	3,750	3,750	3,750	1,235	1,235	1,235
Subtotal planned	7,500	7,500	3,750	3,750	3,750	1,235	1,235	1,235
Total	88,694	78,294	67,129	67,129	63,118	56,563	56,563	56,563

Source: 2020 Urban Water Management Plan, Table 3-5. El Dorado Irrigation District 2021.
af = acre-feet
AFY = acre-feet per year

Recycled Water

EID has been producing recycled water for over 30 years at the El Dorado Hills WWTP, initially for industrial purposes and for turf irrigation at the El Dorado Hills Executive Golf Course (El Dorado Irrigation District 2021). The Deer Creek WWTP facilities began supplying recycled water to the Serrano area of El Dorado Hills in 1990, and in 1997 the systems and pipe networks of the El Dorado Hills and Deer Creek WWTPs became a single, interconnected delivery system (El Dorado Irrigation District 2021). In the late 1990s and early 2000s, EID expanded recycled water use to include commercial and residential irrigation. Currently, the demand for recycled water exceeds production,

and must be supplemented with potable water as needed during peak seasonal demand. Currently, EID delivers approximately 4,200 acre-feet of water to its recycled water customers annually, of which about 700 acre-feet is supplemental potable water. The recycled water system is now nearing buildout, and EID does not anticipate additional connections, as the expansion of recycled water customers has diminished in recent years due to capital costs, operating costs, lack of supply, and availability of potable water (El Dorado Irrigation District 2021). By 2045, EID anticipates having a supply of 3,500 AFY of recycled water within its service area (El Dorado Irrigation District 2021).

Current and Future Demand

Based on the 2015 EID *Water Diversion Report*, EID diverted 27,810 af into its potable water system. In addition to the potable water, EID served 2,349 af of recycled water in 2015 to meet customer demands (El Dorado Irrigation District 2013a). Combined, the total district potable water use in 2015 was 22,241 af (El Dorado Irrigation District 2021). This value includes nonrevenue water,[2] including system losses, necessary to deliver these supplies from their respective treatment plants to the customer meter. This value also includes 909 af sold to the City of Placerville (El Dorado Irrigation District 2021). The 2019 total district potable water use was 26,283 af (El Dorado Irrigation District 2021).

Table 3.12-3 shows how total water demand from existing and planned uses in EID's service area is anticipated to increase through 2045. Per the 2020 UWMP, total water demand for the years 2040 and 2045 are estimated at 42,130 AFY and 43,320 AFY, respectively (El Dorado Irrigation District 2021). These totals include all expected demands, including the proposed project as represented in the revalidation memorandum (Appendix H2).

[2] *Nonrevenue* water represents all of the water necessary to deliver to the customer accounts and reflects distribution system leaks, water demands from potentially unmetered uses such as fire protection, hydrant flushing, and unauthorized connections, and inescapable inaccuracies in meter readings. The predominant source of nonrevenue water is from system leaks.

Table 3.12-3. Estimated Combined Water Demand from Other Existing and Planned Future Uses in the El Dorado Irrigation District Service Area

	Demand (AFY)				
Category	2025	2030	2035	2040	2045
Potable					
Existing Potable Uses	21,220	21,220	21,220	21,220	21,220
New Potable Use Customers	890	1,790	2,690	3,660	4,600
Total Municipal	22,110	23,010	23,910	24,880	25,820
Other Uses	3,300	3,300	3,300	3,300	3,300
Agricultural (potable)	5,210	5,360	5,510	5,660	5,810
Distribution System Loss	4,120	3,860	3,960	4,050	4,150
Total Potable Demand	34,740	35,530	36,680	37,890	39,080
Recycled					
Single Family – dual (landscape)	2,450	2,450	2,450	2,450	2,450
Commercial	990	990	990	990	990
Recreational Turf	490	490	490	490	490
Distribution System Loss	310	310	310	310	310
Total Recycled Demand	4,240	4,240	4,240	4,240	4,240
Total Water Demand	38,980	39,770	40,920	42,130	43,320

Source: EID 2020 UWMP Table 4-11
AFY = acre-feet per year
GPU = General Plan Update

Water Conservation

Because El Dorado County relies heavily on surface water supplies from the Sierra Nevada snowpack, which varies annually, water conservation measures are implemented on the part of both the water supplier and the end user. EID has adopted demand management measures, including "water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable and efficient use and reuse of available supplies" that form an integral part of EID's water conservation efforts during both normal and dry years (El Dorado Irrigation District 2011). In addition to EID's internally applied conservation measures, such as leak detection, measures include commercial and residential water efficiency programs featuring water audits for both residential and commercial customers; complimentary low-flow showerheads and bathroom faucet aerators for residential customers; and rebates on residential high-efficiency toilets and clothes washers, irrigation efficiency upgrades, and weather-based irrigation control for residential customers (El Dorado Irrigation District 2014).

El Dorado Irrigation District Drought Preparedness Plan

In 2007, EID developed a comprehensive preparedness plan to help identify drought conditions and determine when El Dorado County would be considered to be entering into drought conditions. The EID Board of Directors adopted the Drought Preparedness Plan in 2008. Drought stages identified in the Drought Preparedness Plan range from 0 to 3 to show increasing severity and also consider the potential for water shortage emergencies related to an unexpected disruption of supply, storage, or distribution system facilities (El Dorado Irrigation District 2011). The Drought Action Plan 2015

Update updated the stages from three to four stages to conform to the February 2010 member recommendations of a Regional Water Authority workgroup that was tasked with developing consistent messaging in the greater Sacramento region during drought conditions (El Dorado Irrigation District 2015).

EID used the Drought Preparedness Plan to develop an action plan that would address a drought situation. In single dry years, EID would follow the Drought Preparedness Plan, along with adopted policies, when implementing voluntary or mandatory demand reduction measures (Appendix H1, *Water Supply Assessment*). In the event of a second dry year, EID would invoke the first stage of the Drought Preparedness Plan, informing the public of predicted water shortages and encouraging conservation of up to 15% of normal demand through voluntary conservation (Appendix H1, *Water Supply Assessment*). In a third dry year, EID would implement the Drought Preparedness Plan's second stage, increasing efforts to reduce demand by up to 30% of normal use through voluntary and mandatory conservation measures (Appendix H1, *Water Supply Assessment*).

EID's Drought Action Plan, updated most recently in 2021, implements the Drought Preparedness Plan and includes specific measures to address drought conditions. Table 3.12-4 summarizes the characteristics and actions associated with the stages outlined in the Drought Preparedness Plan.

El Dorado Irrigation District Drought Action Plan

EID's 2021 *Drought Action Plan Update* serves as a detailed work plan for EID staff to manage the district's water supply before, during, and after drought conditions. This update specifically focused on the ongoing drought and mandated statewide conservation requirements. Many of the changes in the update, including the demand reduction percentages for Stages 1 and 2, were intended to only apply to the most recent drought. The *Drought Action Plan* identifies normal conditions plus four stages of drought severity that depend on EID water supply availability and indicates the water conservation measures to be implemented in each of those stages, as well as post-drought actions. Under normal water supply conditions, EID prohibits water waste, maintains ongoing water conservation measures, and implements public outreach and education to raise awareness of water efficiency practices. Stage 1 drought conditions would occur if water supplies were slightly restricted; in response, EID would inform customers of possible shortages and ask them to voluntarily conserve up to 10% of normal use. At Stage 2, water supplies would be moderately restricted, and EID would implement both voluntary and mandatory conservation measures to reduce use by up to 28% of normal (to match the state-mandated conservation requirement placed on EID in 2015). A Stage 3 drought would occur if water supplies became severely restricted and would result in the enforcement of mandatory measures to achieve a demand reduction goal of up to 50% of normal use. Stage 4 would result from persistent drought conditions leading to extremely restricted water supplies; under Stage 4 conditions, EID would require water rationing for health and safety purposes in order to achieve a greater than 50% demand reduction (El Dorado Irrigation District 2021).

Following 2 consecutive dry years (2012 and 2013), EID implemented the *Drought Action Plan*. On February 4, 2014, the EID Board of Directors declared a Stage 2 Water Warning, and on April 22, 2014, the EID Board implemented mandatory watering restrictions called for under Stage 2 drought conditions, intended to conserve 30% of normal use (El Dorado Irrigation District 2014). The EID Board unanimously rescinded the Stage 2 Water Warning and lifted the mandatory watering restrictions at its May 9, 2016 meeting (El Dorado Irrigation District 2016b).

On April 1, 2015, Governor Brown issued the fourth in a series of Executive Orders on actions necessary to address California's severe drought conditions, which directed the State Water Board to require mandatory water reductions in urban areas to reduce potable urban water usage by 25% statewide. Following unprecedented water conservation and plentiful winter rain and snow, on April 7, 2017, the Governor ended the drought State of Emergency in most of California, while maintaining water reporting requirements and prohibitions on wasteful practices such as watering during or right after rainfall. Executive Order B-40-17 lifted the drought emergency in all California counties except Fresno, Kings, Tulare, and Tuolumne.

On April 21, 2021, Governor Gavin Newsom issued a drought emergency proclamation for Mendocino and Sonoma Counties due to drought conditions in the Russian River Watershed. On May 10, 2021, the proclamation was expanded to include the Klamath River, Sacramento-San Joaquin Delta, and Tulare Lake Watersheds, encompassing an additional 39 counties, including El Dorado County.

Table 3.12-4. El Dorado Irrigation District Drought Action Plan Stages and Required Actions

Water Supply Conditions	Drought Stage	Stage Title	Stage Objective	Response Actions
Normal water supply	None Ongoing water conservation and enforcement of water waste prohibition.	Normal Conditions	Public awareness of water efficiency practices and prohibition of water waste.	Public outreach and education for ongoing water efficiency practices and the prohibition of water waste.
Slightly restricted water supplies (up to 15% supply reduction)	Stage 1 Introductory stage with voluntary reductions in use.	Water Alert	Initiate public awareness of predicted water shortage and encourage conservation.	Encourage voluntary conservation measures to achieve up to a 15% demand reduction.
Moderately restricted water supplies (up to 30% supply reduction)	Stage 2 Voluntary and mandatory reductions in water use.	Water Warning	Increase public awareness of worsening water shortage conditions. Enforce mandatory measures such as watering restrictions.	Voluntary conservation measures are continued, with the addition of some mandatory measures to achieve up to a 30% demand reduction.
Severely restricted water supplies (up to 50% supply reduction)	Stage 3 Mandatory reductions in water use.	Water Crisis	Enforce mandatory measures and/or implement water rationing to decrease demands.	Enforce mandatory measures to achieve up to a 50% demand reduction.
Extremely restricted water supplies (greater than 50% supply reduction)	Stage 4 Water rationing for health and safety purposes.	Water Emergency	Enforce extensive restrictions on water use and implement water rationing to decrease demands.	Enforce mandatory measures to achieve greater than 50% demand reduction.

Source: El Dorado Irrigation District 2021.

Groundwater

There is no groundwater basin in western El Dorado County. Overall, El Dorado County experienced little groundwater change from 1999 to 2010. Depths fluctuated between 22 and 30 feet deep, with an increasing long-term trend. See Section 3.8, *Hydrology, Water Quality, and Water Resources*, for a more detailed discussion of groundwater in El Dorado County and the project area. Groundwater will not be used for the project, as EID will provide all water (from surface water sources) for the development.

Wastewater

In addition to providing potable and recycled water, EID also provides wastewater conveyance and treatment services. EID operates two wastewater collection systems in the El Dorado Hills/Cameron Park area: the Deer Creek and El Dorado Hills systems, which convey wastewater to the Deer Creek WWTP and the El Dorado Hills WWTP, respectively (El Dorado Irrigation District 2013b). The Deer Creek WWTP, adjacent to the project site, is located 2 miles south of US 50 off of Deer Creek Road and serves the drainage basin and areas of Diamond Springs, Cameron Park, and Shingle Springs. The El Dorado Hills WWTP, approximately 1.25 miles south of US 50 along Latrobe Road, serves an estimated population of 42,100 people in the El Dorado Hills service area (El Dorado Irrigation District 2013b). The project area is not within the El Dorado Hills WWTP service area.

The Deer Creek WWTP operates in accordance with WDRs issued by the Central Valley Water Board (Order R5-2014-0081, NPDES Permit No. CA 0078662) (Central Valley Regional Water Quality Control Board 2014a). The permit contains specific effluent limitations for discharges to Deer Creek. The Deer Creek WWTP has had one serious violation of the effluent limitations on December 31, 2012 (contained in Order R5-2008-0173-01 from December 1, 2007 through March 31, 2014) because the measured constituent exceed maximum prescribed levels by more than 20% (Central Valley Regional Water Quality Control Board 2014b).

With an existing permitted average dry weather flow capacity of 3.6 mgd, the Deer Creek WWTP serves a population of approximately 33,700 people in Cameron Park, El Dorado, Shingle Springs, and Diamond Springs and recycles or discharges its treated effluent to Deer Creek (El Dorado Irrigation District 2013b). EID is required to discharge a minimum of 1.0 mgd to Deer Creek any time the treated effluent flow is at or above 2.5 mgd (El Dorado Irrigation District 2013b). The WWTP in 2013 treated approximately 2.64 mgd and treated approximately 2.10 mgd in 2019 (El Dorado Irrigation District 2013b; El Dorado Irrigation District 2020). Required dry weather flow capacity at full buildout is estimated to be 5.0 mgd; the Deer Creek WWTP is projected to reach its current capacity between 2022 and 2032 (El Dorado Irrigation District 2013b). To accommodate this increased flow and reach the 5.0 mgd capacity, EID plans to expand the WWTP by 2029 (El Dorado Irrigation District 2013b).

The Deer Creek WWTP treats wastewater using preliminary and primary treatment, secondary treatment, and tertiary treatment. Once the wastewater has been fully treated it is discharged into Deer Creek, a tributary to the Cosumnes River. The permit contains specific effluent limitations for discharges to Deer Creek. The facility also includes recycled water facilities. Recycled water is provided to irrigate golf course landscaping and irrigate landscaping of thousands of single-family homes in El Dorado Hills, including the Serrano, Creekside Greens, Blackstone, Four Seasons, and Euer Ranch subdivisions as well as certain commercial facilities in the El Dorado Hills areas (Dudek 2008).

Wastewater flows described in the WWFMP are based on growth defined by the County General Plan. The fundamental planning basis for developing water demands and projected wastewater flows is the planned land use presented in the County General Plan over the 20-year planning horizon of the adopted 2004 General Plan, including the specific plans developed for the communities of Bass Lake Hills, Carson Creek, El Dorado Hills, Northwest El Dorado Hills, Promontory, and Valley View. EID uses its wastewater generation rates, combined with the County General Plan land use designations and the number of planned connections in each of these specific plans, to project wastewater flows for the El Dorado Hills and Deer Creek collection systems (El Dorado Irrigation District 2013b).

The WWFMP assumes 2.25 mgd for the Deer Creek system in areas with land use designations but no specific plan (El Dorado Irrigation District 2013b). The total future wastewater flows of 5.0 mgd for the Deer Creek system, as described above, were determined by adding these projections to existing flows (El Dorado Irrigation District 2013b). Per EID administrative regulations, individual developers will be responsible for the planning, engineering, and construction of proposed sewer systems located within their respective development projects (El Dorado Irrigation District 2013b).

The WWFMP uses a hydraulic model of EID's Deer Creek collection system to analyze the existing systems, evaluating capacity deficiencies and proposed upgrades for both the existing and future wastewater flow conditions. EID's analysis indicates several areas where actual peak wet weather flows are significantly higher than EID's design criteria, primarily along the northern and southern perimeters of the El Dorado Hills collection system and the eastern and western edges of the Mother Lode sewershed (El Dorado Irrigation District 2013b).

In 1998, in conjunction with revising its NPDES permit for the 3.6-mgd plant, EID prepared and certified an EIR (SCH #1996092074) (ESA 1998). In addition to evaluating the environmental impacts of construction and operating the 3.6-mgd capacity plant, the EIR also evaluated potential expansion to a 10.8-mgd full-build capacity. As stated in the certified EIR, the evaluation of a 10.8-mgd plant was for engineering planning purposes only. Ultimate plant expansion would be designed to meet planned buildout of the Deer Creek WWTP service area, as approved by the County, and the actual capacity of the WWTP may never reach 10.8 mgd. Subsequent expansions beyond 3.6 mgd up to the maximum 10.8 mgd were evaluated at a programmatic level. As part of the facility planning process at that time, EID assumed an incremental increase from 3.6 mgd to 7.2 mgd (ESA 1998). Thus, EID's current estimate for expansion to 5.0 mgd by 2029 is within the assumptions evaluated in the certified EIR.

As described in the certified EIR, capacity expansion was assumed to include process improvements to the headworks, new features added to the primary, secondary, and tertiary treatment processes (e.g., clarifier, aeration basins, sludge pumps, backwash pumps, multimedia filters), and changes in solids handling. The plant utility system and operations/maintenance building would also be modified. The EIR characterized the potential future expansions to capacities of 7.2 mgd and up to 10.8 mgd as conceptual and would likely be modified in the future to reflect the timing and location of county population growth, technology advancements, and/or regulatory changes. As stated in the certified EIR, it is anticipated that construction activities to implement the various process improvements and plant upgrades would be contained within the existing degraded footprint of the WWTP and vegetation removal would not be required (ESA 1998).

The certified EIR concluded that construction and operational environmental impacts of expansion to a maximum 10.8 mgd would result in potentially significant construction impacts for the

following: sedimentation/erosion in Deer Creek (water quality); criteria air pollutant emissions; potential to affect special-status and protected wildlife species and associated habitat; potential to encounter previously undiscovered precontact or historic resources; temporarily increase construction traffic noise or cause pavement damage. Potentially significant operational impacts identified in the certified EIR were potential effects of treated wastewater discharges on Deer Creek water quality; odors; noise; hazardous materials use; and emergency access. EID adopted mitigation measures to reduce these aforementioned impacts to less-than-significant levels. Cumulative nighttime lighting impacts were determined to be significant and unavoidable, even with mitigation identified in the certified EIR. EID also concluded that plant expansion could be growth inducing, and the secondary effects of such growth would be significant and cannot be mitigated by EID (ESA 1998). In conjunction with project approvals, EID adopted a Mitigation Monitoring and Reporting Program (MMRP), Findings, and a Statement of Overriding Considerations (Resolution 98-76).

Stormwater

The west slope of El Dorado County contains three major watersheds, each of which drains into either the Middle Fork of the American River, the South Fork of the American River, or the Cosumnes River. The watersheds are further divided into smaller drainage basins that feed the tributaries to the three major rivers. Generally, developed drainage and stormwater infrastructure exist in the drainage basins.

The Marble Creek watershed consists of moderately steep terrain with the creek flowing from US 50 southeast to its confluence with Deer Creek. Deer Creek drains south through Cameron Park and continues southward for about 2 miles after crossing under US 50. It then turns and flows to the southwest, discharging into the Cosumnes River upstream of State Route 99. To the east, beyond the ridge lines of Marble Valley, relatively small areas drain to Deer Creek. To the west, relatively small areas drain to Strap Minor Creek and Pluckett Creek, both small watersheds that discharge into Deer Creek, just upstream of Latrobe Road (Watermark Engineering 2014).

Solid Waste

Solid waste includes household garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, appliances, manure, vegetable or animal solid and semisolid wastes, and other discarded materials, including household hazardous waste, which are addressed separately in Section 3.7, *Hazards and Hazardous Materials*.

The County has solid waste collection franchise agreements with six companies to collect and manage solid waste. In 1962, the El Dorado Hills Community Services District (CSD) gained the authority to collect and dispose of residential and commercial garbage and refuse matter within the CSD boundaries. El Dorado Disposal Services, a Waste Connections, Inc. company, serves the unincorporated areas of El Dorado County and the El Dorado Hills CSD within which the project site is located.

Refuse collection is mandatory in the El Dorado Hills CSD service area and El Dorado Disposal Services has approximately 12,095 residential customers. Two transfer stations/material recovery facilities are located in El Dorado County where solid waste is taken and diverted to landfills, recycling facilities, or other locations. These facilities are located in Diamond Springs and South Lake Tahoe. The material recovery facility (MRF) in Diamond Springs serves western El Dorado County and can process 400 tons per day (Ross pers. comm.). According to CalRecycle's Recycling and Disposal Reporting System database, unincorporated El Dorado County averaged approximately

30,535.8 tons of landfill waste per quarter in 2020 (CalRecycle 2020). The South Lake Tahoe Refuse Transfer Station serves the Tahoe Basin. Currently, the Potrero Hills Landfill, located in Solano County, California, is used by the waste collection and disposal services (El Dorado County 2020).

Potrero Hills Landfill is a Class III landfill that accepts only nonhazardous waste for disposal (EDAW 2003b). The landfill's disposal area is 340 acres (CalRecycle 2019). The solid waste facility permit for this landfill (48-AA-0075) authorizes the facility to receive a peak daily waste flow of 4,330 tons, or an annual maximum disposal volume of 1,234,200 tons (CalRecycle 2019). The current average disposal volume is approximately 2,500 tons per day (WasteWorks 2022.). The estimated closure date for the landfill is 2059 (U.S. Environmental Protection Agency 2022).

Solid waste in El Dorado County is generated from a mix of residential, commercial, and industrial sources. Approximately 139,000 tons of solid waste was generated in El Dorado County in 2010, an average of 0.77 ton per person based on a 2010 population of approximately 180,000 (El Dorado County Environmental Management Department 2012). Approximately 91,424 tons of this waste was generated by commercial uses (El Dorado County Environmental Management Department 2012:3-6). As shown in Table 3-1 of the *El Dorado County Solid Waste Management Plan* (El Dorado County Environmental Management Department 2012), the residential population generating solid waste in El Dorado Hills in 2010 was estimated to be 36,000. The primary generator of residential waste in this area is single-family homes, as El Dorado County has a higher proportion of single-family homes than the statewide average. Based on the residential population and the annual solid waste generated by this population (23,922 tons), it is estimated that the average residential solid waste generated per person was 0.67 ton. The greatest increase in waste disposal over the County's 20-year planning period is from the projected population increase in El Dorado Hills, as the population for the El Dorado area is anticipated to increase by approximately 30% by 2030 (El Dorado County Environmental Management Department 2012).

El Dorado Hills CSD is contracted with El Dorado Disposal until June 2030 for waste and recycling (El Dorado Hills Community Services District 2019). The CSD diverted 51% of waste in a 3-month period in 2017 through recycling, composting, and other reduction and diversion programs (El Dorado Hills Community Services District 2017). El Dorado Disposal collects mixed recycling containers and green waste materials on alternate weeks from residences within the CSD, as well as allowing residents to bring recycling material to the Diamond Springs MRF programs (El Dorado Hills Community Services District 2017). El Dorado Disposal encourages residents to dispose of yard waste through home composting, curbside pickup, or individually taking it to a transfer station that accepts "clean green" materials (El Dorado Disposal 2024). In addition, El Dorado Disposal operates several recycling and e-waste buyback centers to which residents are encouraged to bring additional recyclables; the nearest to the project site is located at 4421 Latrobe Road in El Dorado Hills. The CSD provides diversion reports, documenting compliance with its Source Reduction and Recycling Programs and the amount of waste disposed and diverted to El Dorado County on a quarterly basis.

The nearest large-scale recycling facility to the project site is the Diamond Springs MRF, operated by El Dorado Disposal at 4100 Throwita Way in Diamond Springs. In addition to household recycling, the Diamond Springs MRF accepts a wide variety of waste materials, including mixed loose waste, clean wood waste, appliances, car bodies, and construction waste (lumber, concrete) (El Dorado Disposal 2024).

Hazardous waste in El Dorado County consists primarily of waste oil, old paint, and lead acid car batteries (El Dorado County 2014). Waste oil is collected through over 21 public waste oil collection sites that are open 7 days per week, and other hazardous materials such as old paint, car batteries, expired or banned pesticides or herbicides, and solvents are collected via a cooperative arrangement with EDHFD and the Diamond Springs MRF to operate a permanent collection facility for hazardous waste (El Dorado County 2014). In addition, all curbside solid waste is screened for hazardous waste (El Dorado County 2014).

Energy

Energy usage is typically quantified using the British thermal unit (BTU[3]). As a point of reference, the approximate amounts of energy contained in common energy sources are indicated in Table 3.12-5.

Table 3.12-5. Energy Content by Energy Source

Energy Source	BTUs
Gasoline	120,214 per gallon
Diesel Fuel	137,381 per gallon
Natural Gas (compressed gas)	1,036 per cubic foot
Electricity	3,412 per kilowatt-hour

Source: U.S. Energy Information Administration 2023a.
BTUs = British thermal units

California has a diverse portfolio of energy resources. In 2022, the state was the largest consumer of jet fuel and second-largest consumer of motor gasoline among all states in the nation. California ranked seventh for crude oil production and second for crude oil refining capacity. California was the third-largest electricity consumer in the nation, with 49% of in-state generation from renewable resources and 42% from natural gas. (U.S. Energy Information Administration 2023b.)

Energy efficiency efforts have dramatically reduced statewide per-capita energy consumption relative to historical averages. According to the U.S. Energy Information Administration (2023c), California consumed approximately 7,359 trillion BTUs of energy in 2021. Per-capita energy consumption (i.e., total energy consumption divided by the population) in California is the fourth lowest in the country, ranking 48th among all states (and the District of Colombia) in the country with 189 million BTU in 2021 (U.S. Energy Information Administration (2023c).

As of 2021, natural gas accounted for the majority of energy consumption (2,173 trillion BTUs, 31 percent), followed by motor gasoline (1,495 trillion BTUs or 21%), interstate electricity (624 trillion BTUs, 9 percent), distillate fuel oil (568 trillion BTUs, 8 percent), biomass (467 trillion BTUs, 7 percent), other petroleum products (454 trillion BTUs, 6 percent), and a variety of other sources. The transportation sector consumed the highest quantity of energy (2,802 trillion BTUs, 41 percent), followed by the industrial (1,598 trillion BTUs, 24 percent), residential (1,229 trillion

[3] A British thermal unit is a standard unit of energy measure, which is the quantity of heat required to raise the temperature of 1 pound of water 1 degree Fahrenheit at or near 39.2 degrees Fahrenheit. A therm is a unit of heat equivalent to 100,000 BTUs.

BTUs, 18 percent), and commercial (1,157 trillion BTUs, 17 percent) sectors. (U.S. Energy Information Administration 2023b.)

California's per-capita energy consumption, in general, is declining due to improvements in energy efficiency and design. However, despite this reduction in per-capita energy use, the state's overall (i.e., non-per-capita energy consumption) energy consumption is expected to increase over the next several decades due to growth in population, jobs, and demand for vehicle travel. California is the most populated state in the nation, has the largest economy, and is second only to Texas in total energy consumption. Although California has the world's fifth-largest economy, the state has one of the lowest per-capita energy consumption levels in the United States. California's extensive efforts to increase energy efficiency and implement alternative technologies have restrained growth in energy demand. California is also rich in energy resources. The state has an abundant supply of crude oil and is the nation's second largest producer of conventional hydroelectric power. California also produces more electricity from renewable energy than every other state but Texas. (U.S. Energy Information Administration 2023c.)

Regionally, Pacific Gas and Electric Company (PG&E), the provider for electricity and natural gas in El Dorado Hills, has a diverse power production portfolio, which consists of a variety of renewable and non-renewable sources. Energy production typically varies by season and by year depending on hydrologic conditions. Regional electricity loads also tend to be higher in the summer because the higher summer temperatures drive increased demand for air conditioning. In contrast, natural gas loads are higher in the winter because the colder temperatures drive increased demand for natural gas heating.

At the local level, El Dorado County consumes a small amount of energy relative to the state. In 2022, electricity and natural gas usage were approximately 0.4 percent and 0.3 percent of the statewide total, respectively (California Energy Commission 2023). Motor gasoline was about 0.5 percent of statewide usage, whereas diesel fuel usage was about 1 percent of the statewide total (California Energy Commission 2023). For reference, El Dorado County is home to about 0.5 percent of California residents (U.S. Census Bureau 2023). As a whole, El Dorado County consumed 1,259,499,268 kilowatt-hours (kWh) of electricity and 36,645,650 therms of natural gas in 2022 (California Energy Commission 2023). Table 3.12-6 provides a summary of total and per-capita El Dorado County energy consumption from the two primary sources of consumption (buildings and mobile) for 2022 conditions.

Local Electricity and Natural Gas Service

The project area is within the PG&E service area for natural gas and electricity. There are several natural gas distribution and transmission facilities north of US 50 that are available to serve the project through local connections (Marble Valley Company, LLC 2023).

Table 3.12-1. El Dorado County Total and Per Capita Energy Consumption (2022)

Source	kWh	Therms	Gasoline (gallons)	Diesel (gallons)	BTUs [a]	Per Capita BTUs [b]
Buildings	1,259,499,268	36,645,650	–	–	7,961,976,502,416	41,299,343
Mobile	13,568,688	19,501	63,913,421	11,344,942	9,290,113,994,855	48,188,488
Total	1,273,067,956	36,665,151	63,913,421	11,344,942	17,252,090,497,271	89,487,831

Sources: California Energy Commission 2023; U.S. Energy Information Administration 2023a; U.S. Census Bureau 2023; EMFAC2021.

Notes:

[a] See Table 3.12-5 for energy content values.

[b] El Dorado County 2022 population = 192,787.

BTU = British thermal unit
kWh = kilowatt-hours

3.12.2 Environmental Impacts

Methods of Analysis

This analysis is based on the assumption that the project area would be developed with residential, commercial, public facilities, and agriculture/open space development, which would require construction of infrastructure including potable water, recycled water (potentially), wastewater, and stormwater improvements. The proposed project would require an expansion of the El Dorado Hills Community Region boundaries and a General Plan amendment to include the project site. Any new utility lines that would be required within the project area would be placed within the rights-of-way of future roads, parks, or open space that would be built as part of the proposed project. The proposed project would require potential offsite utility infrastructure improvements, outside the VMVSP area, that would be required to support the proposed project, such as extension of water, recycled water (potentially), wastewater, natural gas, electric, cable, and phone lines to connect to existing infrastructure. These related offsite improvements are shown in Figures 2-12 and 2-13 in Chapter 2, *Project Description*. Traffic improvements to comply with General Plan Policy TC-Xf. These improvements are shown in Figure 2-15.

The methods of conducting the impact analysis for public services and utilities are based on analyzing service ratios, capacities, response times, or other performance objectives to determine whether implementation of the proposed project would result in an exceedance of an existing, permitted, or acceptable performance objective that would require the construction of a new or expanded facility, using the following information. An exceedance of service ratios, capacities, or response times alone does not justify an impact under CEQA; only physical impacts that would result from exceedances (such as the need for construction of new or expanded facilities as a result of the exceedances) would be considered a physical impact under CEQA.

Fire and Police Protection

Minimum response times for fire and police protection are identified in County General Plan Policy 5.1.2.2. Minimum response times for a percentage of the population, along with service ratio requirements, are also identified in County General Plan Policy 5.1.2.2. Impacts were determined by estimating response times under implementation of the proposed project and comparing those estimates with the minimum response times in the General Plan. The need for new or expanded fire and police protection facilities was determined based on the ability of the stations to maintain service to their existing service areas and the proposed project within those minimum response times.

Schools

The County General Plan identifies the minimum levels of service for school districts within El Dorado Hills as those which the school districts determine to be appropriate (El Dorado County 2004:5-87). The project area falls within the Buckeye Union and El Dorado Union High School Districts. The project site is not within the Rescue Union School District boundary. The districts do not have projected school capacities for 2043, when the proposed project is expected to reach buildout. Therefore, projections for additional students from the proposed project are compared to existing capacities, which do not reflect the actual future capacities.

Libraries

The County General Plan does not specify service ratios for libraries. However, based on personal communication, a standard planning ratio is to have a minimum of 0.5 square foot of library space per capita (Amos pers. comm.). Therefore, this analysis uses that ratio as a reference.

Water Supply

The water supply analysis is based on the WSA prepared by Tully & Young (Appendix H1, *Water Supply Assessment*) and the revalidation memorandum by Tully & Young (Appendix H2). The WSA, which was approved by the EID Board of Directors in August 2013, assessed the availability and sufficiency of EID's water supplies to meet the proposed project's estimated water demands.[4] Methods used to evaluate water supply consisted of development of residential and non-residential baseline demand factors, application of those factors to the proposed project to estimate the projected VMVSP water demands. Project-specific and EID service area demands were then compared to the available water supply to determine the sufficiency of the water supply to meet the combined demands of the VMVSP and all other existing and planned users. Methods used to identify demands are described in detail in the WSA (Appendix H1, *Water Supply Assessment*). Per the 2021 revalidation memorandum (Appendix H2), it is expected that the water demand for the project would be lower than calculated in the EID-approved 2013 WSA. This would be due to current assumptions about residential and non-residential water use that has been driven by continued statutory, regulatory, and common-practice considerations. For instance, since 2013, both the statewide mandatory Green Building Standards Code and the statewide (MWELO) have been modified to require more efficient appliances and fixtures and placed further restrictions on residential and non-residential irrigated landscapes. These factors, as well as a continued conservation ethic among water using customers, has resulted in a lowering of EID's per-capita water demand factors compared to those used for the 2013 WSA. Because the land uses for the project assumed in the 2013 WSA are consistent with the land uses depicted in the proposed Specific Plan, the water demand forecasts represented in the 2013 WSA are likely conservatively high.

On June 28, 2021, EID adopted its 2020 UWMP. Although the updated UWMP reflects some variations in the characterization of total demands and supplies from the August 2013 WSA, the variations do not change the conclusions of the WSA. Specifically, the 2020 UWMP contains a modified description of existing and projected water supply assets to (1) reflect a more conservative representation of federal CVP contract supplies to align with restrictions placed on the CVP supplies during 2015, and (2) to align the growth in recycled water supplies to be more consistent with expected growth in recycled water demands (because recycled water can only be used for a limited set of irrigation demands). Based upon coordination with the County, the 2020 UWMP also identifies modified projected water demands to reflect slower growth through the planning horizon. However, the demands of the VMVSP, along with the other projects simultaneously undergoing a WSA analysis (CEDHSP, LRVSP, and Dixon Ranch residential project), were maintained in the 2020 UWMP as represented in the WSA adopted in August 2013. The demand reduction in the 2020 UWMP to reflect the County's slower growth projections was applied only to the category of "other planned

[4] On June 28, 2021, EID adopted its updated UWMP. Although the plan reflected some variations in the characterization of total demands and supplies when compared with the August 2013 WSA, the variations do not change the resulting conclusions of the WSA.

uses" (see Appendix H1, *Water Supply Assessment*), resulting in a lower overall projected demand, but maintaining the VMVSP's previously identified demand.

Overall, as reflected in the supply/demand integration tables presented in the 2020 UWMP, EID still shows existing and planned supplies exceeding forecast demands, consistent with the findings of the WSA (Tully & Young 2021).

At the time the 2013 WSA was prepared, the analysis included information about possible alternative supplies when "some uncertainty" exists with respect to the availability of planned supplies, as required by CEQA. The WSA noted some uncertainty with the SMUD Cooperation Agreement (Upper American River Project [UARP] supply and included a description of three options to that supply (see Water Supply Assessment, Appendix H1, Attached Memo to ICF regarding Water Supply Options beginning on page 51). Since that time, EID has determined that the UARP supply will not be necessary over the planning horizon, though it is still being pursued. The 2020 UWMP does not consider the UARP supply in its calculations but does include the Fazio CVP supply. Should the Fazio CVP supply not be available, the UWMP indicates that water supply would still exceed demand. As such, an analysis of potential water supply impacts of alternative water supplies is not required for this Draft EIR. For additional information about alternative water supplies, as presented in the 2013 WSA, the reader is referred to Appendix H1, Water Supply Assessment.

Wastewater

The wastewater analysis is based on EID's WWFMP, which uses projected wastewater flows for the district's Deer Creek collection system based on the County General Plan's land use designations and the number of planned connections included in the specific plans for the community of Bass Lake Hills. The plan then combines that information with the district's wastewater generation rates to calculate projected flows for each collection system.

Stormwater

Drainage and stormwater were analyzed based on information in the *Marble Valley Storm Drain Master Plan* (Watermark Engineering 2014), which is included in Appendix J, *Drainage Analysis*. The drainage study included the following.

- Estimates of 100-year peak flows for existing and developed conditions.
- Limits of 100-year flooding at the most downstream road crossing over Marble Creek.
- Floodway analysis along three areas along Deer Creek.
- Storage requirements for the site to attenuate 100-year flows to approximate existing-conditions flows.

Solid Waste

The solid waste analysis uses current capacities of the Diamond Springs MRF and Potrero Hills Landfill. To calculate the amounts of solid waste projected for the proposed project, the amount of residents for the proposed project, 8,381 residents, were divided by the amount of dwelling units, 3,236, to equal 2.6 residents per dwelling unit. The average residents per dwelling unit were multiplied by the average amount of solid waste per year in the western region of El Dorado County, as the residential waste generation rate (El Dorado County Environmental Management Department

2012). Waste generation rates for the proposed commercial development and public facilities development were based on rates from the California Department of Resources Recycling and Recovery (2013a, 2013b).

Energy

The energy analysis for the project evaluates the following sources of energy consumption associated with the project.

- **Short-term construction:** Gasoline and diesel consumed by vehicles and offroad construction equipment.
- **Operational on-road vehicles**: Fossil fuel (e.g., gasoline) and electricity consumed by personal automobiles and service trucks.
- **Operational power, heating, and cooking**: Electricity and natural gas consumed by occupants.
- **Operational landscaping**: Fuel consumed by landscaping equipment.

Construction-related energy use (i.e., fuel consumption) was calculated by converting GHG emissions predicted by the California Emissions Estimator Model (CalEEMod) using the rate of carbon dioxide emissions emitted per gallon of combusted gasoline (19.4 pounds/gallon) and diesel (22.5 pounds/gallon) (Climate Registry 2023). The estimated fuel consumption was converted to BTU using the factors summarized in Table 3.12-5. Materials manufacturing would also consume energy, although information on the intensity and quantity of fuel used during manufacturing is currently unknown and beyond the scope of project-level environmental analyses. An analysis of energy associated with materials manufacturing is considered speculative and is not presented in this Draft EIR. This analysis focuses on energy associated with physical construction of the project (i.e., fuel consumed by heavy-duty equipment and vehicles).

Energy consumed by operational on-road vehicles was quantified using the vehicle miles traveled (VMT) estimate developed by the traffic analysis. Fuel consumption was calculated by multiplying the estimated VMT by the countywide default fleet mix and associated fuel economy factors from EMFAC2021. The estimates were converted to BTUs using the factors summarized in Table 3.12-5. Mixed-use design policies that encourage residents to travel from home to services within the project area without using an external roadway (known as *internalization*) would result in vehicle trip and corresponding fuel consumption reductions. Trips made by walking instead of personal vehicles would also contribute to trip and fuel use reductions (Appendix K, *Transportation Impact Analysis*). These features were incorporated into the VMT modeling and subsequent fuel consumption analysis.

Operational electricity and natural gas consumption under full project buildout (2045) was drawn from the CalEEMod modeling performed to support the GHG analysis (see Section 3.6, *Greenhouse Gas Emissions*). Fuel consumption by landscaping equipment was calculated by converting GHG emissions predicted by CalEEMod. It was conservatively assumed all equipment would use gasoline.

Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the proposed project would be considered to have a significant effect on public services and utilities if it would result in any of the conditions to public services and utilities listed below.

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services.
    - Fire protection
    - Police protection
    - Schools
    - Other public facilities
- Require or result in the relocation or construction of new or expanded wastewater treatment or stormwater drainage facilities, the construction of which could cause significant environmental effects.
- Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.
- Result in a determination by the wastewater treatment provider that 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.
- 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.
- Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

In accordance with Appendix G of the State CEQA Guidelines, the conditions listed below are used to evaluate whether the proposed project would be considered to have a significant effect on energy resources or efficiency.

- Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Appendix F of the State CEQA Guidelines identifies the following potential environmental impacts related to energy that may be considered in an EIR. Appendix I, *CEQA Guidelines Appendix F: Energy Conservation*, of this Draft EIR includes the State CEQA Guidelines Appendix F for reference.

1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project, including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed.
2. The effects of the project on local and regional energy supplies and on requirements for additional capacity.
3. The effects of the project on peak- and base-period demands for electricity and other forms of energy.
4. The degree to which the project complies with existing energy standards.
5. The effects of the project on energy resources.

6. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

The State CEQA Guidelines recommend that the discussion of applicable energy impacts focus on whether the project would result in the wasteful, inefficient, or unnecessary consumption of energy. Efficient projects that incorporate conservation measures to avoid wasteful energy usage facilitate long-term energy planning and avoid the need for unplanned or additional energy capacity. Accordingly, based on the criteria outlined in the State CEQA Guidelines Appendix F, the proposed project would cause significant impacts related to energy if it would lead to a wasteful, inefficient, and unnecessary usage of direct or indirect energy. As discussed in Section 3.12.1, *Existing Conditions*, under *Regulatory Setting*, energy legislation, policies, and standards adopted by California and local governments were enacted and promulgated for the purpose of reducing energy consumption and improving efficiency (i.e., reducing wasteful and inefficient use of energy). Therefore, for the purposes of this analysis, *wasteful* and *inefficient* are defined as circumstances in which the project would conflict with applicable state or local energy legislation, policies, and standards or result in increased per-capita energy consumption. Accordingly, inconsistency with legislation, policies, or standards designed to avoid wasteful and inefficient energy usage, and as increased per-capita energy consumption relative to the current countywide average, is used to evaluate whether the proposed project would result in a significant impact related to energy resources and conservation.

Impacts and Mitigation Measures

Impact PSU-1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection; police protection; schools; or libraries (less than significant)

Fire Protection

EDHFD would serve the western portion of the project site while the El Dorado County Fire Protection District would serve the eastern portion. Approval of the VMVSP would allow for the project site to be incorporated into the El Dorado Hills Community Region, which would require response times to be 8 minutes or less for 80% of the population for community regions. Additionally, the VMVSP includes a location for a future EDHFD fire facility in the southwest portion of the project site, near the border with China Diggins Road (Marble Valley Company LLC 2023). The project proponent and EDHFD would determine the exact location and parcel size in the future, should the need arise, including any utilities and infrastructure needed to serve the facility and would prepare a separate CEQA document at that time.

The proposed project site would be served by the closest fire station, Fire Station 86 of the EDHFD. This station serves approximately 3,604 homes and is located approximately 1 mile from the project site on Bass Lake Road (El Dorado Hills Fire Department 2020). Fire Station 86 response times are historically under 7 minutes (Lilienthal pers. comm.). The standard for the fire department is a 6-minute travel time 90% of the time for all emergency calls (Lilienthal pers. comm.). Because the proposed project is proposing to annex to a Community Region, it would have to meet the 8-minute minimum response time for 80% of the population. The EDHFD anticipates it would meet a 6-minute response time for the VMVSP area even without the additional fire station included in the

project because of the proximity of Fire Station 86 (Lilienthal pers. comm.). Thus, based on the County General Plan minimum requirements and the fire department standards, the level of service currently achieved would be sufficient.

Fire Station 28, located approximately 4 miles from the project site on Ponderosa Road in Shingle Springs, is the closest El Dorado County Fire Protection District fire station to the project area. It serves Red Hawk Casino and the communities of Shingle Springs, South Cameron Estates, and Crazy Horse. The average response time for the El Dorado County Fire Protection District from 2002 to 2010 was approximately 9 minutes, and approximately 8:43 minutes in 2010 (El Dorado County Fire Protection District 2011:18). Response times have been reduced by 19% since 2002. Although this is slightly over the 8-minute minimum response time, several factors would address this deficit. Because the project area would be served by the EDHFD and the El Dorado County Fire Protection District, the proximity of the project site to the nearest fire stations, and the inclusion of a future fire station on the project site, it is anticipated that the County General Plan requirements would be met. No new fire protection facilities beyond those planned within the project or alterations to existing facilities would be needed. There would be no environmental impacts associated with facilities construction beyond those included in the project or expansion, and impacts associated with fire protection services would be less than significant. (El Dorado County Fire Protection District 2011)

Police Protection

As described under *Environmental Setting*, the County Sheriff's Office does not currently meet the service ratio requirements for providing police protection. The proposed project would develop residential, commercial, and other uses similar to other developments in the area. Furthermore, some of the residential neighborhoods in the proposed project are planned to be gated similar to other neighborhoods in El Dorado Hills. If the communities are gated, they may also have their own security in addition to the public protection offered by the Sheriff's Office. Additionally, although the Sheriff's Office has no plans to build a new substation near the proposed project in the near future, the office did earmark a future site for a possible substation near Bass Lake Road and US 50 in the proposed project area (Dreher pers. comm.). County General Plan Policy 5.1.2.2 identifies that the minimum level of service for sheriff responses should be an 8-minute response to 80% of the population (El Dorado County 2004). The Sheriff's Department averaged an 8-minute or better response to only 40% of the priority 1 and 2 calls that were received in 2013 (El Dorado County Sheriff's Department 2014). The proposed project would add population, which would further affect the existing law enforcement staff. Funding for staffing emergency services is obtained through taxes and other local government funding, not through developer fees. Although the proposed project would increase demand for Sheriff's Department staff, the project site is located within an area that is currently served by the existing Sheriff's Department, deputies, staff, and facilities and the addition of population would not require the addition of any new deputies, staff, and facilities, which could result in an impact on the environment. Therefore, environmental impacts associated with police protection services would be less than significant.

Schools

As described under *Regulatory Setting* and *Environmental Setting* in Section 3.12.1, *Existing Conditions*, the project area lies within the Buckeye Union and El Dorado Union High School Districts. The proposed project would introduce additional students to existing schools in these districts and would provide school sites for one K–5 or K–6 elementary school and one K–8 elementary school. As discussed in Section 3.12.1, *Existing Conditions*, the El Dorado Union High

School District anticipates a decline in student enrollment, even accounting for future development within the district.

Table 3.12-7 summarizes the student generation factors for the two school districts that would serve the project area.

Table 3.12-7. Student Generation Factors in the Project Area

Grade Level	Single-Family Residential	Multifamily Residential
K–5 (Buckeye Union School District)	0.400	0.400
6–8 (Buckeye Union School District)	0.100	0.100
9–12 (El Dorado Union High School District)	0.177	0.177

Sources: Marble Valley Company LLC 2023; Williams and Associates 2004.

As shown in Table 3.12-8, the proposed project is expected to result in 3,222 households[5] (single-family, duplex, townhouse, apartment, and condominium) with approximately 2,181 school-age (K–12) children.

Table 3.12-8. Projected Students Generated by the Proposed Project

Residential Dwelling Type	Residential Units	K–5 Factor	K–5 Students	6–8 Factor	6–8 Students	9–12 Factor	9–12 Students
Single-family and duplex	1,963	0.400	7851	0.100	196	0.177	347
Multifamily	1,259	0.400	504	0.100	126	0.177	223
Total	3,222		1,289		322		570

Source: Marble Valley Company LLC 2023.

[5] 14 units within Agriculture Tourism (AT) are associated with a bed-and-breakfast-type accommodation and, therefore, are not considered in permanent population estimates.

Table 3.12-9. Current Enrollments and Capacities in the Project Area

School	Current Enrollment (2022–2023) [a]	Proposed Project (students)	School Capacity (students)	Exceedance (students)
Blue Oak Elementary	485		792[c]	
Valley View Elementary	694		850[c]	
Proposed Project K–5 School	0		650*	
Elementary Total	1,179	1,294	2,292	+181
Camerado Springs Middle School	479		960[c]	
Middle School Total	479	324	960	-157
Total K–8 students				+24
Proposed Project K–8 School	0		900*	
K–8 Total	479	1,618	4,152	-2,055
Union Mine High School	1,066		1,485[b]	
Ponderosa High School	1,648		2,283[b]	
El Dorado High School	1,224		1,568[b]	
Oak Ridge High School	2,516		2,530[b]	
High School Total	6,454	573	7,866	-893

Sources:
[a] Education Data Partnership 2024.
[b] SchoolWorks 2022.
[c] Schoolworks 2018b.
* Approximate.

Based on recommended sizes of 650 students for K–5 elementary schools, 900 students for middle schools, and 2,000 students for high schools, the proposed project would generate a demand for one elementary school (K–5), one K–8 school, and 0.3 high school (Marble Valley Company, LLC 2023). The proposed project would include sites for a K–5 and a K–8 school (Marble Valley Company, LLC 2023). The 1,618 children in grades 8 and under that are expected to be generated by approving the VMVSP would exceed the available capacity of the existing Buckeye Union School District but would not exceed the capacity of the new schools to be built.

Although the proposed project is within the attendance boundary of Union Mine High School, the El Dorado Union High School District would determine which high school would house the students residing in the project area (Marble Valley Company, LLC 2023). As shown in Table 3.12-9, between the district's four schools, there is capacity for the 573 students generated by the proposed project. Additionally, it is likely that the students generated from the project area and other projects south of US 50 would attend a new high school to be constructed on a site the District owns on Latrobe Road (Marble Valley Company, LLC 2023).

Increased enrollment is not a significant environmental effect but is rather a social effect (*Goleta Union School District v. Regents of U.C.* 1995*)*. Because the school districts collect school impact fees, those fees serve as full and complete mitigation for development under SB 50, as provided for under California Government Code Section 65995 et seq. Therefore, impacts on schools would be less than significant.

The project applicant and the appropriate school district(s) would enter into a written agreement regarding the mitigation of impacts on school facilities (according to General Plan Policy 5.8.1.1). Although the school sites are reserved in the VMVSP for acquisition by the Buckeye Union School District, and would be constructed by the school district, the exact details of construction funding and timing, and other particulars of school construction would be set forth in the future Development Agreement, Public Facilities Financing Plan, and future, site-specific acquisition agreements between the school district and the project applicant. Within 3 years of the adoption of the VMVSP and as a condition of approval of the small lot tentative and small lot final subdivision maps, Buckeye Union School District and the project applicant would enter into a School Reservation and Option Agreement, unless the parties mutually agree to extend this deadline. If the district and developer have not entered into acquisition agreements within that reservation period, the VMVSP requirement to reserve the school sites would be deemed to have been fully satisfied (VMVSP Policy 7.2) (Marble Valley Company, LLC 2023).

Libraries

As described under *Environmental Setting* in Section 3.12.1, *Existing Conditions*, El Dorado County currently is deficient in countywide library space. Residents of the project area would be expected to use the two closest branches, the Cameron Park Library and the El Dorado Hills Library. The proposed project could add approximately 8,381 residents to the library service area. The addition of 8,381 residents to the existing 18,370 people served by the Cameron Park Library would decrease the library's current service ratio from 0.68 to 0.46 square foot per capita, below the standard, but still above the countywide average. The addition of these residents to the El Dorado Hills Library's 50,000 users would decrease the El Dorado Hills Library's service ratio from 0.32 square foot per capita to 0.27 square foot per capita, below the planning standard. Even if half of the residents used the Cameron Park Library and half used the El Dorado Hills Library, the square footage would be 0.55 and 0.30 square foot per capita, respectively; the El Dorado Hills Library would also be below the standard service ratio. However, because the standard ratio is not a legal requirement or in the County General Plan, there is no requirement for the proposed project to meet this standard. As described above for schools and additional students, increased population and potential library patrons would be a social impact (*Goleta Union School District v. Regents of U.C.* [1995] 37 Cal.4th 1025). Because the proposed project does not include construction of a new library, there is no physical impact. Therefore, although patronage is expected to increase with the additional project-generated population, impacts on libraries would be less than significant.

Summary

Overall, the proposed project would not result in the need for new or expanded public services, the construction of which would result in physical effects. Therefore, impacts from the proposed project on fire and police protection, schools, and libraries would be less than significant. No mitigation is required.

Offsite and traffic improvements would not result in increased demand on public services through an increase in population. As described in Section 3.14, *Transportation and Circulation* (Impact TRA-5), traffic improvements could result in temporary delays for emergency vehicles during construction but would result in long-term benefits and improved response times. Because offsite and traffic improvements would not result in the need for new or physically altered governmental facilities to maintain acceptable emergency response times, this would be a less-than-significant impact.

Impact PSU-2: Require or result in the relocation or construction of new or expanded wastewater treatment or stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects (less than significant with mitigation)

Wastewater Demand

The Deer Creek WWTP operates under WDRs and an NPDES permit issued by the Central Valley Water Board. The WWTP is permitted to discharge up to 3.6 mgd of disinfected tertiary treated effluent to Deer Creek, and the permit contains specific numerical and narrative effluent limits for specific constituents.

Based on EID's Design Standards for wastewater generation rates, the proposed project would generate an average of 789,580 gallons per day, or 0.79 mgd (Table 3.12-10). The WWTP treated an average of 2.10 mgd in 2019 (El Dorado Irrigation District 2020). Therefore, the additional 0.79 mgd combined with a current average of 2.10 mgd would be 2.89 mgd, which would be within the plant's permitted average dry weather flow effluent limit of 3.6 mgd. Neither offsite wastewater conveyance facilities intended to serve the project site nor General Plan Policy TC-Xf traffic improvements would result in increased population or increased wastewater treatment demand. The offsite improvements and General Plan Policy TC-Xf traffic improvements would therefore not cause the Deer Creek WWTP to exceed the Central Valley Water Board's wastewater treatment requirements.

The constituents in wastewater flows from the proposed project to the WWTP would be typical of residential and commercial uses, similar to flows from other residential and commercial development in the vicinity, and would not contain new or substantially different chemical constituents that would be anticipated to cause permitted effluent limitations for chemical parameters to be exceeded. Therefore, this impact would be less than significant. No mitigation is required.

Table 3.12-10. Wastewater Service Demand from the Proposed Project

Land Use	Unit	Wastewater Generation Rate (gpd/EDU or gpd/acre)	Total Predicted Wastewater (gpd)
Residential (low and medium density)	2,685 dwelling units	240 gpd/EDU	644,400
Residential (multifamily density)	551[a] dwelling units	180 gpd/EDU	99,180
Public facilities (schools)	35 acres	500 gpd/acre	17,500
Public facilities (parks)	47 acres	Minimal	
Commercial	57 acres	500 gpd/acre	28,500
Total			789,580 gpd/0.79 mgd

Source: Wastewater Generation Rates from El Dorado Irrigation District 2013b:92.

EDU = equivalent dwelling unit
gpd = gallons per day
mgd = million gallons per day

[a] includes 50 units in Village Commercial

Wastewater Treatment Facilities

The proposed project would generate 0.79 mgd of wastewater. When added to the current average dry weather flow of 2.10 mgd, the total (3.43 mgd) would not exceed the WWTP's current treatment capacity of 3.6 mgd. Construction of the proposed project is anticipated to begin in 2024, and last approximately 19 years. Based on the County General Plan planning horizon, estimates of areas for future known densities, and estimate of areas for future unknown densities, EID projects that future flows to the WWTP will reach capacity between 2022 and 2032 depending upon the rate of growth (El Dorado Irrigation District 2013b:151). EID has determined a capacity of 5.0 mgd for the Deer Creek WWTP will be necessary to accommodate future flows and currently plan to have the expanded facility operational by 2029 (El Dorado Irrigation District 2013b:151). Accounting for the inclusion of the Marble Valley Master Plan in the projections and the substitution of VMVSP for that development, the projected wastewater that would be generated from the proposed project and other projects that would also be treated at the Deer Creek WWTP, total wastewater generation would total 5.94 mgd by 2025. This would exceed the planned capacity of the Deer Creek WWTP of 5.0 mgd. However, the project's contribution to the demand for wastewater facilities would not be the sole reason for WWTP expansion.

As an industry standard practice, EID monitors growth and plans to meet future demands generated by authorized development. If the VMVSP is approved by the County Board of Supervisors, the next revisions to the EID WWFMP will reflect updated future demand calculations, and County General Plan amendments will be reviewed and used as a basis for analysis of future needs to identify what improvements would be required to accommodate additional flows and the timing for when such improvements would be necessary. The types of improvements would depend on regulatory requirements and could involve wastewater process upgrades. As described in the *Environmental Setting*, EID has evaluated the environmental impacts of plant expansion beyond 3.6 mgd. EID's current estimate for expansion to 5.0 mgd by 2029 is within the facility planning assumptions evaluated in the certified EIR. Expansion of the Deer Creek WWTP to 7.2 mgd and 10.8 mgd was also addressed in the certified EIR. While the proposed project would contribute incrementally to the need for expansion by project buildout, it would not result in changes to the construction and operational assumptions and associated environmental impacts beyond those identified in the certified EIR for the Deer Creek WWTP expansion project. The mitigation measures identified in the certified Deer Creek WWTP Expansion Project EIR to reduce or avoid potential impacts of expansion would be implemented by EID, as set forth in the MMRP for the plant expansion and the agency's Findings (Resolution 98-76). In conjunction with VMVSP project approvals, the County would, therefore, be able to make findings pursuant to State CEQA Guidelines Section 15091(a)(2) that the mitigation measures are the responsibility of EID and not the County, and that such measures have been adopted by EID. The approved mitigation measures apply to the following resources: hydrology; air quality; geology, soils, and seismicity; biological resources; hazardous materials; public health; aesthetic resources; transportation and circulation; and cultural resources. These measures include measures to retrofit the WWTP to reduce odors and BMPs to reduce construction emissions, odors, and operational noise (Appendix L, *Deer Creek WWTP Mitigation Measures*). Therefore, the impact related to the need for expanded or new WWTP facilities is less than significant.

Wastewater Conveyance Facilities

The project site is within the EID service area. Currently, there is no existing wastewater infrastructure within the boundaries of the project area; however, EID's Deer Creek WWTP is adjacent to the eastern boundary of the project site.

Offsite wastewater line extensions, as shown in Figure 2-11, are proposed to connect offsite east of the project area south of Cameron Estates, and extend west from there to provide sewer lines to the proposed project. Wastewater infrastructure would be constructed onsite to serve the project area, including two sewer trunk lines and sewer force mains. An initial lift station is proposed for the middle section of the project area to pump all wastewater flows anticipated for a substantial portion of the project via a force main to a proposed gravity line near the eastern boundary of the project area that would connect to the existing trunk line to the Deer Creek WWTP. A second lift station would be located near the confluence of Marble Creek and Deer Creek. However, this lift station could (if desired by EID) be sized to ultimately replace the original lift station referenced above. Additionally, a substantially smaller lift station is anticipated to be built in the eastern area of the project site for the second sewer main. From there, onsite and offsite gravity lines would transport the wastewater to the Deer Creek WWTP. EID's WWFMP identifies capacity expansion and replacement needs for offsite wastewater and infrastructure based on the County General Plan land uses in effect at the time. The exact locations of offsite infrastructure have not been determined. Additionally, as required by EID Board Policy 9020, the project applicant would secure EID's approval of an engineering facility plan report (FPR) for the extension of EID facilities for subdivisions and commercial developments (Marble Valley Company, LLC 2023). Construction of the wastewater treatment infrastructure would include site grading and infrastructure installation, which would require dust suppression and other incidental water uses. Those water uses are expected to be nominal and are included in the water demand for the project.

Construction of the wastewater conveyance/distribution infrastructure would include site grading and infrastructure installation, which would require dust suppression and other incidental water uses. Those water uses are expected to be nominal and are included in the water demand estimations for the project. Construction of pipelines would require construction equipment and cause soil disturbance, which could result in air quality emissions, noise generation, or construction crew traffic; use of small amounts of hazardous materials such as diesel and oil; generate stormwater runoff or erosion; result in the potential to encounter previously unidentified cultural resources; and disturb habitat, among other potential environmental impacts. These types of impacts are already disclosed and evaluated in this document. As described in Sections 3.2, *Air Quality*; 3.3, *Biological Resources*; 3.4, *Cultural Resources*; 3.8, *Hydrology, Water Quality, and Water Resources*; and 3.10, *Noise and Vibration*, construction activities could have significant impacts on the environment. With the exception of construction noise (Impact NOI-1a), which would be significant and unavoidable, implementation of the mitigation measures identified for those impacts would reduce impacts to a less-than-significant level.

Impacts related to offsite wastewater line improvements and General Plan Policy TC-Xf traffic improvements are described in Section 3.2, *Air Quality* (Impacts AQ-6 and AQ-7), Section 3.3, *Biological Resources* (Impacts BIO-17 through BIO-30), Section 3.4, *Cultural Resources* (Impact CUL-4), Section 3.5, *Geology, Soils, Minerals, and Paleontological Resources* (Impact GEO-11), Section 3.8, *Hydrology, Water Quality, and Water Resources* (Impact WQ-11), Section 3.10, *Noise and Vibration* (Impacts NOI-4), and Section 3.14, *Transportation and Circulation* (Impact TRA-5). As identified in the discussions of those impacts, construction of some of the offsite improvements could result in

significant impacts. Implementation of the mitigation measures listed below, which would be the responsibility of the applicant, would reduce impacts of offsite improvements to less-than-significant levels.

Stormwater

The proposed project would generate stormwater runoff. The project would incorporate a new detention basin in the southwestern corner of the project area to reduce peak stormwater runoff to a level that would not affect downstream facilities and would accommodate the potential increase in stormwater runoff as a result of the impervious surfaces (e.g., roads, home roofs, sidewalks). As described in the *Marble Valley Storm Drain Master Plan* (Appendix J, *Drainage Analysis*), the new stormwater drainage facilities would be constructed under sidewalks and roads and would collect and divert stormwater from the proposed development to the existing stormwater system, where the stormwater would be held in a detention basin in the southwest corner of the project site prior to being discharged into receiving waters. A 7-foot-wide by 5-foot-high box culvert would be constructed as part of a southern road crossing in the project area to attenuate the flows leaving Marble Valley and the flow along Deer Creek downstream of Plunkett Creek. A second high-level culvert would be constructed as part of the embankment for each downstream road crossing, located at the 100-year water level at the upstream side of the embankment, to act as an emergency spillway in an extreme event larger than the 100-year storm or if debris restricts high flow. Rock rip rap erosion control would also be constructed at the culvert outlets, which should be based on U.S. Army Corps of Engineers (USACE) design criteria.

Design and construction of the new stormwater system would be required to comply with the adopted *Drainage Manual,* SWMP and current State Water Board order(s) regulating construction activities (e.g., Order No. 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-006-DWQ), the stormwater pollution prevention plan (SWPPP), and BMPs (Marble Valley Company, LLC 2023). The stormwater system would also have to comply with the County's NPDES permit in place at the time of subsequent development approvals (e.g., Order No. 2013-0001-DWQ) and the Stormwater Quality Control Ordinance No. 5022 to ensure project stormwater flow rates and volumes can be accommodated in the drainage system. Final master utility plans for sewer, water, and recycled water must be reviewed and approved by EID in an FPR at the improvement plan stage (Marble Valley Company, LLC 2023).

Storm drain systems would be required to channel runoff from onsite and offsite roadway improvements. Installation of the system would include trenching and grading, which would require dust suppression and other incidental water uses. Those water uses are expected to be nominal and are included in the overall construction water demand assumed in the WSA. Installation of the storm drain lines would require construction equipment and would cause soil disturbance, which could result in air pollutant and GHG emissions, noise generation, or require special construction methods such as blasting; use of small amounts of hazardous materials such as diesel and oil; generate stormwater runoff or erosion; result in the potential to encounter previously unidentified cultural resources; disturb habitat; or result in temporary roadway lane narrowing or detours, among other potentially significant environmental impacts. These types of construction impacts are a component of the site development footprint impacts evaluated in this document in Section 3.2, *Air Quality*; Section 3.3, *Biological Resources*; Section 3.4, *Cultural Resources*; Section 3.5, *Geology, Soils, Minerals, and Paleontological Resources*; Section 3.6, *Greenhouse Gas Emissions*; Section 3.8, *Hydrology, Water Quality, and Water Resources*; Section 3.10, *Noise and Vibration*; and Section 3.14, *Transportation and Circulation*. Construction-related noise impacts as a result of offsite improvements would be of much

smaller magnitude than construction-related noise impacts of the proposed project itself because the amount and duration of construction would be far less than for the proposed project itself. Implementation of the mitigation measures identified in those sections, which would be the responsibility of the applicant as they pertain to installation of storm drainage facilities, would reduce impacts to a less-than-significant level.

Mitigation Measure AQ-2b: Implement best management practices to reduce construction-related exhaust emissions during early construction

Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks

Mitigation Measure AQ-2d: Implement an EDCAQMD-approved Fugitive Dust Control Plan during construction

Mitigation Measure AQ-2e: Offset construction-generated ozone precursors

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-1d: Avoid and minimize potential disturbance of oak woodland habitat and compensate for loss of oak woodland and individual trees

Mitigation Measure BIO-2: Compensate for the permanent loss of riparian woodland

Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands

Mitigation Measure BIO-3b: Compensate for loss of jurisdictional wetlands

Mitigation Measure BIO-4: Compensate for loss of other waters of the United States

Mitigation Measure BIO-5a: Conduct floristic surveys in the project area for special-status plants during appropriate identification periods

Mitigation Measure BIO-5b: Avoid or compensate for substantial effects on special- status plants in the project area

Mitigation Measure BIO-7: Conduct preconstruction survey and implement California red-legged frog avoidance and minimization measures

Mitigation Measure BIO-8: Avoid and minimize construction-related impacts on foothill yellow-legged frog

Mitigation Measure BIO-9: Conduct preconstruction surveys for northwestern pond turtle and exclude turtles from the work area

Mitigation Measure BIO-10a: Avoid and minimize impacts on Blainville's horned lizard

Mitigation Measure BIO-11a: Conduct vegetation removal activities outside the breeding season for birds and raptors

Mitigation Measure BIO-11b: Conduct preconstruction nesting surveys for special-status and non-special-status birds and implement protective measures during construction

Mitigation Measure BIO-12: Identify suitable roosting sites for bats and implement avoidance and minimization measures

Mitigation Measure BIO-13: Implement measures to avoid and minimize potential impacts on American badger

Mitigation Measure BIO-14: Identify suitable shelter and denning habitat for ringtail and implement avoidance and protective measures

Mitigation Measure BIO-18: Compensate for loss of oak woodland in offsite infrastructure improvement areas

Mitigation Measure BIO-22a: Conduct floristic surveys in the offsite infrastructure improvement areas for special-status plants during appropriate identification periods

Mitigation Measure BIO-22b: Avoid or compensate for substantial effects on special-status plants in the offsite infrastructure improvement areas

Mitigation Measure BIO-24a: Conduct a habitat assessment for federally listed branchiopods in the offsite infrastructure improvement areas

Mitigation Measure BIO-24b: Avoid or compensate for effects on vernal pool fairy shrimp and vernal pool tadpole shrimp and their habitat

Mitigation Measure CUL-1d: Perform archaeological construction monitoring during ground-disturbing activities within 100 feet of known cultural resource sites

Mitigation Measure CUL-1e: Stop work in the event of discovery of previously unknown cultural resources

Mitigation Measure CUL-3: Perform construction monitoring during ground-disturbing activities and stop work if human remains are encountered

Mitigation Measure CUL-4: Perform cultural resources surveys of the offsite infrastructure and traffic improvement areas and mitigate impacts on any eligible resources in accordance with State CEQA Guidelines Section 15126.4

Mitigation Measure GEO-4: Implement recommendations developed by qualified geotechnical engineers for excavation in hard rock

Mitigation Measure GEO-10a: Educate construction personnel in recognizing fossil material

Mitigation Measure GEO-10b: Stop work if fossil remains are encountered during construction

Mitigation Measure GEO-10c: Stop work if a cave or void is encountered during construction

Mitigation Measure NOI-1a: Employ noise-reducing construction practices

Mitigation Measure TRA-4: Implement site-specific transportation management plan during construction

Impact PSU-3: Require or result in the construction of new water treatment or conveyance facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects (less than significant with mitigation)

Potable Water

An overall potable water system is already in place for the communities of El Dorado Hills and Cameron Park, including offsite transmission mains, storage tanks, and booster stations. However, in the 2013 IWRMP, EID identifies recommended facilities to support future development and provide service reliability. These recommendations include the construction of a new 44-mgd WTP off Missouri Flat Road approximately 1 mile south of US 50 and the construction of a 48-inch, 42-inch, and 30-inch gravity transmission main for the new treatment plant to the El Dorado Hills supply region. The 48-inch and 42-inch transmission main would primarily follow the Sacramento-Placerville transportation corridor from the new plant to Shingle Lime Mine Road. The 42-inch transmission main would follow Shingle Lime Mine Road north, cross Durock Road, follow Coach Lane to the west in Cameron Park, and then follow various county roads to Deer Creek Road and Marble Valley Road. At Marble Valley Road, the main would transition to 30 inches and follow Bass Lake Road north to the Bass Lake tanks. Construction of the new WTP and associated transmission main would be timed with needed capacity expansion and is subject to EID approval.

As discussed in the project description, interim potable water improvements could accommodate 1,544 residential units in the VMVSP, prior to the construction of a new WTP. Implementation of the proposed project would require construction of new transmission lines and mains and pump stations to physically transport water to the project site from the EID Western/Eastern water supply region. As shown in Figures 2-9 and 2-12, the following improvements would be required.

- Construction of a new 18-inch line from the existing 16-inch line in Ponte Morino Drive to the existing 18-inch stub on the north side of US 50, near the US 50/Cameron Park Drive off-ramp.
- Construction of a new 12-inch line within Durock Road from the existing 12-inch line near the driveway to Syar Concrete to the intersection of Business Drive.
- Construction of a new 24-inch transmission main from the intersection of Cameron Park Drive and Coach Lane to the Village of Marble Valley boundary and Deer Creek Road. The 24-inch main would follow the same alignment as the proposed 42-inch transmission main.
- Construction of approximately three new pressure reducing stations with locations to be determined with EID input at a later date.
- Connect the existing 10-inch line in Cambridge Road to the new 24-inch transmission main.
- New water transmission lines along Bass Lake Road and Cambridge Road.

These water lines would ultimately connect to a new transmission main recommended in EID's 2013 IWRMP.

Recycled Water

The project area lies within the EID service area and shares a common boundary with the Deer Creek WWTP, which is a source of recycled water. Although there is no existing recycled water infrastructure within the project site boundaries, and the proposed project is not currently in EID's plan for use of recycled water, EID could serve the proposed project with offsite infrastructure extensions.

If recycled water were to become available to the project area, construction of the recycled water infrastructure within in the VMVSP area would include site grading and infrastructure installation, which would require dust suppression and other incidental water uses. Those water uses are expected to be nominal and are included in the water demand estimations for the project. Construction of pipelines would require construction equipment and cause soil disturbance, which could result in air quality emissions, noise generation, or construction crew traffic; use of small amounts of hazardous materials such as diesel and oil; generate stormwater runoff or erosion; result in the potential to encounter previously unidentified cultural resources; and disturb habitat, among other potential environmental impacts. These types of impacts are already disclosed and evaluated in this document. As described in Sections 3.2, *Air Quality*; 3.3, *Biological Resources*; 3.4, *Cultural Resources*; 3.8, *Hydrology, Water Quality, and Water Resources*; and 3.10, *Noise and Vibration*, construction activities could have significant impacts on the environment. Implementation of the mitigation measures identified for those impacts would reduce impacts to a less-than-significant level.

Impacts related to offsite improvements to connect to existing facilities are described in Section 3.2, *Air Quality* (Impact AQ-6); Section 3.3, *Biological Resources* (Impacts BIO-16 through BIO-30); Section 3.4, *Cultural Resources* (Impact CUL-4); Section 3.5, *Geology, Soils, Minerals, and Paleontological Resources* (Impact GEO-11); Section 3.8, *Hydrology, Water Quality, and Water Resources* (Impact WQ-11); Section 3.10, *Noise and Vibration* (Impact NOI-7); and Section 3.14, *Transportation and Circulation* (Impact TRA-7). As identified in those impacts, construction of some of the offsite improvements could result in significant impacts. Implementation of the mitigation measures listed below, which would be the responsibility of the applicant as they pertain to the installation of recycled water lines, would reduce impacts of offsite improvements to less-than-significant levels.

Mitigation Measure AQ-2b: Implement best management practices to reduce construction-related exhaust emissions

Mitigation Measure AQ-2c: Require advanced off-road engines and newer onsite on-road trucks

Mitigation Measure AQ-2d: Implement an EDCAQMD-approved Fugitive Dust Control Plan during construction

Mitigation Measure AQ-2e: Offset construction-generated ozone precursors

Mitigation Measure BIO-1a: Install construction barriers around the construction area to protect sensitive biological resources to be avoided

Mitigation Measure BIO-1b: Conduct environmental awareness training for construction employees

Mitigation Measure BIO-1c: Conduct periodic site visits during construction

Mitigation Measure BIO-1d: Avoid and minimize potential disturbance of oak woodland habitat and compensate for loss of oak woodland and individual trees

Mitigation Measure BIO-2: Compensate for the permanent loss of riparian woodland

Mitigation Measure BIO-3a: Avoid and minimize disturbance of waters of the United States, including wetlands

Mitigation Measure BIO-3b: Compensate for loss of jurisdictional wetlands

Mitigation Measure BIO-4: Compensate for loss of other waters of the United States

Mitigation Measure BIO-5a: Conduct floristic surveys in the project area for special-status plants during appropriate identification periods

Mitigation Measure BIO-5b: Avoid or compensate for substantial effects on special- status plants in the project area

Mitigation Measure BIO-7: Conduct preconstruction survey and implement California red-legged frog avoidance and minimization measures

Mitigation Measure BIO-8: Avoid and minimize construction-related impacts on foothill yellow-legged frog

Mitigation Measure BIO-9: Conduct preconstruction surveys for northwestern pond turtle and exclude turtles from the work area

Mitigation Measure BIO-10a: Avoid and minimize impacts on Blainville's horned lizard

Mitigation Measure BIO-11a: Conduct vegetation removal activities outside the breeding season for birds and raptors

Mitigation Measure BIO-11b: Conduct preconstruction nesting surveys for special-status and non-special-status birds and implement protective measures during construction

Mitigation Measure BIO-12: Identify suitable roosting sites for bats and implement avoidance and minimization measures

Mitigation Measure BIO-13: Implement measures to avoid and minimize potential impacts on American badger

Mitigation Measure BIO-14: Identify suitable shelter and denning habitat for ringtail and implement avoidance and protective measures

Mitigation Measure BIO-18: Compensate for loss of oak woodland in offsite infrastructure improvement areas

Mitigation Measure BIO-22a: Conduct floristic surveys in the offsite infrastructure improvement areas for special-status plants during appropriate identification periods

Mitigation Measure BIO-22b: Avoid or compensate for substantial effects on special-status plants in the offsite infrastructure improvement areas

Mitigation Measure BIO-24a: Conduct a habitat assessment for federally listed branchiopods in the offsite infrastructure improvement areas

Mitigation Measure BIO-24b: Avoid or compensate for effects on vernal pool fairy shrimp and vernal pool tadpole shrimp and their habitat

Mitigation Measure CUL-1d: Perform archaeological construction monitoring during ground-disturbing activities within 100 feet of known cultural resource sites

Mitigation Measure CUL-1e: Stop work in the event of discovery of previously unknown cultural resources

Mitigation Measure CUL-3: Perform construction monitoring during ground-disturbing activities and stop work if human remains are encountered

Mitigation Measure CUL-4: Perform cultural resources surveys of the offsite infrastructure and traffic improvement areas and mitigate impacts on any eligible resources in accordance with State CEQA Guidelines Section 15126.4

Mitigation Measure GEO-4: Implement recommendations developed by qualified geotechnical engineers for excavation in hard rock

Mitigation Measure GEO-10a: Educate construction personnel in recognizing fossil material

Mitigation Measure GEO-10b: Stop work if fossil remains are encountered during construction

Mitigation Measure GEO-10c: Stop work if a cave or void is encountered during construction

Mitigation Measure NOI-1a: Employ noise-reducing construction practices

Mitigation Measure TRA-4: Implement site-specific transportation management plan during construction

Impact PSU-4: Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years (less than significant)

A WSA was prepared for the proposed project in accordance with California Water Code Section 10910 (Appendix H1, *Water Supply Assessment*). The following evaluation of water supply availability regarding secured and planned water supplies is based on the information presented in the WSA, which was approved by the EID Board of Directors in 2013, the 2021 revalidation memorandum (Tully & Young 2021), Appendix H2, and the 2020 UWMP.

Project Demand

The WSA identified the proposed project's total water demand at buildout to be 2,177 AFY.[6] Table 3.12-11 summarizes the demand by category through Year 25 after beginning of construction (shown as 2035 in the 2013 WSA). As illustrated by the data, most of the demand would not begin until several years after construction begins.

Table 3.12-11. Estimated Project Water Demands (2013 WSA)

	Demand (AFY)					
Category	Current	Year 5[c]	Year 10[c]	Year 15[c]	Year 20[c]	Year 25[c]
Residential	0	0	222	669	1,192	1,510
Commercial	0	0	0	23	80	162
Public	0	14	162	173	201	219
Other[a]	0	111	254	272	172	36
Subtotal demand	0	125	638	1,137	1,646	1,927
Nonrevenue demand[b]	0	16	83	148	214	250
Total demand	0	141	721	1,285	1,860	2,177

Source: Appendix H, *Water Supply Assessment*:Table 2-3.

AFY = acre-feet per year

[a] Other consists of water for rights-of-way and landscape lots, oak woodland mitigation, and construction.

[b] Nonrevenue water represents all of the water necessary to deliver to the customer accounts and reflects distribution system leaks, water demands from potentially unmetered uses such as fire protection, hydrant flushing, and unauthorized connections, and meter reading inaccuracies. The predominant source of nonrevenue water is from system leaks. The WSA assumes nonrevenue demand would be 13%.

[c] While these values represent data from the 2013 WSA, the project has yet to be approved and therefore Years 2015 through 2035 are represented at Year 5 through Year 25 from beginning of construction to avoid confusion.

Table 3.12-12 summarizes from the 2013 WSA the total estimated demand for the proposed project and all other existing and planned land uses in 5-year increments from start of construction. As described in the *Environmental Setting*, per the 2020 UWMP, total water demand for the years 2040 and 2045, including the proposed project, are estimated at 42,130 AFY and 43,320 AFY, respectively (El Dorado Irrigation District 2021). These totals are conservative because projected demand could reasonably be determined to be less for the proposed project as calculated in the 2013 WSA since additional regulations would likely result in a lower demand estimate for the project due to more stringent MWELO and residential gallons per person per capita day (GPCD) estimates (Tully & Young 2021).

[6] EID prepares an annual Water Resources and Service Reliability Report (El Dorado Irrigation District 2016a) to determine water meter availability within its service area. Water meter availability is referred to in terms of equivalent dwelling units (EDU). An EDU is not the same as the number of housing units. EID's conversion rate for single-family average unit demand in the Western/Eastern Supply Area is 0.50 af per EDU (El Dorado Irrigation District 2015). Using this conversion rate, the project's total water demand of 2,177 AFY, shown in Table 3.12-11 and in the WSA, would correspond to 4,354 EDU. The residential demand of 1,510 AFY, shown in Table 3.12-11 and in the WSA, would correspond to 3,020 EDU.

Table 3.12-12. Summary of Total Estimated Water Demands (Proposed Project and Other Existing and Planned Future Uses) (2013 WSA)

	Demand (AFY)					
Category	Current	Year 5[a]	Year 10[a]	Year 15[a]	Year 20[a]	Year 25[a]
Proposed project	0	141	721	1,285	1,860	2,177
Existing and planned future uses	38,984	39,359	42,216	48,275	56,104	65,117
Total water demand	38,984	39,500	42,937	49,560	57,874	67,295

Source: Appendix I, *Water Supply Assessment*: Table 3-2.
AFY = acre-feet per year
[a] While these values represent data from the 2013 WSA, the project has yet to be approved and therefore Years 2015 through 2035 are represented at Year 5 through Year 25 from beginning of construction to avoid confusion.

Supply and Demand Comparison

Table 3.12-13 provides a comparison of secured water supply and estimated demand of the proposed project combined with other existing and planned demand. Normal year water supplies currently available to EID with secured assets total 70,800 AF and single dry year assets total 63,400 AF. The secured water supplies for a multiple-year drought are shown below. The entire buildout demand of the proposed project is 2,177 AFY and would be expected to occur in 2045, at the earliest. The proposed project is accounted for in the projections for water demand in the UWMP. However, as shown in Table 3.12-13, the addition of 2,177 AFY to the demand in any year would not exceed available secured supply in any projected year.

As shown in Table 3.12-13, in 2035, current and secured supplies alone in all hydrologic year types would be sufficient to meet project demands in addition to the demands of other existing and planned future uses. As described in the 2020 UWMP, the District has sufficient and reliable water supplies to meet forecasted customer water needs through 2045 considering water use forecasts for both normal and dry conditions (Tully & Young 2021). The District's surface water supplies have constraints in dry years, but are manageable over time such that they are considered reliable.

Table 3.12-13. Comparison of Water Supply and Total Demand by Hydrologic Year Type

	Supply and Demand (AFY)					
	Current	2025	2030	2035	2040	2045
Normal						
Supply	70,800	70,800	70,800	78,300	78,300	78,300
Demand	35,910	38,908	39,770	40,920	42,130	43,320
Difference	34,890	31,820	31,030	37,380	36,170	34,980
Single Dry						
Supply	63,400	63,400	63,400	67,100	67,100	67,100
Demand	37,300	40,930	41,760	42,970	44,240	45,490
Difference	25,700	22,470	21,640	24,130	22,860	21,610
Multiple Dry Year 1						
Supply		63,400	63,400	63,400	63,400	63,400
Demand		40,930	41,760	42,970	44,240	45,490
Difference		22,470	21,640	20,430	19,160	17,910
Multiple Dry Year 2						
Supply		59,400	59,400	63,100	63,100	63,100
Demand		41,100	42,000	43,220	44,490	45,490
Difference		18,300	17,400	19,880	18,610	17,610
Multiple Dry Year 3						
Supply		55,300	55,300	56,600	56,600	56,600
Demand		41,270	42,240	43,470	44,740	45,490
Difference		14,030	13,060	13,130	11,860	11,110
Multiple Dry Year 4						
Supply		55,300	55,300	56,600	56,600	56,600
Demand		41,440	42,480	43,720	44,990	45,490
Difference		13,860	12,820	12,880	11,610	11,110
Multiple Dry Year 5						
Supply		55,300	55,300	56,600	56,600	56,600
Demand		41,610	42,720	43,970	45,240	45,490
Difference		13,690	12,580	12,630	11,360	11,100

Source: El Dorado Irrigation District 2021; Tables 5-2 and 5-3.
AFY = acre-feet per year

At the time the 2013 WSA was prepared, EID's water supplies associated with the entire secured and planned water assets were estimated to total 110,290 AFY for a normal year (Appendix H1, *Water Supply Assessment*:4-8). The WSA concluded that EID should have sufficient water available to meet the needs of the proposed project and all other demands in its service area through 2035. This finding was further supported in the UWMP adopted by EID in June 2021, as stated in the revalidation memorandum (Appendix H2). Although the UWMP reflected some variations in the characterization of total demands and supplies from the 2013 WSA, the variations do not change the resulting conclusions of the WSA. Specifically, the 2020 UWMP contains modified representation of existing and projected water supply assets to: (1) reflect a more conservative representation of

federal CVP contract supplies to align with restrictions placed on the CVP supplies during 2015; and (2) align the growth in recycled water supplies to be more consistent with expected growth in recycled water demands (since recycled water can only be used for a limited set of irrigation demands). Based upon coordination with the County, the 2020 UWMP also identifies modified projected water demands to reflect slower growth throughout the planning horizon. However, the demands of the proposed project, along with the other projects that simultaneously underwent WSA analysis (CEDHSP, LRVSP, and Dixon Ranch residential project), were maintained in the 2020 UWMP, consistent with their representation in the WSAs approved by EID in August 2013 for those other projects.

The WSA's original conclusion that water supplies would be sufficient was based on the following assumptions (Appendix H1, *Water Supply Assessment*:5-5).

- EID, EDWA, and the El Dorado Water and Power Authority successfully execute the contracts and obtain the water right permit approvals for currently unsecured water supplies: 7,500 AFY of Fazio water (which was anticipated to be available in 2017) and 30,000 AFY under the El Dorado–SMUD Cooperation Agreement. Absent these actions, the water supplies currently held by EID and recognized to be diverted under existing contracts and agreements would be insufficient in 2035 to meet the proposed project demands along with all other existing and planned future uses.
- EID will commit to implement Facility Capacity Charges in an amount sufficient to assure the financing is available as appropriate to construct the necessary infrastructure as detailed in the March 2013 EID IWRMP.
- Demand in single dry years includes an additional 5% of demand over the normal year demand during the same time period. This conservative assumption accounts for the likelihood that EID customers will irrigate earlier in the season to account for dry spring conditions. This hypothetical demand augmentation may or may not manifest in dry years, but this conservative assumption further tests the sufficiency of water supplies during dry conditions.
- The estimated demands include 13% to account for nonrevenue water losses (e.g., distribution system losses).

The 2021 revalidation memorandum concluded that because the proposed project's land uses have not changed relative to those assumed in the EID-approved 2013 WSA, estimated water use demands would not exceed quantities forecast in the WSA (Tully & Young 2021). The 2020 UWMP incorporated this project specifically into its water supply reliability forecasting and came to the same conclusion as the 2013 WSA that there is sufficient water service reliability to meet all demands at least 20 years into the future. Moreover, projected demand could reasonably be determined to be less for the proposed project as calculated in the 2013 WSA since additional regulations would likely result in a lower demand estimate for the same project due to more stringent MWELO and residential GPCD estimates. The original WSA found water availability and sufficiency for the proposed project through 2035. The proposed project is recognized in EID's 2020 UWMP as part of planned future customer demands. EID's 2020 UWMP concludes sufficient water supplies for all current and planned future customers through 2045 during normal, single dry, and droughts lasting 5 years. Therefore, EID's conclusions of water availability and sufficiency to meet the proposed project's estimated water demands as articulated in the 2013 WSA is still valid, and the 2020 UWMP provides necessary concurrence of these prior conclusions.

Based on these assumptions, no new or expanded entitlements would be needed. With the recent adoption by EID of the 2020 UWMP, these conclusions continue to be supported, even with the modified supply and demand characterization included in the 2020 UWMP. Impacts related to sufficient water supplies would be less than significant. No mitigation is required.

In addition, EID manages water supply conditions to meet the increasing demands of new development within its service area, especially during droughts. In February 2014, the EID Board of Directors declared a Stage 2 Water Warning and implemented the mandatory watering restrictions called for under Stage 2 drought conditions. As of March 25, 2016, cumulative water use since January 1, 2013 has dropped by 30% (El Dorado Irrigation District 2016b).

As described in the *Water Conservation* section under *Drought Preparedness Plan* and *Drought Action Plan*, EID has in place a number of voluntary and mandatory measures to manage water supply during drought conditions of varying severity. Table 3.12-4 outlines the actions EID will take during each respective stage; these actions include convening a Drought Response Team to coordinate the responses of EID's various departments, reaching out to the community with information about water conservation, undertaking changes in operations to conserve water supplies, and determining when to increase or reduce the drought stage.

Impact PSU-5: 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 and anticipated commitments (less than significant)

The Deer Creek WWTP currently treats an average dry weather flow of 2.10 mgd (El Dorado Irrigation District 2020). The addition of proposed project flows (0.79 mgd) would not exceed the plant's current capacity of 3.6 mgd. As described in Impact PSU-2, based on the County General Plan planning horizon, estimates of areas for future known densities, and estimates of areas for future unknown densities, EID estimates that projected flows will reach current capacity between 2022 under the high-growth scenario and 2032 under the slow-growth scenario (El Dorado Irrigation District 2013b:151). The WWFMP projects that the Deer Creek WWTP expansion will occur around 2029, and capacity will be increased to 5.0 mgd (El Dorado Irrigation District 2013b:151). Proposed project buildout (around 2035) would include more dwelling units than Marble Valley Master Plan, which is included in the EID projection, and is anticipated to result in approximately 0.70 mgd more flows. Therefore, the development of VMVSP could exceed the planned capacity of the Deer Creek WWTP of 5.0 mgd.

As discussed in Impact PSU-2, as an industry standard practice, EID monitors growth and plans to meet future demands generated by authorized development. If the VMVSP is approved by the County Board of Supervisors, the next revisions to the EID WWFMP will reflect updated future demand calculations, and County General Plan amendments will be reviewed and used as a basis for analysis of future needs to identify what improvements would be required to accommodate additional flows and the timing for when such improvements would be necessary. The types of improvements would depend on regulatory requirements and could involve wastewater process upgrades. As described under *Environmental Setting* in Section 3.12.1, *Existing Conditions*, EID has evaluated the environmental impacts of plant expansion beyond 3.6 mgd. EID's current estimate for expansion to 5.0 mgd by 2029 is within the facility planning assumptions evaluated in the certified EIR. While the proposed project would contribute incrementally to the need for expansion by project buildout, it would not result in changes to the construction and operational assumptions and

associated environmental impacts beyond those identified in the certified EIR for the Deer Creek WWTP expansion project. The mitigation measures identified in the certified Deer Creek WWTP Expansion Project EIR to reduce or avoid potential impacts of expansion would be implemented by EID, as set forth in the MMRP for the plant expansion and the agency's Findings (Resolution 98-76). The approved mitigation measures apply to the following resources: hydrology; air quality; geology, soils, and seismicity; biological resources; hazardous materials; public health; aesthetic resources; transportation and circulation; and cultural resources (Appendix L, *Deer Creek WWTP Mitigation Measures*). In conjunction with VMVSP project approvals, the County would, therefore, be able to make findings pursuant to State CEQA Guidelines Section 15091(a)(2) that the mitigation measures are the responsibility of EID and not the County, and that such measures have been adopted by EID.

Therefore, this impact would be less than significant. No mitigation is required.

Impact PSU-6: 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)

The proposed project would generate some volume of solid waste during construction. The County's existing Construction and Demolition Debris Diversion Ordinance requires project applicants and their construction contractors to reuse or recycle a minimum of 50% of the construction and demolition debris and VMVSP Policy 9.29 requires project applicants and their construction contractors to reuse or recycle a minimum of 65% of the construction and demolition debris.

The VMVSP would allow for residential, commercial, public facilities, and agriculture/open space development. The Western Region of El Dorado County generates an average of 0.67 ton of solid waste per person per year (2010). The proposed project could generate an average of 5,615 tons[7] of solid waste per year for the 3,236 residential units, or 8,381 residents. The project would also generate 57,582 tons of solid waste per year for the 375,000 square feet of office park;[8] 839.5 tons per year for the 100,000 square feet of village commercial space;[9] and 19.5 tons per year for 15,246 square feet (0.35 acre) of school.[10] The total would be 64,037 tons of waste per year, or 175 tons per day, for the proposed project, before recycling. Waste generation includes all materials discarded, whether or not they are later recycled or disposed in a landfill, but the proposed project would be required to comply with state and local regulations to recycle solid waste.

Solid waste from the project site would be collected and transported to the waste transfer facilities in El Dorado County and then sent to the Potrero Hills Landfill. As described under *Environmental Setting* in Section 3.12.1, *Existing Conditions*, the Diamond Springs material recovery facility can process 400 tons of waste per day, and currently process approximately 70 tons per day (Ross pers.

[7] 8,381 residents based on land use densities and 3,236 dwelling units. (average of 0.67 ton per person per year)*(8,381 people) = average of 5,615 tons of solid waste generated by proposed residential land use per year.

[8] Assumes 0.084 pound per square foot per day (lbs/sf/day) produces approximately 31,500 lbs per day (Source: California Department of Resources Recycling and Recovery 2013a). (31,500 lbs/day)*(365) = 115,164,000 lbs/year (assuming professional offices are open 7 days a week, which is conservative). (115,164,000 lbs/year)/(2,000 lbs/ton) = 57,582 tons.

[9] Assumes 0.046 lb/sf/day produces approximately 4,600 lbs per day (Source: California Department of Resources Recycling and Recovery 2013b). (4,600 lbs/day)*(365) = 1,679,000 lbs/year (assuming retail is open 7 days a week, which is conservative). (1,679,000 lbs/year)/(2,000 lbs/ton) = 839.5 tons.

[10] Assumes 0.007 lb/sf/day produces approximately 106.7 lbs per day (Source: California Department of Resources Recycling and Recovery 2013c). (106.7 lbs/day)*(365) = 38,953.5 lbs/year (assuming schools are open 7 days a week, which is conservative). (1,679,000 lbs/year)/(2,000 lbs/ton) = 19.5 tons.

comm.). An additional 175 tons per day from the proposed project would not exceed the capacity of Diamond Springs, or of the two facilities combined.

As described under *Environmental Setting* in Section 3.12.1, *Existing Conditions*, the Potrero Hills Landfill can accept 4,330 tons of waste per day. In 2012, it processed an average of 1,096 tons per day (California Department of Resources Recycling and Recovery 2019). An additional 175 tons (which is a conservative estimate, not including waste that would be recycled, and assuming all waste from the proposed project would only go to this landfill), would not exceed the landfill's capacity.

The Potrero Hills Landfill would be able to accommodate the proposed project's waste. Additionally, the project estimates are conservative because they do not include recycling diversions. Therefore, the proposed project would be served by a landfill with sufficient permitted capacity to accommodate its solid waste disposal needs and impacts would be less than significant. No mitigation is required.

Impact PSU-7: Comply with federal, state, and local management and reduction statutes and regulations related to solid waste (less than significant)

The proposed project would be required to comply with all federal, state, and local statutes and regulations related to solid waste during its construction and operation. These statutes and regulations include those discussed in Section 3.12.1, *Existing Conditions,* under *Regulatory Setting*. Furthermore, VMVSP Policy 9.29 requires that the developer reuse or recycle a minimum of 65% of the construction and demolition debris. These requirements would be enforced during construction and operation through permit conditions and the mandatory requirement that all solid waste be collected by a refuse collector such as the El Dorado Disposal Services, which provides a variety of services such as recycling, green waste collection, and household hazardous waste collection that would be available to residents and businesses in the VMVSP. This would ensure the County can continue to comply with state-required solid waste diversion requirements. Therefore, impacts would be less than significant. No mitigation is required.

Impact PSU-8: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation or conflict with or obstruct a state or local plan for renewable energy or energy efficiency (less than significant)

As indicated above, the wasteful, inefficient, and unnecessary use of direct or indirect energy in the context of Appendix F of the State CEQA Guidelines means circumstances in which the project would conflict with applicable state or local energy legislation, policies, and standards adopted, enacted, or promulgated for the purpose of reducing energy consumption and improving efficiency. As discussed below, the project would result in energy consumption more efficient and less consumptive than under current conditions within the County.

Construction

Project construction would consume gasoline and diesel through operation of heavy-duty construction equipment and vehicles. Based on the GHG emissions, energy use associated with project construction was calculated and estimated to result in the one-time consumption of 195,680 million BTU.

The VMVSP includes several policies that would help conserve indirect energy during construction. For example, VMVSP Policy 9.24 requires a 20% reduction in cement use, which would reduce embodied energy associated with construction. Likewise, VMVSP Policy 9.25 requires cement and concrete be made with recycled products, which would conserve virgin materials and may reduce manufacturing energy. VMVSP Policy 9.27 also requires use of sustainably sourced, regional, bio-based, and reused materials, which may reduce hauling requirements and associated on-road fuel consumption. These policies are consistent with statewide objectives to conserve energy, such as Title 24. The energy consumption of 195,680 million BTU associated with construction activities does not include the effects of these VMVSP policies because sufficient data is not available regarding the amount of cement required by the project that would be affected by these policies. Likewise, the estimate does not account for mitigation measures required to reduce air quality and greenhouse gas (GHG) impacts, as discussed in Chapters 3.3, *Air Quality*, and 3.6, *Greenhouse Gases*. Specifically, Mitigation Measures GHG-1, AQ-2b, and AQ-2c requires implementation of BMPs that will reduce fossil-fuel consumption and support electric-powered (or alternatively fueled) equipment and vehicles.

Operation

Electric and Natural Gas Infrastructure

PG&E will supply electric and natural gas service to the proposed project, as described in Section 2.3.3, *Project Features*. Estimated peak electric demand at buildout for the residential units is approximately 17 megavolt amperes. PG&E electric service would be served by a 4-wire 21kV from two existing substations, Clarksville to the west and Shingle Springs to the east. Service would be extended from the 21kV single-phase overhead line that extends south over US 50. Estimated peak natural gas demand at buildout is approximately 180 thousand cubic feet per hour. Several distribution and transmission facilities north of US 50 may be extended to the plan area to provide natural gas service. Natural gas service will be distributed to the plan area by a network of eight-, six-, and four-inch feeder mains, with distribution lines and services sized based upon anticipated gas loads.

Energy Use

Occupancy of the project would generate vehicle trips from daily resident access, visitors, employee travel, and waste management trucks. Project operations would also result in the consumption of electricity and natural gas for power, heating, and cooking and fossil fuels from landscaping equipment. Fuel consumed by on-road vehicles and landscaping equipment, as well as electricity and natural gas consumed by residents and businesses, represents the long-term operational energy impact associated with the project.

Electricity and natural gas consumption at full project buildout (2045) were quantified using CalEEMod and the land use assumptions presented in Table 2-2 in Chapter 2, *Project Description*. The VMVSP Sustainability Element includes several policies that would improve energy efficiency and reduce indirect electricity and natural gas energy consumption, as well as VMT. Energy benefits associated with quantifiable mandatory VMVSP policies were assumed in the modeling, as described in Section 3.6, *Greenhouse Gas Emissions*.

Additional operational energy reductions may be achieved by the VMVSP policies that support alternative transportation, improve sustainable land use design, and encourage renewable energy, and passive heating and cooling. See Appendix B, *Consistency with El Dorado County General Plan*

Policies, for a listing of VMVSP policies that would help to reduce energy consumption directly (e.g., reducing the amount of electricity consumed) or indirectly (e.g., reducing the amount of water consumed, which reduces energy required to treat and transport water). These strategies were not quantified because the exact number of installed systems and affected structures are currently unknown.

Operational energy consumption (expressed in terms of million BTU) at full buildout in 2045 with and without quantified mandatory VMVSP policies is summarized in Table 3.12-14.

Table 3.12-14. Estimated Annual Operational Energy Consumption for the Proposed Project

Condition	Million BTU/Year
Without VMVSP policies	375,383
With quantified VMVSP policies[a]	375,327

Source: Ascent 2024

[a] Modeling includes energy benefits achieved by VMVSP Policies 9.16, 9.36, 9.42, 9.45, 9.50, and 9.51.

As shown in Table 3.12-14, long-term operation of the project would result in energy usage (gasoline, diesel, electricity, and natural gas). However, VMVSP policies would reduce energy consumption by approximately 55 million BTU compared to if these policies were not pursued.

Based on the energy consumption results discussed above, Table 3.12-15 provides a summary of per-capita El Dorado County energy consumption. As indicated in Table 3.12-15, per-capita BTU energy consumption associated with the proposed project is anticipated at 40,677,081, well below the 89,487,831 per-capita BTU energy consumption associated with the current El Dorado County average (Table 3.12-6), indicating the project would result in more efficient and lower consumption of energy resources.

Table 3.12-15. Proposed Project Per-Capita Energy Consumption

Million BTU	BTU	Per-Capita BTU[a]
375,327	375,327,423,970	40,677,081

[a] Assumes a 2045 population of 9,227 residents.

With respect to on-road vehicles, the project would improve energy efficiency and fuel consumption compared to the existing land use designations, as the project would promote mobility and connectivity between streets and major destinations, as well as configuring future development with typical densities and site design policies to minimize automobile use. This is consistent with the Energy Policy Act and AB 2076, which both strive to reduce dependency on petroleum demand.

Many of the electricity and natural gas reductions would be achieved through the energy conservation requirements of the CALGreen Code and Title 24 standards. For example, buildings would, where feasible, incorporate site design measures to reduce heating and cooling needs by orienting buildings on the project site to reduce heat loss and gain, depending on the time of day and season (VMVSP Policy 9.12). Buildings would also feature programmable thermostats (VMVSP Policy 9.15) and EnergyStar-certified appliances installed prior to occupancy (VMVSP Policy 9.16). All lighting in publicly or commonly accessed outdoor areas would use high-efficiency light-emitting

diode (LED) or similar lighting with automatic or dimmable controls; and public street lighting would also use LED or similar technologies.

The VMVSP also includes policies concerning renewable energy sources. For example, VMVSP Policy 9.22 requires that all residential, commercial, and public buildings be designed to allow for the installation of renewable energy systems, including active solar, wind, or other emerging technologies. Solar water heating systems, radiant heating systems, or similar types of energy-efficient technologies would be required in commercial and multifamily buildings and encouraged in single-family residences and swimming pools (VMVSP Policy 9.23).

Mitigation measures required to reduce air quality, GHG, and transportation impacts, as discussed in Chapters 3.3, *Air Quality*, 3.6, *Greenhouse Gases,* and 3.14, *Transportation*, will also reduce energy consumption. For example, Mitigation Measure TRA-2 requires shifting of 25,000 square feet of commercial office land use to commercial retail land use and implementing a Commute Trip Reduction (CTR) program. This measure will reduce total VMT by VMVSP land uses, resulting in less energy consumption by mobile sources. Mitigation Measure GHG-2 outlines feasible strategies that can be individually or collectively implemented to reduce GHG emissions within the area, energy, and mobile source sectors, including mandatory revisions to VMVSP policies that will increase onsite renewable energy generation. Collectively, implementation of air quality, GHG, and transportation mitigation will further improve energy efficiency and reduce overall energy consumption.

With regard to the proposed project's effects on local and regional energy supplies and on requirements for additional capacity, peak- and base-period demand for electricity and other forms of energy, and other energy resources, it is anticipated the VMVSP policies that promote residential and commercial self-sufficiency will enhance energy, environmental, and transportation efficiency, reducing the requirement for additional capacity.

The degree to which the proposed project encourages efficient and reduced energy consumption and generation of its own energy resources will dictate its dependency on the local energy utility. This will allow a certain degree of self-sufficiency, as less reliance and dependency on the local energy utility occurs. As an example, electricity purchases from the grid can be flattened and utility charges reduced or avoided through the installation of rooftop solar PV or other distributed energy resources. Generating onsite energy resources may also provide enhanced power quality and insulate homeowners from blackouts and other larger grid disruptions. Therefore, the extent the proposed project is able to reduce its energy load and meets its own energy requirements will have a direct effect on peak and base supply from the local energy utility.

The local energy utility will need to plan on the degree of dependency associated with the proposed project, as well as the potential for export of excess energy from potential renewable components that could be implemented as part of the proposed project to its system. The local energy utility will evaluate and plan for the energy resources needed to accommodate the proposed project, and these resources include generation, transmission, and distribution facilities. The costs of these facilities are generally included in the rates paid by the users.

An energy utility's planning for the energy needs of its service territory utilizes local and regional development plans. This dynamic process is subject to regulatory oversight by the California Public Utilities Commission (CPUC) where every 2 years in long-term procurement plan proceedings the CPUC assesses the system and local resource needs of the state's three investor-owned utilities over a 10-year horizon. The CPUC establishes upfront standards for utility procurement activities and

cost recovery by reviewing and approving proposed procurement plans prior to implementation. Integral to this process is the utility demand forecast which is subject to review by the CEC and used in its Integrated Energy Policy Report. To ensure consistency with approved plans, the CPUC conducts annual Energy Resource Recovery Account proceedings where energy forecasts are refined versus ongoing procurement. This continual planning process ensures the local energy requirements for a region, both current and planned, will be accommodated by the local utility. Consequently, it is anticipated the proposed project would not have a detrimental effect on local and regional energy supplies, nor on any requirements for additional capacity. In addition, the proposed project would not impede the local utility's ability to meet the projected peak- and base-period demand for electricity and other forms of energy. Consequently, this impact would be less than significant. No mitigation is required.

The VMVSP includes plans for providing the project area with electricity and natural gas by connecting to existing PG&E facilities. With the exception of facilities such as transformers, switches, and other pedestal and pad-mounted equipment, all new distribution facilities will be underground. The underground lines would be placed in joint trenches, and franchise or public utilities easements would extend along all major roads within the project area, as shown in Figures 8.6 and 8.7 in the VMVSP. Natural gas for residential neighborhoods would consist of 2-inch distribution mains and 0.5-inch services. (Marble Valley Company, LLC 2023)

Dry utility extensions would be constructed offsite for electricity and gas along Cambridge and Bass Lake Road extensions as described in Chapter 2, *Project Description*, and shown on Figure 2-13.

Conclusion

The project is consistent with and would go beyond state and local energy policies enacted to reduce energy consumption (see VMVSP policies identified in Appendix B, *Consistency with El Dorado County General Plan Policies*). Operational energy consumption would result in lower per-capita energy consumption than the 2022 El Dorado County average. As such, the project would not result in a wasteful, inefficient, and unnecessary usage of energy. With implementation of the planned connections, the project would also connect to natural gas and electricity services. Related environmental impacts are disclosed in this document. Therefore, impacts related to energy resources would be less than significant. No mitigation is required.

3.13 Recreation

This section describes the regulatory and environmental setting for recreation facilities within the western area of El Dorado County. It also describes impacts on recreation facilities that would result from implementation of the Village of Marble Valley Specific Plan (VMVSP; proposed project). The environmental effects of constructing parks proposed within the project site are included in the technical analyses in Sections 3.1, *Aesthetics*, through 3.14, *Transportation and Circulation*.

3.13.1 Existing Conditions

Regulatory Setting

The provision of parkland is governed at the state level by California Government Code Section 66477, commonly called the Quimby Act. At the local level, the *El Dorado County General Plan* (County General Plan), the El Dorado County *Parks and Trails Master Plan*, and the El Dorado Hills Community Services District (CSD) *Parks and Recreation Facilities Master Plan* guide the dedication and maintenance of recreational facilities within the unincorporated area of western El Dorado County. Applicable recreation regulations and policies related to the VMVSP are described below.

State

Quimby Act

The Quimby Act (California Government Code 66477), enacted in 1966, is a state law, applied at the local level, that specifies the parkland dedication requirements for new residential development. The Quimby Act allows local jurisdictions to require developers of new residential subdivisions to dedicate up to 3 acres of park area per 1,000 persons or, if the amount of existing neighborhood and community park area exceeds that limit, the jurisdiction can require that existing ratio, not to exceed 5 acres of land per 1,000 persons or to pay in-lieu fees for park or recreational purposes. Although the Quimby Act requires the dedication of new parkland, it does not address the development, operation, or maintenance of new park facilities. Therefore, the Quimby Act provides open space needed to develop park and recreational facilities, but does not ensure the development of the land or the provision of a park.

Local

At the local level, the dedication, operation and maintenance of recreation facilities on the project site and surrounding area is guided by the County General Plan, the County *Parks and Trails Master Plan*, the El Dorado Hills CSD *Parks and Recreation Facilities Master Plan,* and the Cameron Park CSD *Recreation Facilities Master Plan*.

El Dorado County General Plan

The Parks and Recreation Element of the County General Plan guides the establishment and maintenance of parks, recreation facilities, and trails in unincorporated El Dorado County (El Dorado County 2004). The Parks and Recreation Element contains the following goals and policies applicable to recreation resources within and near the VMVSP site. The full text of these goals, objectives, and policies can be found in Appendix B, *Consistency with El Dorado County General Plan*

Policies, which provides an analysis of the project's consistency with County General Plan policies as required under State California Environmental Quality Act (CEQA) Guidelines Section 15125.

- Goal 9.1, *Parks and Recreation Facilities*, addresses provision of adequate recreation opportunities and facilities for the health and welfare of all residents and visitors of the County, and includes Objective 9.1.1, *Park Acquisition and Development*, and Policies 9.1.1.1, 9.1.1.2, 9.1.1.3, 9.1.1.4, and 9.1.1.5; and Objective 9.1.2, *County Trails*, and Policies 9.1.2.4, and 9.1.2.8; and Objective 9.1.3, *Incorporation of Parks and Trails*, and Policy 9.1.3.1.
- Goal 9.2, *Funding*, addresses Quimby Act requirements related to provision of ongoing development, operation, and maintenance of parks associated with new development projects, and includes Objective 9.2.2, *Quimby Act*, and Policy 9.2.2.2.

El Dorado County Parks and Trails Master Plan

The County *Parks and Trails Master Plan* covers County-owned recreational facilities in its plan area, consisting of that portion of western El Dorado County not within the boundaries of a local parks provider. The stated purpose of the *Parks and Trails Master Plan* is to "provide direction and implementation strategies to guide the acquisition, development, and operation of County-owned parks and trails in the Plan Area" (El Dorado County 2012). The *Parks and Trails Master Plan* incorporates the goals, objectives, and policies included in the Parks and Recreation Element of the County General Plan and supplements those with additional goals, objectives, and policies to direct the planning, operation, and maintenance of parks and trails consistent with the County's long range vision. The *Parks and Trails Master Plan* includes the following relevant goal, objectives, and policies.

> **GOAL 1: Health and Wellness.** El Dorado County residents will have reasonable access to a variety of park and trail facilities to enhance their opportunities for physical, mental, and social health and well-being.
>
> **Objective 1.1: Park and Trail Locations.** Park and trails facilities shall be located taking into consideration the potential to provide recreational opportunities to underserved populations and to expand the diversity of recreational experiences available to County residents.
>
> > **Policy 1.1.2:** Some trails should be located to provide connections to neighborhoods or public places such as schools, parks, and civic areas to encourage residents to incorporate walking and cycling as a regular activity.
> >
> > **Policy 1.1.3:** As new parks and trail are planned, consideration should be given to locating them in places that will provide access to diverse and unique recreation experiences.
>
> **Objective 1.2: Public Access.** El Dorado County parks and trails will be designed and operated to provide maximum public access as feasible considering safety, sensitive natural resources, and other constraints.

El Dorado Hills Community Services District Parks and Recreation Facilities Master Plan

The El Dorado Hills CSD *Parks and Recreation Facilities Master Plan* (El Dorado Hills Community Services District 2021) outlines the way El Dorado Hills CSD parks, facilities, and recreation programs will be managed to respond to anticipated growth and changing recreation trends over a 5-year planning period. The El Dorado Hills CSD *Parks and Recreation Facilities Master Plan* outlines the following pertinent goals.

> **Promote Health and Wellness:** The District will continue to focus on health and wellness by expanding the trail network to encourage greater connectivity through walking and biking, improve park access, and promoting multi-generational spaces that will elevate health and wellness for a variety of users.

Communicate, Collaborate and Engage with District Residents and Stakeholders: This 2021 Master Plan places an emphasis on active, intentional communications and collaboration with those that use, participate in and care for the parks and recreation system in El Dorado Hills. The recommendations around this goal are created to increase the important relationship between the District, community members, and stakeholders; including the County, the school districts, and the El Dorado Hills Promise Foundation.

Preserve and Promote Learning about Natural Areas: The 2016 community engagement process established preserving natural resources as a top priority for residents. This was re-stated from the residents and stakeholders with an underlining stress on including interpretatives that educate users on the importance of the natural resources. The previous policies to address water conservation and sustainability were also maintained.

Develop and Maintain State-of-the-Art Parks, Trails, and Recreation Facilities: Community engagement results continued to reveal that residents of El Dorado Hills value parks for their diverse features and their varied recreation functions. The Plan Update includes strategies to bring in more dynamic features throughout the system and increase flexibility in programming.

Engage and Connect the Community with Programs and Events: The desire to develop and maintain physical spaces for outdoor and recreation spaces was underscored with the need for more recreation programs and community events that addressed the program needs of specialized recreation groups like seniors, toddlers, teens and families.

Maintain Financial Stability: The District is committed to achieving financial stability that will ensure future provision of high quality parks and recreation services in El Dorado Hills. The Plan Update includes various strategies such as conducting financial feasibility studies for large-scale facilities, designing revenue-generating facilities, and other innovative approaches around maintenance and design of energy-efficient facility designs.

Cameron Park Community Services District Recreation Facilities Master Plan

The Cameron Park CSD *Recreation Facilities Master Plan* (Cameron Park Community Services District 2014) guides Cameron Park CSD decisions and actions related to the provision of park facilities and recreation programs. The *Recreation Facilities Master Plan* presents Cameron Park CSD goals and policies related to parks and recreation, the demographic composition of the community, park facilities and programs, planning standards, community needs, and recommendations on implementation. The Cameron Park CSD *Recreation Facilities Master Plan* contains the following pertinent goals and policies.

GOAL 1.1: Park and recreation facilities meet the diverse recreation interests of all District residents.

GOAL 1.2: High quality park and recreation facilities provide a variety of recreation opportunities in a safe, accessible, functional, and aesthetically pleasing environment.

GOAL 1.3: A comprehensive pedestrian and bicycle trail system through open space and along the major streets provides CPCSD residents with recreation and alternative transportation options.

GOAL 1.7: Cooperative relationships are established and maintained with all other public and private agencies providing recreational facilities within the CPCSD boundary.

GOAL 1.8: CPCSD provides a full range of park and recreation facilities convenient to users and evenly distributed throughout the community.

GOAL 1.9: Park acreage meets the adopted community standards for current and projected population levels.

Policy 1.1: The CPCSD will develop and maintain parklands that comply with the adopted acreage standards for the population living within the CPCSD.

Policy 1.2: When new residential developments are proposed, the CPCSD will evaluate the best way to meet the needs of new residents for park and recreation facilities, including trails and natural areas.

Policy 1.4: All land dedicated by developers shall be suitable for the type of facilities which will be developed on that site.

Policy 1.12: A comprehensive system of trails to link residential areas with parks, schools and open space areas will be developed by the CPCSD.

Policy 1.13: Facilities will be provided by the CPCSD to serve the basic recreational and social needs of all ages, economic situations, and physical abilities. All CPCSD residents will have access to District recreation facilities.

Policy 1.15: Provisions for trail development shall be required as appropriate at the time that subdivisions are planned and approved. Trail rights-of-way or land dedication shall not be credited to the portion of the development impact fee that derives from the Quimby park dedication requirements for active parklands.

County Code (El Dorado County Subdivision Ordinance) 120.12.090

The County implements the Quimby Act (described above) through Section 120.12.090 of the County Code. The County Code sets standards for the acquisition of lands for parks and recreational purposes, or the payments of fees in lieu thereof, on any discretionary residential development project that is subject to land subdivision. A subdivision of 50 or fewer units can only be required to pay in-lieu fees; subdivisions of more than 50 units may dedicate land, pay fees, or a combination of both. Non-residential subdivisions are conditioned so that Quimby fees would be paid if the property is developed with multifamily housing within 5 years of map recordation.

The County Code includes formulas to calculate the amount of parkland to be dedicated and/or in-lieu fees based on the number of proposed dwelling units and population density. For park planning purposes, the County uses a household size of 3.3 people per single-family residential unit and 2.1 people per multifamily unit (County Code 120.12.090.A.9).

Environmental Setting

Recreation amenities in El Dorado County include a wide range of federal, state, local, and privately owned facilities (Figure 3.13-1). In the westernmost part of the county near the VMVSP site, recreation facilities are primarily owned and operated by the County, El Dorado Hills CSD, and private homeowners' associations (HOAs). County-owned, El Dorado Hills CSD, and Cameron Park CSD facilities in western El Dorado County are described below. The project site is not adjacent to any existing parklands or developed recreational facilities.

County Recreation Facilities

The County categorizes parks, in increasing size, as neighborhood, community, and regional facilities. Neighborhood parks, 2 to 10 acres in size, are typically within walking or biking distance of the residents they serve and have amenities such as play areas, turf, and picnic areas. Community parks, generally 10 to 44 acres in size, are intended to serve the larger community and may include sports fields and courts, a swimming pool, and a community center as well as the amenities found in the smaller neighborhood parks. Regional parks range in size from 30 to 1,000 acres, are intended to serve a region larger than an individual community, may include all the amenities typically found at neighborhood and community parks, and may also feature facilities such as amphitheaters, trails, campgrounds, and interpretive centers.

The County is responsible for managing and maintaining six existing public recreation facilities and owns land targeted for four additional parks (El Dorado County 2012). The six existing facilities consist of two community parks (51-acre Henningsen Lotus Park and 21-acre Pioneer Park), one neighborhood park (3-acre Bradford Park), the El Dorado County Fairgrounds and Joe's Skate Park, located at the fairgrounds, and the 16-acre Chili Bar rafting/kayaking put-in on the South Fork of the American River. The three proposed County parks include the 26-acre Pollock Pines Community Park site, a 62-acre portion of the 1,600-acre Cronan Ranch Regional Trails Park in Pilot Hill, and the 6.3-acre Railroad Park site in the community of El Dorado.

El Dorado Hills Community Services District Recreation Facilities

El Dorado Hills CSD owns and manages a total of approximately 500 acres of existing, undeveloped, and planned parkland, providing parks and recreation facilities and services to residents of the El Dorado Hills area. The project site is within the El Dorado Hills CSD boundaries. Bass Lake Regional Park (a 211-acre site between the communities of El Dorado Hills and Cameron Park) was purchased by El Dorado Hills CSD. When constructed, Bass Lake Regional Park would be the closest recreation facility, approximately 2 miles north of the project site.

El Dorado Hills CSD identifies seven categories of parks within its service area: neighborhood, village, community, open spaces, special use areas, community recreation facilities and other facilities. Table 3.13-1 summarizes these park categories and the acres of each type within the El Dorado Hills CSD service area. Neighborhood parks, located within walking and bicycling distance of most users, range in size from 1 to 3 acres, and are designed primarily for unsupervised, non-organized recreation. Village parks, 3 to 15 acres in size, are within walking and driving distance 0.5 to 1 mile of residents. Village parks are intended to provide active and passive recreational opportunities and may have amenities such as trails, bathrooms, play equipment, and facilities for organized sports. Community parks are intended for use by the broader community. They range from 15 to 100 acres in size and feature facilities for organized sports, parking areas, and bathrooms. Community parks may also include passive recreational opportunities and community centers. Open spaces consist of permanent, undeveloped green or open space ranging in size from small to very large and are managed for natural value and recreational use. Open spaces are intended to provide opportunities for nature-based recreation and the El Dorado Hills CSD has been identified as one of the organizations that may accept the dedication of public open space lands in the El Dorado Hills area. Special use areas consist of freestanding facilities such as community centers, aquatic centers, sports complexes, teen centers, archery ranges, skate parks and arts and cultural facilities.

Table 3.13-1. El Dorado Hills CSD Parks Categories

Park Type	Description	Total Acreage
Neighborhood	Designed primarily for unsupervised, non-organized recreation Located within walking and bicycling distance of most users Should at minimum have a playground, picnic shelter, sports court, and an internal pathway system 1–3 acres	84
Village	Provide active and passive recreational opportunities for large and diverse groups Located within a 0.5- to 1-mile radius of residents and can be within walking and driving ranges Should have all of the amenities of a neighborhood park plus at least two additional compatible recreation facilities Can have amenities like trails, bathrooms, play equipment, and recreational facilities for organized sports 3–15 acres	106
Community	Focal points and gathering places for the broader community Walking or bicycling distance should not exceed 0.5 to 1 mile from residents Should include sports fields and other facilities designed to serve a communitywide audience Include recreational facilities for organized sports, parking areas, and bathrooms, and may include passive recreational opportunities May incorporate senior centers or community centers 15–100 acres	75
Regional	Bass Lake Regional Park (undeveloped)	211
Open Spaces	Permanent, undeveloped green or open space Managed for natural value and recreational use and provides opportunities for nature-based recreation 1-1,000 acres	106
Special Use Areas	Free standing specialized use facilities such as community centers, aquatic centers, sports complexes or skate parks	56
Community Recreation Facilities	Places for specialized recreation groups such as disc golf, mountain bikers, aquatic facilities, etc.	88
Other Facilities	District offices and maintenance buildings	0
Total		726

Source: El Dorado Hills Community Services District 2021.

Parks in the El Dorado Hills CSD service area include facilities owned and maintained by El Dorado Hills CSD, facilities owned and maintained by local HOAs, and joint use of local school grounds. The 726 acres of existing, undeveloped, and planned El Dorado Hills CSD parkland consist of 14 neighborhood parks, 8 village parks, 2 community parks, 1 regional park, 5 open spaces, and 3 special use areas (El Dorado Hills Community Services District 2021). Facilities owned and operated by local HOAs comprise approximately 39 privately owned neighborhood parks (El Dorado Hills Community Services District 2021). Local elementary, middle, and high schools provide 12

additional joint-use recreation facilities in the El Dorado Hills CSD service area in 2007 (El Dorado Hills Community Services District 2021).

Each park category in the El Dorado Hills CSD has either a designated service ratio or, in the case of open space, a recommended guideline. Table 3.13-2 summarizes these service ratios and current and projected levels of service.

Table 3.13-2. Parkland Levels of Service

Park Type	EDH District Acres (2021 Inventory)	LOS Standard[a]	Current Level of Service (LOS)
Population = 46,593			
Regional Parks	207.20	–	4.45
Neighborhood Parks	84.39	1.5	1.81
Village Parks	116.98	1.5	2.51
Community Parks	74.59	2.0	1.6
Parks (Regional, Neighborhood, Village & Community	472.66	5.0	10.14
Open Space (Private and Public)	N/A	40.5*	N/A
Open Space (new standard in current Master Plan)	151.05	3.0	3.24

Source: El Dorado Hills Community Services District 2021.
[a] Standards, Levels of service, and guidelines are expressed in acres per 1,000 population.
* This figure was not intended to be fulfilled by the District alone, but rather was intended to include HOA open space areas to meet the community's goal for open space acreage.

As Table 3.13-2 shows, there is currently 10.14 acres of developed parkland for every 1,000 residents, including HOA parks (El Dorado Hills Community Services District 2021; Table B-1). It is important to note that privately preserved open space is not included in the Open Space LOS calculations. Open spaces within developments are distributed throughout the District and contribute to a higher level of service than is represented by the LOS of District open spaces alone. According to the District's 2021 *Park and Recreation Facilities Master Plan*, the District is meeting or exceeding its LOS standard for neighborhood parks at 1.81 acres per 1,000 residents. For village parks, the District is nearly meeting its 1.5 acres per 1,000 residents LOS standard, and at the District's 2036 population anticipates meeting the 1.5 acre standard without adding any additional village parks. The District has 74.59 acres of community parkland resulting in a current LOS of 1.6 acres per 1,000 residents, which is below the 2.0 acres per 1,000 residents standard. If Bass Lake Regional Park is considered within the analysis as a community park, the District would be at 6.05 acres per 1,000 residents, well above the standard. Bass Lake Regional Park was not envisioned when these standards were established. If Bass Lake Regional Park is not included, the District should add 18.6 acres of community parkland to meet the LOS standard.

There are currently 151 acres of District-owned open space. To adhere to the 2016 Master Plan LOS guideline of 40.5 acres per 1,000 people for the current population, an additional 1,736 acres of open space is needed. At the time of the 2016 plan, there was a total of 2,230 acres of private open space within the District's boundaries. Though there is not current data available on the inventory of privately held open space in the District, the District appears to be meeting its guideline of 40.5 acres per 1,000 people.

Cameron Park Community Services District Recreation Facilities

A small section of the Cameron Park CSD's southwestern boundary borders the project site's northern boundary. The Cameron Park CSD is discussed in this section to analyze potential impacts on services and facilities due to the proximity of the proposed project.

The Cameron Park CSD manages a total of approximately 143 acres of parkland, 96.3 acres of which is developed parkland for recreation use (Cameron Park Community Services District 2014). The 143 acres of parkland include 4 community parks (Cameron Park Community Center, Cameron Park Lake, Christa McAuliffe Park, and Rasmussen Park); 6 neighborhood parks (David West Park, Dunbar Park site [undeveloped], Eastwood Park, Gateway Park, Hacienda Park, and Northview Park); and 4 natural areas (Knollwood Park Site, Royal Oaks, Sandpiper Park Site, and Bonanza Park Site) (Cameron Park Community Services District 2014). Only one of the natural areas, Royal Oaks, has improvements; the remaining three are currently used for natural resource preservation (Cameron Park Community Services District 2014).

In addition to the park facilities owned and operated by the Cameron Park CSD, several other recreational facilities are located in the area for residents' use. The Cameron Park Country Club includes an 18-hole championship golf course, tennis complex, pool, recreation center, and dining room. The campuses for Blue Oak and Green Valley elementary schools and Pleasant Grove and Camerado Springs middle schools are within the Cameron Park CSD. These schools have multi-use rooms, playgrounds, and sports fields that are used outside of school hours for sports leagues, events, and informal play.

Each category of park has a designated service ratio. Table 3.13-3 summarizes the service ratio and current levels of service.

Table 3.13-3. Parkland Levels of Service, Cameron Park CSD

Park Type	Cameron Park CSD Existing Standard (acres per 1,000 persons)	Acres Needed per Standard (based on 2013 population of 18,986)	Cameron Park CSD Existing Level of Service (acres)	Surplus/ (Deficit) (acres)
Neighborhood	2.0	38.0	32.7	(5.3)
Community	3.0	57.0	77.8	20.8
Open Space Preserves	5.0	94.9	394.3	299.4

Source: Cameron Park Community Services District 2014:52.

The Cameron Park CSD is currently deficient in neighborhood parks by 5.3 acres (Table 3.13-3). Given the Cameron Park CSD's projected population estimate of 21,748 people, by 2023 the Cameron Park CSD would need a total of 43.5 acres of neighborhood parks, including 10.8 acres of additional neighborhood parkland beyond the existing acreage, to adequately serve its residents (Cameron Park Community Services District 2014:1). The Cameron Park CSD has, and is expected to sustain, a surplus of community parkland and open space preserve acreage.

Village of Marble Valley Specific Plan Area Recreation Facilities

Although the project site was approved for development in 1998, the site was not developed. Consequently, no developed recreational resources currently exist within the VMVSP area. The project site is not directly adjacent to any existing parklands or developed recreational facilities. The

unimproved El Dorado Trail passes nearby and surrounding developments include the recreational facilities described above.

3.13.2 Environmental Impacts

Methods of Analysis

The analysis of the VMVSP's impacts on recreational resources was conducted using a review of local recreation planning documents, including the County General Plan Parks and Recreation Element, the County *Parks and Trails Master Plan*, the El Dorado Hills CSD *Parks and Recreation Facilities Master Plan,* and the Cameron Park CSD *Recreation Facilities Master Plan*. The recreation impact assessment in this section is based on a comparison of the anticipated population of the VMVSP area with the ability of existing and VMVSP-proposed recreational facilities to accommodate that population. The assessment includes an analysis of the County's Quimby Act parkland dedication requirements outlined in County Code Section 120.12.090. The analysis assumes 3.3 people per single-family residential unit and 2.1 people per multifamily unit to estimate the population, in accordance with County Code Section 120.12.090.A.9

Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the proposed project would be considered to have a significant effect if it would result in any of the conditions listed below.

- 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.
- Require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

Impacts and Mitigation Measures

Impact REC-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated (less than significant)

The VMVSP proposes development of up to 1,963 single-family and 1,209 multifamily units as well as 50 residential units in Village Commercial and 14 units in Agri-Tourism. The Village Commercial units are assumed to be multifamily units, and the Agri-Tourism units are assumed to be single-family units. Based on a household size of 3.3 people per single-family residential unit and 2.1 people per multifamily unit (County Code 120.12.090.A.9), build-out of the VMVSP would introduce up to 9,168 park users into the area, which would increase the use of existing parks and recreational facilities.

As described in Section 3.13.1, *Existing Conditions*, the El Dorado Hills CSD exceeds the village park acreage requirement but is presently deficient in neighborhood parks, village parks and community parks (Table 3.13-2). The Cameron Park CSD is currently deficient in neighborhood parks by 5.3 acres (Table 3.13-3) and, as described in Section 3.13.1, *Existing Conditions*, anticipates remaining deficient in neighborhood parkland as its population grows.

The VMVSP includes development of approximately 1,343 acres of parks and open space, consisting of 47 acres of village parkland, 12 acres of neighborhood parkland, and 1,284 acres of open space, 466 acres of which could comprise a passive day-use park south of Deer Creek. In addition, as shown in Figure 2-8 in Chapter 2, *Project Description*, the project includes a bikeway and pedestrian trail network, a network of Class I bike paths with a potential connection to the El Dorado Trail through the Lime Rock Valley Specific Plan project area (if approved). The 1,284 acres of open space and 47 acres of village parkland would be open to the public, with the exception of the 466-acre passive day-use park if stakeholders do not come forward to operate it.

The introduction of the VMVSP recreation amenities would provide additional recreational opportunities for the residents of the project site as well as the public, and would minimize the VMVSP area residents' use of similar existing recreational facilities operated by the El Dorado Hills and Cameron Park CSDs. Parkland dedication as proposed would exceed Quimby Act requirements of 45.84 acres and would augment parkland acreage known to be deficient in the El Dorado Hills and Cameron Park CSD service areas.

The VMVSP contains the following objectives and policies that address open space and parkland dedication, and use. Implementation of these policies would minimize potential effects associated with deterioration of existing neighborhood parks.

Objective 3.6: Set aside natural open space lands to preserve sensitive environmental resources and provide for wildlife habitat, while allowing for the passive recreational enjoyment of the community.

Policy 3.8: Set aside a minimum of 30% open space consistent with the El Dorado County General Plan.

Objective 3.7: Provide parks and gathering spaces for a range of ages and users.

Policy 3.10: Provide private neighborhood parks and public community parks at an overall minimum standard of 5 acres per 1,000 residents, linking them to residential areas and activity centers through a network of sidewalks, bike paths, and trails.

Policy 3.11: All multifamily and high-density residential sites are encouraged to incorporate on-site recreational amenities for their residents.

Objective 6.8: Set aside open space lands for scenic or recreational enjoyment, avoidance of natural hazards, and corridors for the movement of wildlife.

Policy 6.40: Create community and foundation or private open space zones, which may contain limited recreation uses and facilities, storm water quality detention basins, water quality structures, wetland and tree mitigation areas, and other potential public utilities.

Policy 6.41: Open space areas shall incorporate sensitive natural resources, including oak woodlands, Deer and Marble Creeks and their intermittent tributaries, steep hillsides, and cultural resources.

Policy 6.42: Locate Class I bicycle paths, or paved and unpaved trails throughout the public open space, unless prohibited by state or federal agencies, or the Historic Properties Treatment Plan.

Objective 7.2: Create new park and recreation opportunities within the Plan Area for the enjoyment of existing and new residents.

Policy 7.1: School sites should be located adjacent to village park sites to provide for joint-use of facilities and shall be accessed from public arterial or collector roadways.

Policy 7.7: To promote walking and cycling, village and neighborhood parks shall be connected to the pedestrian and bicycle network.

Policy 7.8: Locate neighborhood parks reasonably central to the neighborhoods they are intended to serve.

Policy 7.9: Neighborhood parks shall be a minimum of 1 acre.

Policy 7.10: Acceptable amenities for neighborhood parks include open turf for unstructured play, landscape improvements, playground structures, site furnishings (picnic tables and shelters, benches, bike racks, drinking fountains, trash receptacles, etc.), site identification and interpretive signage, basketball court (full or half), natural areas, and walking paths. Sports fields, artificial turf, off-street parking, and restrooms are not allowed. Examples of neighborhood parks include Serrano Villages B, D, G, and K1/K2.

Policy 7.11: For public parks to be owned and/or maintained by the EDHCSD, the Project Proponent will determine the type and design of the improvements in consultation with the EDHCSD.

Policy 7.13: Village parks shall be located adjacent to public arterial or collector roadways, and where feasible, adjacent to public schools to promote joint-use facilities.

Policy 7.14: In addition to the acceptable amenities for neighborhood parks (refer to Policy 7.9), village parks may include sports fields (natural or artificial turf and lighted or unlighted); restrooms; active recreation facilities appropriate for the size, scale, and topography of the park; and off-street parking. Prohibited amenities include regional-scale facilities, large indoor facilities, swimming pools, and large storage and maintenance buildings. Examples of village parks include Alan Lindsey Park and the planned park at Serrano Village J.

Policy 7.15: Park designs shall accommodate a variety of active and passive recreational facilities and activities that meet the needs of Plan Area residents of all ages, abilities, and special interest groups, including the disabled.

Policy 7.16: Village parks shall feature active recreational uses as a priority and may provide field lighting for nighttime sports uses and other activities as deemed appropriate by the EDHCSD.

Policy 7.21: Easements and designated open space shall not be credited as park land acreage. These areas may be used for park activities, but not to satisfy Quimby park land dedication requirements.

Policy 7.23: The Project Proponent shall dedicate park land acreage consistent with Quimby park land dedication requirements. It is currently contemplated that the Project Proponent will dedicate 45.84 acres of park lands to the EDHCSD as specified in the Public Facilities Financing Plan and the Development Agreement, provided the Plan Area builds out to its maximum dwelling count of 3,236 units.

Because the proposed project would establish open space and active recreational opportunities that exceed the parkland dedication requirements of the Quimby Act, the County General Plan, and the El Dorado Hills and Cameron Park CSDs, implementation of the VMVSP would not be expected to cause or accelerate the deterioration of existing park facilities. This would be a less-than-significant impact. No mitigation is required.

Impact REC-2: Require the construction or expansion of offsite recreational facilities that might have an adverse physical effect on the environment (no impact)

The proposed project would provide new parkland within the VMVSP project area that would accommodate existing and project-related residents in the El Dorado Hills and Cameron Park CSDs, and would contribute toward remedying the expected deficiencies in 2036 for neighborhood, and community parks identified by the El Dorado Hills CSD. As described under *Environmental Setting* in Section 3.13.1, *Existing Conditions*, in 2036 the service area would still be deficient in neighborhood

parks, with a service ratio of 1.81 acres per 1,000 people requiring 10.08 acres of additional neighborhood parkland; and community parks with a service ratio of 1.6 per 1,000 people requiring 126 acres of additional community parkland (El Dorado Hills Community Services District 2021). However, the proposed project would create 12 acres of neighborhood parks, which would bring the CSD over its target of 10.08 additional acres for neighborhood parkland.

There are currently 151 acres of District-owned open space. To adhere to the 2016 Master Plan LOS guideline of 40.5 acres per 1,000 people for the current population, an additional 1,736 acres of open space is needed. At the time of the 2016 plan, there was a total of 2,230 acres of private open space within the District's boundaries. Though there is not current data available on the inventory of privately held open space in the District, the District appears to be meeting its guideline of 40.5 acres per 1,000 people. As noted in the El Dorado CSD *Parks and Recreation Facilities Master Plan*, the open space target was not intended to be fulfilled entirely by the El Dorado CSD, but rather to include HOA open space areas to meet the community's open space acreage goal. The proposed project would include 1,284 acres of open space as well as a 21-acre public lake park with more than 10 acres of land for an amphitheater, gazebo, and lighted sports fields. Therefore, the proposed project would help the CSD meet its guideline for combined open space.

The proposed project is not anticipated to result in the need for the construction or expansion of offsite recreational facilities that might have adverse physical effects on the environment. There would be no impact.

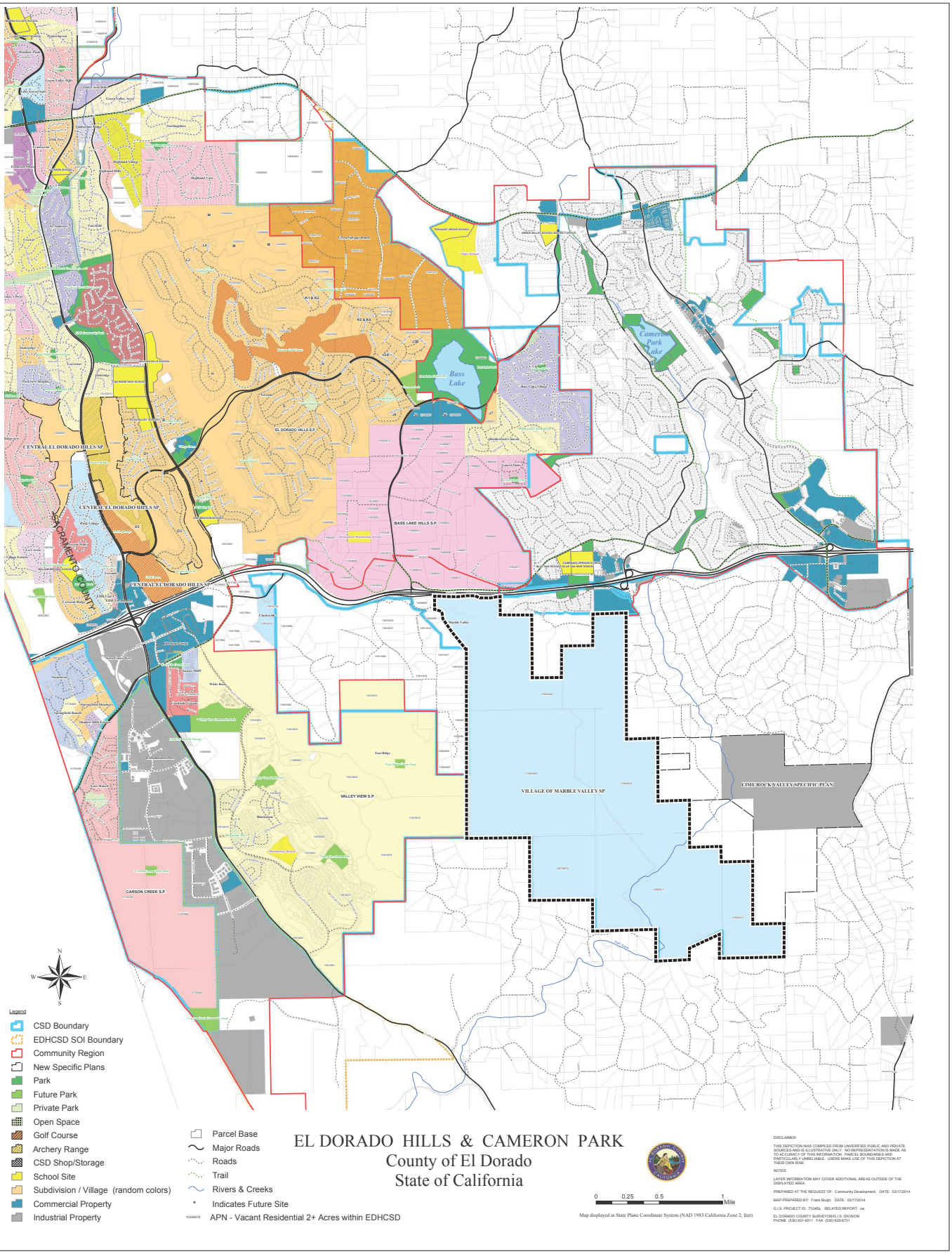

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Figure 3.13-1
Parks in the Project Vicinity

3.14 Transportation and Circulation

This section presents the setting information, identifies transportation impacts associated with implementation of the Village of Marble Valley Specific Plan (VMVSP; proposed project), and proposes mitigation for significant impacts. The preliminary roadway circulation plan is shown in Figure 2-7, and the preliminary trail circulation plan is shown in Figure 2-8.

Fehr and Peers prepared a transportation impact analysis for the transportation network within the proposed project and surrounding area. The information presented in this section and the evaluation of impacts is based on the Fehr and Peers transportation impact analysis, which is provided in Appendix K1 and K2, *Transportation Impact Analysis* and *Village of Marble Valley Specific Plan VMT Analysis*, respectively. This section provides the results of the existing plus project conditions analysis. The analysis of cumulative transportation and circulation impacts is presented in Section 5.2, *Cumulative Impacts*.

3.14.1 Existing Conditions

Regulatory Setting

State

California Department of Transportation

The California Department of Transportation (Caltrans) is responsible for operating and maintaining the state highway system. In the project vicinity, U.S. Highway (US) 50 is under Caltrans jurisdiction. Caltrans provides administrative support for transportation programming decisions made by the California Transportation Commission (CTC) for state funding programs. The CTC adopts the State Transportation Improvement Program, which is a multi-year Capital Improvement Program that sets priorities and funds transportation projects envisioned in long-range transportation plans.

In June 2014, Caltrans approved a *Transportation Concept Report and Corridor System Management Plan for United States Route 50* (US 50 TCR/CSMP) (California Department of Transportation 2014). The US 50 TCR/CSMP is a long-range (20-year) planning document that identifies existing route conditions and future needs. The US 50 TCR/CSMP communicates the vision for the development of US 50 during the 20-year planning horizon. The US 50 TCR/CSMP applies to US 50 from Interstate 80 in West Sacramento to the Cedar Grove exit, which is east of the study area.

Senate Bill 743

Passed in 2013, Senate Bill (SB) 743 changes the focus of transportation impact analysis under the California Environmental Quality Act (CEQA) from measuring impacts on drivers, to measuring the impact of driving. The change in focus is being implemented by replacing level of service (LOS) of roadways and intersection with vehicle miles traveled (VMT). This shift in transportation impact focus is intended to better align transportation impact analysis and mitigation outcomes with the state's goals to reduce greenhouse gas emissions, encourage infill development, and improve public

health through more active transportation. LOS or other delay metrics may still be used to evaluate the impact of projects on drivers as part of land use entitlement review and impact fee programs.

In January 2019, the California Natural Resources Agency finalized updates to the CEQA Guidelines including the incorporation of SB 743 modifications. To help aid lead agencies with SB 743 implementation, the Governor's Office of Planning and Research (OPR) produced the Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018) that provides guidance about the variety of implementation questions they face with respect to shifting to a VMT metric.

Key guidance from this document includes the following.

- VMT is the most appropriate metric to evaluate a project's transportation impact.
- OPR recommends tour- and trip-based travel models to estimate VMT, but ultimately defers to local agencies to determine the appropriate tools.
- OPR recommends measuring VMT for residential and office projects on a "per rate" basis.
- OPR recommends that a per-capita or per-employee VMT that is 15% below that of existing development may be a reasonable threshold. In other words, an office project that generates VMT per employee that is more than 85% of the regional VMT per employee could result in a significant impact. OPR notes that this threshold is supported by evidence that connects this level of reduction to the state's emissions goals.
- OPR recommends that where a project replaces existing VMT-generating land uses, if the replacement leads to a net overall decrease in VMT, the project would lead to a less-than-significant transportation impact. If the project leads to a net overall increase in VMT, then the thresholds described above should apply.
- Lead agencies have the discretion to set or apply their own significance thresholds.

Regional

Sacramento Area Council of Governments

The Sacramento Area Council of Governments (SACOG) is an association of local governments in the six-county Sacramento region. Its members consist of the Counties of Sacramento, El Dorado, Placer, Sutter, Yolo, and Yuba as well as 22 cities. SACOG provides transportation planning and funding for the region and serves as a forum for the study and resolution of regional issues. In addition to preparing the region's long-range transportation plan, SACOG assists in planning for transit, bicycle networks, clean air, and airport land uses.

The *Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) for 2040* is a federally mandated long-range fiscally constrained transportation plan for the six-county area (Sacramento Area Council of Governments 2019). Most of this area is designated a federal nonattainment area for ozone, indicating that the transportation system is required to meet stringent air quality emissions budgets to reduce pollutant levels that contribute to ozone formation. To receive federal funding, transportation projects nominated by cities, counties, and agencies must be consistent with the MTP/SCS.

The *2021–2024 Metropolitan Transportation Improvement Program* (MTIP) is a list of transportation projects and programs to be funded and implemented between the years 2021 and 2024

(Sacramento Area Council of Governments 2021). SACOG submits the MTIP to Caltrans and amends the program on a quarterly cycle. Only projects listed in the MTP/SCS may be included in the MTIP.

Local

El Dorado County Transportation Commission

The El Dorado County Transportation Commission (EDCTC) is the Regional Transportation Planning Agency for El Dorado County (County), except for that portion of the county within the Tahoe Basin, which is under the jurisdiction of the Tahoe Regional Planning Agency. The EDCTC prepares the County's regional transportation plan (RTP). The *El Dorado County Regional Transportation Plan 2020–2040* is designed to be a blueprint for the systematic development of a balanced, comprehensive, multi-modal transportation system (El Dorado County Transportation Commission 2020). EDCTC submits the RTP to SACOG for inclusion in the MTP/SCS process.

The *El Dorado County Active Transportation Plan* establishes a long-term vision for improving walking and bicycling in El Dorado County (El Dorado County Transportation Commission 2020). The plan is a is a critical tool in guiding a balanced transportation system in the County. The plan updates the previous 2010 El Dorado County Bicycle Master Plan.

In May 2013, EDCTC completed the *El Dorado Hills Community Transit Needs Assessment and US 50 Corridor Operations Plan* (Transit Plan), which explores how recent growth and projected development affect the need for transit services, and identifies the most appropriate type and level of service needed given the demand (El Dorado County Transportation Commission 2013). The Transit Plan represents a recommendation from the *Western El Dorado County 2019 Short-and-Long-Range Transit Plan* to study and consider improved transit service in the El Dorado Hills area (El Dorado County Transportation Commission 2019).

In April 2015, EDCTC adopted the *Coordinated Public Transit Human Services Transportation Plan, El Dorado County*, which is intended to improve mobility of individuals who are disabled, elderly, or of low-income status (El Dorado County Transportation Commission 2015). The plan identifies needs specific to those population groups and strategies to meet their needs.

El Dorado County

The County provides for the mobility of people and goods within El Dorado Hills, which is an unincorporated area of the county.

The Transportation and Circulation Element of the *El Dorado County General Plan* outlines goals and policies that coordinate the transportation and circulation system with planned land uses (El Dorado County 2009). The following goals and their associated policies are relevant to the project (El Dorado County 2019). See Section 3.9, *Land Use Planning and Agricultural Resources*, for an analysis of the project's consistency with County General Plan policies, as required under State CEQA Guidelines Section 15125.

> **County General Plan Goal TC-1:** "To plan for and provide a unified, coordinated, and cost-efficient countywide road and highway system that ensures the safe, orderly, and efficient movement of people and goods."
>
> > **Policy TC-1b:** In order to provide safe, efficient roads, all roads should incorporate the cross sectional road features set forth in Table TC-1.

Policy TC-1p: The County shall encourage street designs for interior streets within new subdivisions that minimize the intrusion of through traffic on pedestrians and residential uses while providing efficient connections between neighborhoods and communities.

Policy TC-1q: The County shall utilize road construction methods that seek to reduce air, water, and noise pollution associated with road and highway development.

Policy TC-1w: New streets and improvements to existing rural roads necessitated by new development shall be designed to minimize visual impacts, preserve rural character, and ensure neighborhood quality to the extent possible consistent with the needs of emergency access, on street parking, and vehicular and pedestrian safety.

County General Plan Goal TC-X: "To coordinate planning and implementation of roadway improvements with new development to maintain adequate levels of service on County roads."

Policy TC-Xa: Except as otherwise provided, the following TC-Xa policies shall remain in effect indefinitely, unless amended by voters:

- Traffic from residential development projects of five or more units or parcels of land shall not result in, or worsen, Level of Service F (gridlock, stop-and-go) traffic congestion during weekday, peak-hour periods on any highway, road, interchange or intersection in the unincorporated areas of the county.
- The County shall not add any additional segments of U.S. Highway 50, or any other highways and roads, to the County's list of roads from the original Table TC-2 of the 2004 General Plan that are allowed to operate at Level of Service F without first getting the voters' approval.
- The County shall not create an Infrastructure Financing District unless allowed by a 2/3rds majority vote of the people within that district.
- Before giving approval of any kind to a residential development project of five or more units or parcels of land, the County shall make a finding that the project complies with the policies above. If this finding cannot be made, then the County shall not approve the project in order to protect the public's health and safety as provided by state law to assure that safe and adequate roads and highways are in place as such development occurs.

Policy TC-Xb: To ensure that potential development in the County does not exceed available roadway capacity, the County shall:

- Every year prepare an annual Capital Improvement Program (CIP) specifying expenditures for roadway improvements within the next 10 years. At least every five years prepare a CIP specifying expenditures for roadway improvements within the next 20 years. Each plan shall contain identification of funding sources sufficient to develop the improvements identified;
    - At least every five years, prepare a Traffic Impact Mitigation (TIM) Fee Program specifying roadway improvements to be completed within the next 20 years to ensure compliance with all applicable level of service and other standards in this plan; and
    - Annually monitor traffic volumes on the county's major roadway system depicted in Figure TC-1.

Policy TC-Xc: Developer paid traffic impact fees combined with any other available funds shall fully pay for building all necessary road capacity improvements to fully offset and mitigate all direct and cumulative traffic impacts from new development during peak hours upon any highways, arterial roads and their intersections during weekday, peak-hour periods in unincorporated areas of the County.

Policy TC-Xf: At the time of approval of a tentative map for a single family residential subdivision of five or more parcels that worsens (defined as a project that triggers Policy TC-Xe [A] or [B] or [C]) traffic on the County road system, the County shall do one of the following: (1) condition the project to construct all road improvements necessary to maintain or attain Level of Service standards detailed in this Transportation and Circulation Element based on existing traffic plus traffic generated from the development plus forecasted traffic growth at 10-years from project submittal; or (2) ensure the commencement of construction of the necessary road improvements are included in the County's 10-year CIP.

For all other discretionary projects that worsen (defined as a project that triggers Policy TC-Xe [A] or [B] or [C]) traffic on the County road system, the County shall do one of the following: (1) condition the project to construct all road improvements necessary to maintain or attain Level of Service standards detailed in this Transportation and Circulation Element; or (2) ensure the construction of the necessary road improvements are included in the County's 20-year CIP.

Policy TC-Xg: Each development project shall dedicate right-of-way, design and construct or fund any improvements necessary to mitigate the effects of traffic from the project. The County shall require an analysis of impacts of traffic from the development project, including impacts from truck traffic, and require dedication of needed right-of-way and construction of road facilities as a condition of the development. This policy shall remain in effect indefinitely unless amended by voters.

Policy TC-Xh: All subdivisions shall be conditioned to pay the traffic impact fees in effect at the time a building permit is issued for any parcel created by the subdivision.

County General Plan Goal TC-2: "To promote a safe and efficient transit system that provides service to all residents, including senior citizens, youths, the disabled, and those without access to automobiles that also helps to reduce congestion, and improves the environment."

Policy TC-2d: The County shall encourage the development of facilities for convenient transfers between different transportation systems (e.g., rail-to-bus, bus-to-bus).

County General Plan Goal TC-3: "To reduce travel demand on the County's road system and maximize the operating efficiency of transportation facilities, thereby reducing the quantity of motor vehicle emissions and the amount of investment required in new or expanded facilities."

Policy TC-3c: The County shall encourage new development within Community Regions and Rural Centers to provide appropriate on-site facilities that encourage employees to use alternative transportation modes. The type of facilities may include bicycle parking, shower and locker facilities, and convenient access to transit, depending on the development size and location.

County General Plan Goal TC-4: "To provide a safe, continuous, and easily accessible non-motorized transportation system that facilitates the use of the viable alternative transportation modes."

Policy TC-4a: The County shall implement a system of recreational, commuter, and inter-community bicycle routes in accordance with the County's Bikeway Master Plan. The plan should designate bikeways connecting residential areas to retail, entertainment, and employment centers and near major traffic generators such as recreational areas, parks of regional significance, schools, and other major public facilities, and along recreational routes.

Policy TC-4b: The County shall construct and maintain bikeways in a manner that minimizes conflicts between bicyclists and motorists.

Policy TC-4c: The County shall give priority to bikeways that will serve population centers and destinations of greatest demand and to bikeways that close gaps in the existing bikeway system.

Policy TC-4d: The County shall develop and maintain a program to construct bikeways, in conjunction with road projects, consistent with the County's Bikeway Master Plan [changed in 2015 to Bicycle Transportation Plan], taking into account available funding for construction and maintenance.

Policy TC-4g: The County shall support development of facilities that help link bicycling with other modes of transportation.

Policy TC-4i: Within Community Regions and Rural Centers, all development shall include pedestrian/bike paths connecting to adjacent development and to schools, parks, commercial areas and other facilities where feasible. In Rural Regions, pedestrian/bike paths shall be considered as appropriate.

County General Plan Goal TC-5: To provide safe, continuous, and accessible sidewalks and pedestrian facilities as a viable alternative transportation mode.

Policy TC-5a: Sidewalks and curbs shall be required throughout residential subdivisions, including land divisions created through the parcel map process, where any residential lot or parcel size is 10,000 square feet or less.

Policy TC-5b: In commercial and research and development subdivisions, curbs and sidewalks shall be required on all roads. Sidewalks in industrial subdivisions may be required as appropriate.

Policy TC-5c: Roads adjacent to schools or parks shall have curbs and sidewalks.

The El Dorado County Community Development Agency's *Transportation Impact Study Guidelines* sets forth the protocols and procedures for conducting transportation analysis in the County (El Dorado County 2014), including the identification of the study area. This traffic analysis is consistent with the County-established methods in place at the commencement of the project.

El Dorado County Transit Authority

El Dorado County Transit Authority (EDCTA) operates El Dorado Transit, which provides public transit service within the project area. El Dorado Hills is currently served by El Dorado Transit Dial-A-Ride services, Commuter Service, and the Iron Point Connector Route.

The El Dorado County *Park-and-Ride Master Plan* calls for constructing nine new facilities over 20 years (El Dorado County Transit Authority 2017). The plan calls for EDCTA to assume primary responsibility for existing park-and-ride facilities in the county and sets forth an annual program to fund the upkeep and operation. The plan reiterates that demand exceeds supply at the park-and-ride lot in El Dorado Hills, referred to as the El Dorado Hills Multi-modal Facility, located in the northeast corner of the White Rock Road/Latrobe Road intersection. The plan indicates that future (year 2027) deficiency at this location will be 172 additional spaces. The plan identifies the construction of a 325-space multi-story parking garage with ground floor retail as priority project #12 in the Capital Improvement Program (CIP) list. The proposed location is the existing park-and-ride lot.

The plan identifies the construction of the Bass Lake Hills Multi-Modal Facility as the number 1 priority. The concept is a condition of the Bass Lake Hills Specific Plan, which requires a designated site suitable for the construction of a 200-space park-and-ride facility. New development is also required to construct the first 100 spaces. The *El Dorado Park-and-Ride Facilities Master Plan* states that completion of the 200-space facility would fully address parking deficiencies in the Cameron Park area. Another facility, named the Marble Valley park-and-ride lot, has been proposed on the south side of US 50 at the Bass Lake Road interchange as part of the Marble Valley development

previously approved by the County. However, the plan states that the Marble Valley park-and-ride lot would be redundant with the Bass Lake Hills Multi-Modal Facility and instead suggests that the developer provide an in-lieu payment toward another proposed park-and-ride facility, such as the Bass Lake Hills Multi-Modal Facility.

El Dorado County Capital Improvement Program and Traffic Impact Fees

Capital Improvement Program

A CIP is a planning document that identifies capital improvement projects (e.g., roads and bridges) a local government or public agency intends to build over a certain time horizon (usually between 5 and 20 years). The CIP serves as a planning and implementation tool for the development, construction, rehabilitation, and maintenance of the county's infrastructure. Capital improvements are projects that provide tangible long-term improvements or additions of a fixed or permanent nature, have value and can be depreciated. CIPs typically provide key information for each project, including delivery schedule, cost, and revenue sources. The County's CIP and Traffic Impact Fee (TIF) Program are also subject to CEQA. The CIP and TF Program Final EIR was certified on December 6, 2016, and the accompanying TIF went into effect on February 13, 2017. An Addendum to the EIR was certified on June 26, 2018, and the fees were updated in 2019 and 2020.

In order to maintain the integrity of the county's roadway network, the County is required to implement County General Plan Policy TC-Xb and Implementation Measures TC-A and TC-B. These measures require the development of a 10- and 20-year CIP. These policies also require an update of the 20-year growth forecast every 5 years. The forecast is needed to update the CIP and TIF Program. Forecasting growth is an iterative and ongoing process—forecasts are reviewed and adjusted annually as well as every 5 years. Routinely verifying and updating growth forecasts allows the County to account for new information and adjust its assumptions and plans accordingly. In addition, the CIP must contain identification of funding sources sufficient to develop the improvements identified. The CIP process includes identifying, prioritizing, and developing funding for needed projects. The CIP includes ongoing projects started in previous years and new projects starting in the current and future fiscal years. The County Board of Supervisors adopts CIPs on an annual basis.

The TIF Program also includes a line item for unprogrammed traffic signal installation and operational and safety improvements at intersections, including improvements such as construction of new traffic signals, turn pockets, and the upgrade of existing traffic signal systems. The County monitors intersections with potential need for improvement through the annual *Intersection Needs Prioritization* process, which is then used to inform the annual update to the CIP. The County Board of Supervisors can add improvements to the CIP as funding becomes available.

Traffic Impact Fee Program

The County has a TIF Program that is used to fund capital improvements to the road system to mitigate traffic impacts resulting from development. The 20-year County CIP and TIF Program was adopted in 2006, with the latest TIF Program update completed on December 8, 2020, and the latest CIP adopted on June 8, 2021. This program is separate from CEQA and, on the basis of SB 743, is not related to an environmental impact under CEQA.

TIF Program fees are collected at the time of issuance of a building permit for new development. To ensure that adequate funding is available and sufficient revenue is collected to fund CIP projects

identified to be required as a result of development and to maintain a level of service consistent with County General Plan policies, the TIF Program and TIF fees are adjusted and updated on an annual and 5-year basis along with the CIP.

Through careful monitoring and implementation of the CIP and TIF Program, the County has a high level of certainty that projects in the CIP will be constructed when improvements are needed and can be implemented in their entirety over time. Implementation of CIP projects alleviates forecasted General Plan level of service deficiencies.

As allowed under state law, the County and project may establish an area of benefit for improvements excluded from the County's TIF Program, to equitably distribute costs of such improvements on a proportionate fair share basis. All public improvements are subject to review and approval by the County and are implemented through an encroachment permit or road improvement agreement, as determined by the County.

El Dorado County and City of Placerville SB 743 Implementation Plan

In 2019, EDCTC completed the El Dorado County and City of Placerville SB 743 Implementation Plan (July 19, 2019) to support the County and the City of Placerville with implementation of SB 743, including the selection of VMT analysis methodology, setting thresholds of significance, and potential mitigation. With Resolution 141-2020 (October 6, 2020), the Board of Supervisors of the County adopted VMT thresholds of significance for purposes of analyzing transportation impacts under CEQA.

The County's VMT thresholds consider the VMT performance of residential and office components of a project separately, using the efficiency metrics of VMT per capita and VMT per employee, respectively. For retail components of a project, the countywide VMT effect is analyzed. The County VMT thresholds of significance are summarized below for each of these components:

- Residential—15% below baseline unincorporated countywide VMT per capita
- Commercial office—15% below baseline unincorporated countywide VMT per employee
- Commercial retail—No net increase in VMT

Environmental Setting

Vehicular Circulation

Under CEQA, vehicle or automobile circulation is addressed in terms of vehicle miles traveled (VMT). This metric focuses impact analysis on those impacts to the environment related to transportation and traffic, as opposed to impact on drivers. VMT is estimated using travel demand models. VMT is then divide by number of people to determine VMT efficiency. Different land uses have different overall patterns and different drivers, therefore, guidance suggests that VMT for residential land uses be measured on a per capita basis, while commercial uses be measured on a per employee basis. Because the threshold of significance for commercial retail is different than that of commercial office, commercial land uses are divided into those two categories. This results in three VMT numbers for comparison and analysis with countywide averages.

VMT estimation was conducted using the El Dorado County Travel Demand Forecasting Model (EDCTDM). The VMT estimation process generates estimates in a manner that is consistent with OPR's Technical Advisory and the selected VMT significance thresholds. To provide a full accounting

of vehicle travel, the EDCTDM provides VMT estimates that include the VMT from intrazonal vehicle trips and trip length adjustments for the trips that enter or exit the area covered by the EDCTDM.

The EDCTDM includes a buffer area that extends along US 50 from El Dorado County into eastern Sacramento County, including the city of Folsom and city of Rancho Cordova. The buffer area allows for more detailed modeling of travel interaction between El Dorado County and eastern Sacramento County. However, even with the buffer area, adjustments to the length of trips passing through the EDCTDM's gateway locations are necessary to account for the full length of trips throughout California.

Table 3.14-1 shows VMT in unincorporated El Dorado County in 2018 and 2040 for residential, commercial office, and commercial retail.

Table 3.14-1. Vehicle Miles Traveled in Unincorporated El Dorado County

Scenario	VMT	Total Population	VMT efficiency
Residential			
2018 Baseline	3,088,005	136,108	22.7
2040 Baseline	3,102,953	181,914	17.1
Commercial Office			
2018 Baseline	428,483	33,076	13.0
2040 Baseline	675,594	56,413	12.0
Commercial Retail			
2018 Baseline	3,277,660		
2040 Baseline	3,256,081		

Source: Fehr & Peers 2021.

Pedestrian Circulation

Attached or landscaped-separated detached sidewalks are provided intermittently throughout the study area. Because of the primarily rural residential nature of El Dorado Hills and Cameron Park, sidewalks are not common. Some of the following major roadway facilities lack sidewalks and result in pedestrian network gaps.

- Both sides of Bass Lake Road from Country Club Drive to Hollow Oak Drive; however, this area currently serves only a few large residential parcels and no services are within walking distance.
- Both sides of Country Club Drive west of Trinidad Drive; however, there are limited land uses that would benefit from sidewalks near the street.
- Sidewalk is also missing on the south side of Country Club Drive between Merrychase Drive and opposite Placitas Drive (Cameron Park Library driveway). This segment is adjacent to Blue Oak Elementary/Charter Montessori School and Camerado Springs Middle School.
- Country Club Drive lacks sidewalk from approximately 300 feet east of Placitas Drive to 200 feet west of Cameron Park Drive, and between El Norte Road and halfway up Country Club Drive.
- Cambridge Road and Flying C Road (south of US 50) lack sidewalk except for the east side near the US 50 interchange.

Most study intersections are unsignalized and lack physical pedestrian features such as curb ramps and marked crosswalks. The three signalized study intersections do provide controlled pedestrian crossings or are otherwise restricted. As described below, Class I bicycle paths double as pedestrian facilities. For example, the Class I path along the east side of Bass Lake Road between Hollow Oak Drive and Serrano Parkway provides redundant pedestrian facilities to the detached sidewalk on the west side.

Bicycle Circulation

Existing and proposed bicycle facilities within the study area are displayed in Figure 3.14-1. Bicycle facilities can be classified into three categories.

- Class I Bicycle Path—Off-street bike paths within exclusive right-of-way; usually shared with pedestrians.
- Class II Bicycle Lane—Striped on-road bike lanes adjacent to the outside travel lane on preferred corridors for biking.
- Class III Bicycle Route—Shared on-road facility, usually delineated by signage and pavement markings.

According to *the El Dorado County Active Transportation Plan* ((El Dorado County Transportation Commission 2021)), mapping information, and field observations, the following major bikeway facilities are present in the study area.

- Class II bicycle lanes on Serrano Parkway, White Rock Road, Latrobe Road and portions of Silva Valley Parkway, Country Club and El Dorado Hills Drive.
- Class I bicycle paths at Bass Lake Road (Hollow Oak Drive to Serrano Parkway) and New York Creek Nature Trail, which is adjacent to El Dorado Hills Drive on the east side between Serrano Parkway and St. Andrews Drive.

Figure 3.14-1 identifies existing and planned bikeways presented in the *El Dorado Bicycle Transportation Plan, 2010 Update* and MTP/SCS for 2036.

Transit

EDCTA provides public transit service within the project area. El Dorado Hills is currently served by EDCTA Dial-A-Ride services, Commuter Service, and the Iron Point Connector Route. The Commuter Service and the Iron Point Connector Route serve only the El Dorado Hills park-and-ride lot and do not circulate within the community.

The Transit Plan explores how the recent growth and projected development affect the need for transit services and identifies the most appropriate type and level of service needed based on the demand. All three services are addressed in the Transit Plan and are described briefly below.

- Dial-A-Ride service is a demand response service designed for seniors and disabled passengers, with limited access available for the general public. The service is available on a first-come, first-serve basis Monday through Friday from 7:30 a.m. to 5:00 p.m., and from 8:00 a.m. to 5:00 p.m. on Saturdays and Sundays. El Dorado Hills is one of 12 geographic zone service areas.
- Commuter Service is offered Monday through Friday between El Dorado County and downtown Sacramento. Morning departures from El Dorado County locations are scheduled from 5:10 to 8:00 a.m., and eastbound afternoon service departs Sacramento from 2:40 to 6:00 p.m. A reverse

commuting service is offered. The El Dorado Hills park-and-ride lot located in Town Center at the White Rock Road/Post Street intersection would be the stop nearest to the proposed project. According to the Transit Plan, nearly one-half of commute passengers boarded at the El Dorado Hills park-and-ride in the mornings, which means this location has the greatest number of Commuter Service boardings.

- Iron Point Connector Route provides direct service from El Dorado County to Folsom with connections to Sacramento Regional Transit light rail on weekdays. This route runs twice in the morning and twice in the afternoon from the Central Transit Center to the Iron Point Light Rail Station in Folsom. The El Dorado Hills park-and-ride located in Town Center at the White Rock Road/Post Street intersection is the stop nearest to the project area.
- Cameron Park Route is a fixed-route service that begins at the Missouri Flat Transfer Center in Placerville. The route serves the Folsom Lake College/El Dorado Center, then continues to Cameron Park. After serving Cameron Park in a clockwise direction, the route serves the Cambridge park-and-ride and returns via Country Club Drive. The Cameron Park Route operates four runs daily and one morning express run with limited stops. Deviations are not permitted on the express run. Monthly ridership was 2,583 during fiscal year 2017-2018 (El Dorado County Transportation Commission 2019).

Based on ridership data presented in the Transit Plan, El Dorado Hills residents make 53,742 annual commute trips (one-way) using El Dorado Transit Commuter Service from the El Dorado Hill and Vine and Mercedes Park-and-Ride stops (El Dorado County Transportation Commission 2019). Assuming a population of 46,593 in El Dorado Hills , this means about one annual commute trip is generated per El Dorado Hills resident (World Population Review 2021). This estimate provides a basis for projecting the potential transit trip generation associated with the project and evaluating the adequacy of transit services and facilities (e.g., park-and-ride parking spaces) under project conditions.

The El Dorado Hills park-and-ride lot provides 120 parking spaces. The Park-and-Ride Facilities Master Plan reports that parking demand exceeds supply. Specifically, Table 3 of the Master Plan reports a deficiency of 23 spaces in 2017. Similarly, the Cameron Park Park-and-Ride had a deficiency of 14 spaces (El Dorado County Transit Authority 2017).

The Transit Plan also describes other transit providers that serve western El Dorado County, including the Senior Shuttle Program, which recently initiated service in El Dorado Hills.

3.14.2 Environmental Impacts

Methods of Analysis

The following describes how existing and existing plus project conditions were evaluated. The assumptions and procedures for evaluating cumulative impacts are presented in Section 5.2, *Cumulative Impacts*.

Vehicle Miles Traveled Analysis Procedures

The following is a summary of the method used to forecast VMT under existing and cumulative conditions. A more detailed discussion is presented in Appendix K, *Transportation Impact Analysis*.

- Existing Conditions (2018). For existing conditions (i.e., baseline conditions), the base year model land use and transportation network from the County traffic model were used to estimate baseline average VMT per capita and average VMT per employee for unincorporated El Dorado County.
- Existing Plus Project Conditions. For existing plus project conditions, the proposed project's land use was added to the model, increasing the base year population and employment. Project-generated average VMT per capita and VMT per employee were calculated.
- Cumulative Conditions (2040). For cumulative conditions, the future year model was used to estimate cumulative (2040) average VMT per capita and average VMT per employee. For cumulative plus project conditions, the proposed project's land use was added to the model, increasing the cumulative year population and employment. Project-generated average VMT per capita and VMT per employee were calculated.

Pedestrian and Bicycle Circulation

Proposed pedestrian and bicycle facilities in the project area were reviewed and qualitatively evaluated for their integration with existing and planned facilities in the study area as well as their ability to provide connectivity and safe means of access between existing and proposed land uses. In particular, access to existing schools and commercial land uses was considered in assessing the adequacy of the proposed non-motorized transportation network.

Transit

An estimate of transit trip generation was established based on review of existing ridership information in the study area. As described above, it is estimated that about one annual commute trip is generated per El Dorado Hills resident. This figure was used to assess the potential for additional demand for transit services and facilities as a result of implementation of the proposed project. This additional demand was then compared with existing LOS in the study area to assess whether project-induced ridership would exceed existing transit service levels.

Thresholds of Significance

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in a significant adverse impact on the environment. Informed by the State CEQA Guidelines, specifically Appendix G, the following criteria have been established to determine whether or not the project would have a significant impact on transportation and circulation.

Implementation of the proposed project would have a potentially significant impact on transportation and circulation if it would result in any of the conditions listed below.

- Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.
- Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).

- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access.

Impacts and Mitigation Measures

Impact TRA-1: Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities (less than significant with mitigation)

Roadway

The proposed project would comply with the TIF Program to help to fund roadway improvement projects and therefore would not conflict with the County General Plan policies addressing vehicle circulation. The project will comply with General Plan Goal TC-X and its implementing Policies TC-Xf and TC-Xh.

Pedestrian Circulation

The proposed project would provide a network of pedestrian trails and pathways to provide connectivity among land uses for non-motorized transportation and public recreation. The proposed trails are designed as paved Class I multi-use paths along the three primary roadways of Marble Valley Parkway, Marble Lake Boulevard (nicknamed "The Gateway Mile") and Lime Rock Valley Road to serve the proposed residential, commercial, and public facilities in the northern half of the project area. Less formal trails are proposed to traverse the preserved open space areas. Pathways would lead to the proposed Foundation Regional Park in the southern portion of the project area. A Class I bike path along Lime Rock Valley Road would connect through the proposed Lime Rock Valley Specific Plan (LRVSP) area (if the County approves the LRVSP) to the El Dorado Trail. Additionally, sidewalks may be provided on one or both sides of local residential streets.

The provision of these facilities would support County General Plan Goal TC-4 and policies related to providing safe routes to school (specifically, Policies TC-4a and TC-4i) by providing new bicycle lanes or multi-use paths or trails along Marble Valley Road, Marble Lake Boulevard, Lime Rock Valley Road, and other areas within the Village of Marble Valley, which would provide bicycle and/or pedestrian access from residential areas to the proposed elementary or middle schools on the north side of the project area.

In the near term the proposed project would increase the demand for pedestrian facilities. The project proposes the construction of additional pedestrian facilities that would connect and integrate with existing and planned facilities adjacent to the project. The project would not conflict with adopted policies, plans, or programs, or otherwise degrade the performance or safety of these facilities. The impact on pedestrian facilities would be less than significant and no mitigation is necessary.

Bicycle Circulation

The proposed project would provide Class I multi-use paths and Class II bicycle lanes along the major transportation corridors, particularly in the northern portion of the project area. Less formal trails are proposed to traverse the preserved open space areas. Pathways open to bicycles would lead to the proposed Foundational Regional Park in the southern portion of the project area. A Class I bike path along Lime Rock Valley Road would connect through the LRVSP area to the El Dorado Trail (if the County approves the LRVSP).

In the near term the proposed project would increase the demand for bicycle facilities. The project proposes the construction of additional bicycle facilities that would connect and integrate with existing and planned facilities adjacent to the project. The project would not conflict with adopted policies, plans, or programs, or otherwise degrade the performance or safety of these facilities. The impact on bicycle circulation would be less than significant and no mitigation is necessary.

Transit

The proposed project would provide a 100- to 120-space park-and-ride lot, in the near term. To accommodate possible future public transit service, transit stops, and bus shelters may be provided in the project area on Marble Valley Parkway and Marble Lake Boulevard near the intersection of Lime Rock Valley Road.

As described in Section 3.14.1, *Existing Conditions*, parking demand exceeds capacity at the El Dorado Hills park-and-ride lot. About one annual commute trip is generated per El Dorado Hills resident, assuming a population of 46,593 in El Dorado Hills (World Population Review 2021). Therefore, assuming a household population of 2.2 persons, the project's 3,236 dwelling units could result in demand for about 7,120 annual commute trips, or about 27 commute trips per weekday. Because trips are counted as one-way and because at least 100 parking spaces would be provided for park-and-ride use within the project, the proposed project would not be anticipated to have an effect on existing park-and-ride capacity.

The analysis in the traffic study (Appendix K1, *Transportation Impact Analysis*) is based on the population at project buildout. The project would not be built out in the near term. Consequently, the project would generate fewer than 27 commute trips per day.

Due to the high utilization of the El Dorado Hills park-and-ride lot, El Dorado Transit operates a secondary park-and-ride lot near the Vine Street/Mercedes Lane intersection in Town Center. The Vine Street/Mercedes Lane park-and-ride lot has sufficient capacity to accommodate increased transit commute trips generated by the project in the near term. Therefore, the park-and-ride lot that is proposed with the project is not necessary in the near term.

Implementation of the proposed project would increase demand for transit. As outlined above, the project could result in demand of about 7,120 transit commute trips annually, which would be an average of about 27 commute trips per weekday. This represents about a 20% increase in El Dorado Transit Commuter Service. The growth in commute trips would not likely exceed the ability to serve this ridership through existing funding sources for transit that are tied to population growth. Most of the boardings for the El Dorado Transit Commuter Service at the El Dorado Hills park-and-ride lot are from El Dorado Hills residents. Consequently, this increase in commuter trips will increase demand for the El Dorado Hills and Cameron Park park-and-ride lots, which operate at or near capacity. As described above, however, the proposed project would provide a 100- to 120-space

park-and-ride lot within the project near the US 50/Bass Lake Road interchange, which would accommodate the estimated demand for park-and-ride facilities anticipated by the project. If this capacity is provided prior to development of the project, the impact on transit would be less than significant. If, however, additional park-and-ride capacity of 16 or more parking stalls were not provided prior to project development, this impact would be significant.[1] Implementation of Mitigation Measure TRA-1 would reduce this impact to a less-than-significant level.

Summary

The impact on pedestrian facilities and bicycle circulation would be less than significant with no mitigation necessary. The impact on transit would be less than significant with implementation of Mitigation Measure TRA-1, which would contribute to the provision of 16 parking stalls to serve park-and-ride users within or adjacent to the project area.

Mitigation Measure TRA-1: Provide alternative park-and-ride facilities

If the proposed park-and-ride facility within the project area is not completed or does not provide 16 dedicated parking stalls for park-and-ride users prior to the construction of the 1,500th residential unit (approximately the halfway point of project development), the applicant will provide for or contribute to the provision of 16 parking stalls to serve park-and-ride users within or adjacent to the project area. In coordination with the County and EDCTA, contribution to the provision of these facilities may ultimately take the form of an in-lieu payment toward construction of the proposed Bass Lake Hills Multi-Modal Facility or the County Line Multi-Modal Transit Facility, as envisioned in the *El Dorado County Park-and-Ride Facilities Master Plan*.

Impact TRA-2: Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) (less than significant with mitigation)

The project includes residential, commercial, agriculture, park and open space land use. Table 3.14-2 summarizes the project's trip-generating land uses.

[1] The project would add approximately 7,120 potential transit riders to the study area (2.2 persons per household x 3,236 dwelling units = ~7,120 persons). Assuming one annual trip per person, the project would add approximately 7,120 commute trips per year. There are approximately 260 weekdays per year (5 weekdays x 52 weeks). Therefore, the new population would be expected to demand approximately 27 commute trips per weekday (7,120 commute trips per year/260 weekdays per year). Because trips are counted as one-way, it is assumed that each parking stall at the park-and-ride lot would serve two trips per day. Therefore, 16 park-and-ride stalls would be considered adequate to meet the estimated 27 daily commute trips.

Table 3.14-2. Village of Marble Valley Specific Plan Land Use

Land Use			
Category		Units	Total
Residential	Single Family	Dwellings	2,735
	Multifamily		501
	Total		3,236
Non-Residential	Office Park	Square Feet	375,000
	Village Commercial	Square Feet	100,000
	Agriculture Tourism	Acres	42
	Public School	Acres	35
	Village Park	Acres	47

Source: Fehr & Peers 2021.

A VMT technical memorandum was prepared for the project in March 2021 by Fehr & Peers and is included as Appendix K, *Transportation Impact Analysis* (Fehr & Peers 2021). Consistent with the County's VMT methodology, the residential, commercial office, and commercial retail land use components are analyzed separately. Table 3.14-3 summarizes the VMT analysis for the residential component, Table 3.14-4 summarizes the VMT analysis for the commercial office component, and Table 3.14-5 summarizes the VMT for the commercial retail component. The VMT calculations for all scenarios are included in Attachment A of Appendix K, *Transportation Impact Analysis*.

Table 3.14-3. Village of Marble Valley Specific Plan's VMT, Residential Component

Scenario	Analysis Geography	VMT	Total Population	VMT per Capita
2018 Baseline	Unincorporated El Dorado County	3,088,005	136,108	22.7
2018 Baseline Threshold (85% of Unincorporated El Dorado County Total Average VMT per Capita)				19.3
2018 Baseline Plus Project	Project Area	190,636	9,537	20.0
VMT Threshold Exceeded?				**Yes**
2040 Baseline	Unincorporated El Dorado County	3,102,953	181,914	17.1
2040 Baseline Threshold (85% of Unincorporated El Dorado County Total Average VMT per Capita)				14.5
2040 Baseline Plus Project	Project Area	139,252	9,537	14.6
VMT Threshold Exceeded?				**Yes**

Source: Fehr & Peers 2021.

Table 3.14-4. Village of Marble Valley Specific Plan's VMT, Commercial Office Component

Scenario	Analysis Geography	VMT	Total Employment	VMT per Employee
2018 Baseline	Unincorporated El Dorado County	428,483	33,076	13.0
2018 Baseline Threshold (85% of Unincorporated El Dorado County Total Average VMT per Employee)				11.1
2018 Baseline Plus Project	Project Area	12,554	1,704	7.4
VMT Threshold Exceeded?				**No**
2040 Baseline	Unincorporated El Dorado County	675,594	56,413	12.0
2040 Baseline Threshold (85% of Unincorporated El Dorado County Total Average VMT per Employee)				10.2
2040 Baseline Plus Project	Project Area	11,775	1,704	6.9
VMT Threshold Exceeded?				**No**

Source: Fehr & Peers 2021.

Table 3.14-5. Village of Marble Valley Specific Plan's VMT, Commercial Retail Component

Scenario	Analysis Geography	VMT per Capita
2018 Baseline Plus Project	Unincorporated El Dorado County	3,277,660
2018 Baseline Plus Project No Retail		3,282,876
Difference (With Retail – Without Retail)		-5,216
2018 Baseline Threshold (No Net Increase in VMT)		-
VMT Threshold Exceeded?		**No**
2040 Baseline Plus Project	Unincorporated El Dorado County	3,256,081
2040 Baseline Plus Project No Retail		3,260,265
Difference (With Retail – Without Retail)		-4,184
2040 Baseline Threshold (No Net Increase in VMT)		-
VMT Threshold Exceeded?		**No**

Source: Fehr & Peers 2021.

As shown, the project's VMT per capita for the residential component would exceed the VMT threshold under existing and cumulative conditions. Therefore, the project's impact on VMT would be significant. However, implementation of Mitigation Measure TRA-2 to shift 25,000 square feet of commercial office land use to commercial retail land use would reduce VMT per capita for the residential component to a level less than the established threshold of 85% of unincorporated El Dorado County VMT per capita. The shift would result in about 125,000 square feet of commercial retail and about 350,000 square feet of commercial office land use. Trip lengths would be reduced and residents and employees in the project area would not have to travel as far to access goods and services. With implementation of Mitigation Measure TRA-2, the project would provide a better balance and more efficient land use mix for the project site and surrounding area. Therefore, with this mitigation the impact would be reduced to a less-than-significant level.

Table 3.14-6. Village of Marble Valley Specific Plan's VMT, Residential Component (with Mitigation Measure TRA-2)

Scenario	Analysis Geography	VMT	Total Population	VMT per Capita
2018 Baseline	Unincorporated El Dorado County	3,088,005	136,108	22.7
2018 Baseline Threshold (85% of Unincorporated El Dorado County Total Average VMT per Capita)				19.3
2018 Baseline Plus Project (with mitigation)	Project Area	181,281	9,537	19.0
VMT Threshold Exceeded?				**No**
2040 Baseline	Unincorporated El Dorado County	3,102,953	181,914	17.1
2040 Baseline Threshold (85% of Unincorporated El Dorado County Total Average VMT per Capita)				14.5
2040 Baseline Plus Project (with mitigation)	Project Area	135,502	9,537	14.2
VMT Threshold Exceeded?				**No**

Source: Fehr & Peers 2021.

Mitigation Measure TRA-2: Shift 25,000 square feet of commercial office land use to commercial retail land use

The County shall require the applicant to change their Specific Plan to include shifting 25,000 square feet of commercial office land use to commercial retail land use, resulting in approximately 125,000 square feet of commercial retail and about 350,000 square feet of commercial office land use. The location of the retail land use shall be determined by market factors, and access from bicycle and pedestrian facilities to encourage non-automobile trips.

Impact TRA-3: Substantially increase hazards because of a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (less than significant)

As described in VMVSP Section 4.4, a selection of street widths and designs has been included to accommodate a range of anticipated traffic volumes within the project site in a manner compatible with adjacent land uses. Streets would generally be curvilinear in design, conforming vertically, horizontally, and as closely as possible to natural topography. If approved, the proposed project's circulation system would be consistent with the County's functional road classification system. Additionally, under VMVSP Policy 4.9, internal roads would be designed to reduce vehicular speed by including narrower traffic lanes, roundabouts, well-marked pedestrian crossings, bulb-outs, or median treatments. The proposed project includes six roundabouts to control intersection movements, traffic flow, and speeds. Therefore, with implementation of this policy, the project would not substantially increase hazards. This would be a less-than-significant impact.

Impact TRA-4: Result in inadequate emergency access (less than significant with mitigation)

In the near term and at full buildout the proposed project would provide two main points of access from the US 50/Bass Lake Road and US 50/Cambridge Road interchanges, and an emergency vehicle access point to the west toward the Valley View and East Ridge Specific Plan areas. A third access point to the east toward Deer Creek Road would become an extension of Lime Rock Valley Road if the County approves the LRVSP. All roads would comply with the 2019 California Fire Code, California Code of Regulations, Title 24, Part 9, Chapter 5, Section 503 and Title 14, California Code of Regulations, Division 1.5, Chapter 7, Subchapter 2, Article 2, and Emergency Access, Section

1273.01 of the Fire Safe Regulations. The proposed project would also improve emergency connections to the existing neighborhoods to the north, east, and west by providing controlled emergency vehicle access points, where feasible and as required by emergency responders. Therefore, even without the third access point provided if Lime Rock Valley is approved, the project would provide adequate emergency access during operations. This impact would be less than significant during operation.

However, during construction of infrastructure improvements and development associated with the VMVSP, temporary detours or road closures could restrict access for emergency vehicles in and around the project area. Because the project could result in inadequate emergency access, this would be a significant impact. Implementation of Mitigation Measure TRA-4 would reduce this impact to a less-than-significant level.

Mitigation Measure TRA-4: Implement site-specific transportation management plan during construction

Prior to construction activities, the applicant shall prepare for County review and approval a site-specific construction transportation management plan (TMP) that addresses the specific steps to be taken before, during, and after construction to minimize traffic impacts, including the mitigation measures identified in this EIR. This shall include all potentially significantly affected roadway segments.

The applicant shall be responsible for developing the TMP in consultation with the applicable transportation entities, including El Dorado County, Caltrans (for state and federal roadway facilities), and EDCTA.

The applicant shall also ensure that the TMP is implemented prior to beginning construction at a site. The County shall review and approved the TMP prior to issuing a grading permit. If necessary, to minimize unexpected operational impacts or delays experienced during real-time construction, the applicant shall also be responsible for modifying the TMP to reduce these effects.

The TMP shall include the following performance features.

- Signage warning of roadway surface conditions such as loose gravel, steel plates, or similar conditions that could be hazardous to road cycling activity on roadways open to bicycle traffic.
- Signage and barricades around the work sites.
- Use of flag people or temporary traffic signals/signage as necessary to slow or detour traffic.
- Advance notifications for the public, emergency providers, cycling organizations, bike shops, and schools, where applicable, describing construction activities that could affect transportation.
- Outreach (via public meetings and/or flyers and other advertisements) to provide advance information about construction activities to residents of surrounding areas.
- Procedures for construction area evacuation in the case of an emergency declared by County or other local authorities. This shall include the locations of emergency evacuation routes.
- Alternate access routes via detours to maintain continual circulation for local travelers in and around construction zones, including bicyclists and pedestrians where applicable.

- Description of construction staging areas, material delivery routes, and specification of construction vehicle travel hour limits.
- Designation of areas where nighttime construction will occur.
- Plans to relocate school bus drop-off and pick-up locations if they will be affected during construction.
- Scheduling for oversized material deliveries to the work site and haul routes to minimize conflict with emergency access.
- Provisions that direct haulers are to pull over in the event of an emergency. Specify measures to ensure that appropriate maneuvers shall be conducted by construction vehicles to allow continual access for emergency vehicles at the time of an emergency.
- Control for any temporary road closure, detour, or other disruption to traffic circulation.
- Designation of offsite vehicle staging and parking areas.
- Publicly posted contact information at entry in case of emergency or complaint.
- Coordination with EDCTA to develop, where feasible, daily construction time windows during which transit operations would not be either detoured or significantly slowed.
- Other actions to be identified and developed as may be needed by the construction manager/resident engineer to ensure that temporary impacts on transportation facilities are minimized.

Impact TRA-5: Impacts on transportation as a result of offsite improvements (less than significant with mitigation)

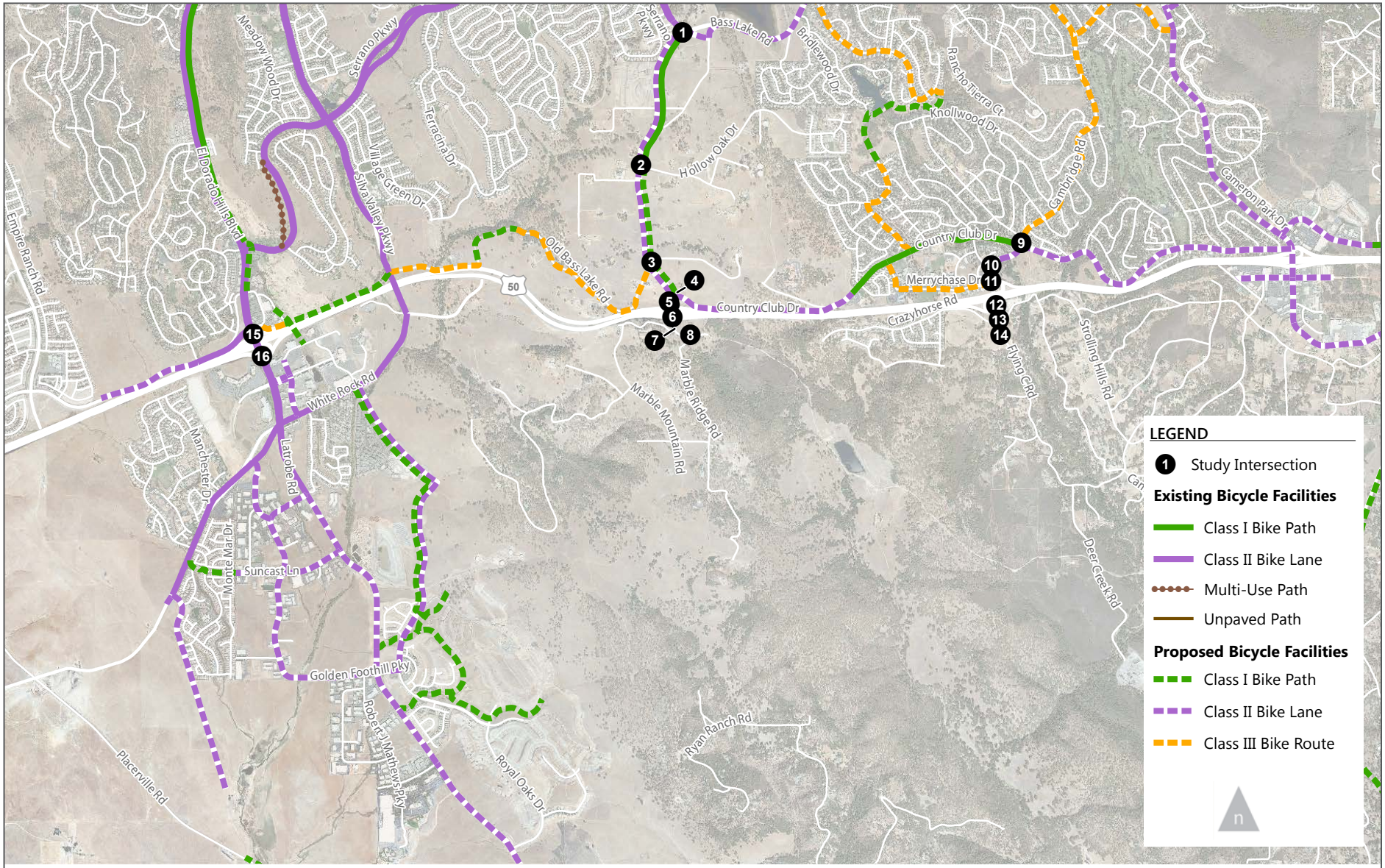
As described in Chapter 2, *Project Description*, and shown in Figure 2-13, the proposed project would include offsite improvements, including the extension of the new Marble Valley Parkway to the Cambridge Road interchange, a new connection of Marble Valley Parkway to the Bass Lake Road interchange, and a new section of Marble Valley Parkway between the east and west sides of the northern portion of the project site. These improvements would serve as primary access roadways for accessing US 50 from the project area and therefore, would improve circulation and connectivity between the proposed project and adjacent areas. These improvements would include bicycle and pedestrian access to the existing and planned non-motorized transportation network north of US 50, which includes future access to commercial areas like the El Dorado Hills Town Center. If the improvements are not constructed by others, the applicant will be responsible for implementing these improvements consistent with County General Plan Goal TC-X and supporting Policy TC-Xf to ensure that transportation improvements are implemented concurrent with approved residential development. If the improvements are constructed by the applicant, the applicant will be subject to fee credit or reimbursement through the County's TIF Program. Therefore, the offsite improvements would not be in conflict with any policies or plans.

Offsite improvements related to transportation and circulation are considered in the project-level VMT analysis and therefore, impacts would be less than significant, as discussed above.

Offsite improvements would be constructed in compliance with County standards and VMVSP Policy 4.9, as discussed in Impact TRA-3, and therefore the offsite improvements would not increase hazards and the impact would be less than significant.

The offsite improvements listed above would improve circulation during operation, which would result in better emergency access. Other offsite improvements are focused on water transmission, which would not affect transportation during operations. However, as with the rest of the project, construction of offsite improvements could result in temporary detours or road closures could restrict access for emergency vehicles in and around the project area. Because the construction of offsite improvements could result in inadequate emergency access, this would be a significant impact. Implementation of Mitigation Measure TRA-4 would reduce this impact to a less-than-significant level.

Mitigation Measure TRA-4: Implement site-specific transportation management plan during construction



Source: Fehr & Peers, *Draft Transportation Impact Analysis* (May 2014)

ICF Graphics... 00667.12 (7-5-2018)

Figure 3.14-1
Bicycle Facilities

Chapter 4
Alternatives Analysis

4.1 Alternatives Overview

The California Environmental Quality Act (CEQA) requires that an environmental impact report (EIR) contain a reasonable range of feasible alternatives that meet most or all project objectives while reducing or avoiding one or more significant impacts of the project. According to State CEQA Guidelines Section 15126.6(f), the range of alternatives required in an EIR is governed by a "rule of reason" that requires an EIR to set forth only those alternatives necessary to permit a reasoned choice.

The discussion of alternatives must "focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project." Where a potential alternative was examined but not chosen as one of the range of alternatives, the State CEQA Guidelines require that an EIR briefly discuss the reasons the alternative was dismissed. In addition to a range of alternatives, an EIR must discuss the "No-Project Alternative," which describes the reasonably foreseeable probable future conditions if the project is not approved (State CEQA Guidelines 15126.6).

The lead agency must consider the alternatives discussed in an EIR before acting on a project. The agency is not required to adopt an alternative that may have environmental advantages over the project if specific economic, social, or other conditions make the alternative infeasible (Public Resources Code 21002).

This chapter describes the alternatives to implementation of the Village of Marble Valley Specific Plan (VMVSP; proposed project) and compares the anticipated environmental impacts of the alternatives to those of the proposed project, analyzed in Chapter 3, *Impact Analysis*, Sections 3.1, *Aesthetics*, through 3.14, *Transportation and Circulation*.

4.2 Alternatives Development

4.2.1 Methods and Screening Criteria

The alternative screening criteria are listed here and are described below in detail.

- **Ability to meet to project objectives**—The extent to which the alternative fulfills the project's objectives.
- **Impact avoidance**—The extent to which the alternative substantially avoids, minimizes, reduces or eliminates an impact.
- **Feasibility**—The extent to which the alternative is potentially capable of being accomplished given economic, environmental, legal, social, and technological factors.

Through this screening process, alternatives were considered and included for further analysis in the Draft EIR or removed from further consideration. Those alternatives that meet the project

objectives, that would reduce one or more project impacts, and that appear feasible are discussed in greater detail in Section 4.3, *Alternatives Analysis*. Those alternatives that were considered but removed from further consideration are described under Section 4.5, *Alternatives Considered but Dismissed from Further Analysis in this Draft EIR.*

Adherence to Project Objectives

El Dorado County's (County's) primary objective for the proposed project, as described in Chapter 2, *Project Description*, is to create development patterns that make the most efficient and feasible use of existing infrastructure and public services while promoting a sense of community as envisioned by the *El Dorado County General Plan* (County General Plan) (El Dorado County 2004a). There are an additional 15 objectives as follows.

- Fulfill regional land use objectives by achieving Metropolitan Transportation Plan/ Sustainable Communities Strategy (MTP/SCS) Consistency. Establish new development that fulfills regional land use objectives by directing two-thirds of new growth in "…Centers and Corridors and Established Communities (i.e., existing suburbs, downtowns, commercial corridors, and the buildout of today's existing suburbs). The remaining third of new housing and 15% of job growth is expected to be in more than two-dozen new Developing Communities (i.e., greenfield areas), mostly located at the edge of established communities and in scattered rural residential areas." Thus achieving the intent of SACOG's adopted 2020 MTP/SCS.
- ***Curtail suburban sprawl.*** Curtail suburban sprawl (County General Plan Goal 2.1) by promoting mixed-use development patterns to accommodate the County's future population growth and support economic expansion.
- ***Assist in meeting future Regional Housing Needs Allocations (RHNA) needs.*** Assist in meeting the County's RHNA for the 2021–2029 Housing Element (and beyond) by introducing new lands zoned multifamily.
- ***Broaden the housing stock in El Dorado Hills and Cameron Park communities.*** Maximize opportunities for higher-density housing. Offer land uses to accommodate various lot sizes, densities, and product types to satisfy the market demands of existing and future household types, sizes, and income levels (County General Plan Goal HO-1), including the senior population (County General Plan Goal HO-4).
- ***Provide a strong community identity and quality built environment.*** Establish a community setting with an identifiable character and a visually attractive design theme that is compatible with the surrounding area and contributes to the quality of life and economic health (County General Plan Goal 2.4). Carefully plan and incorporate visual elements that enhance and promote a sense of community (County General Plan Goal 2.5) and provide quality residential environments for all income levels (County General Plan Goal HO-2).
- ***Utilize existing infrastructure and public services.*** Promote compact land use patterns in Community Regions to maximize existing public services, such as water, wastewater, parks, schools, solid waste, fire protection, law enforcement, and libraries, thus accommodating new growth in an efficient manner (County General Plan Goal 5.1).
- ***Improve connectivity of the regional roadway network.*** Expand the regional roadway network by connecting Marble Valley Parkway between Bass Lake Road and Cambridge Road

interchanges, thus improving parallel capacity to U.S. Highway (US) 50 and providing a coordinated roadway system (County General Plan Goal TC-1).

- ***Encourage future transit opportunities.*** Locate higher-density development in proximity to new public roadways to improve the feasibility of future transit services, thus reducing traffic congestion and offering alternative transportation choices to a range of users (County General Plan Goal TC-2).
- ***Create a new non-motorized transportation system.*** Create a new non-motorized transportation system (County General Plan Goal TC-4) linking residential development to retail services and employment centers. Incorporate Class I bike paths, "complete streets" with Class II bike lanes, and sidewalks in new development to promote alternative transportation modes and reduce vehicle miles traveled (VMT).
- ***Create opportunities to expand the regional trail system.*** Design a trail network for pedestrian and cyclist enjoyment in a manner that coordinates trail connectivity with adjoining undeveloped properties, with a possible linkage to the El Dorado Trail (County General Plan Goal 9.1).
- ***Create new recreational opportunities.*** Provide recreational facilities for the health and welfare of residents and visitors (County General Plan Goal 9.1), including a passive regional park for public enjoyment, thus promoting opportunities to capitalize on recreational uses through tourism and recreation-based businesses and industries (County General Plan Goal 9.3).
- ***Minimize impacts on oak woodlands.*** Conserve vegetative resources (County General Plan Goal 7.4) and minimize impacts on oak woodlands by preserving the area around Deer Creek as open space and directing new development to areas with minimal or little oak canopy.
- ***Preserve natural habitats and set aside wildlife corridors.*** Enhance the natural environment by preserving and protecting habitat within open space areas, including corridors for wildlife movement (County General Plan Goal 7.4). Incorporate the project site's natural features as an amenity for the community to enjoy, and provide opportunities for recreational activities.
- ***Protect important cultural resources.*** Protect the County's important cultural resources (County General Plan Goal 7.5), including significant archaeological and Native American resources and unique historical features of the Cowell family's former quarry and kiln operations.
- ***Foster sustainable communities.*** Foster sustainable communities (County General Plan Goal 2.1) by utilizing sustainable design practices to reduce greenhouse gas (GHG) emissions, and increase the efficiency of energy and water use in new development (County General Plan Goal HO-5).
- ***Promote the El Dorado County agri-tourism industry.*** Promote El Dorado County's Wine Industry by establishing a unique and special project theme focusing on public and private vineyard landscapes, including agricultural production (General Plan Goal 8.2) and creating an "agriburbia" destination.

Impact Avoidance

Alternatives should provide a means of avoiding altogether or reducing the level of impacts that would otherwise result from implementation of the project. The following significant and

unavoidable impacts and less-than-significant impacts that can be reduced to less-than-significant levels with mitigation would result from the proposed project. These impacts are analyzed in detail in Chapter 3, *Impact Analysis*.

Significant and Unavoidable Impacts

Aesthetics

- Impact AES-1: Temporary visual impacts caused by construction activities
- Impact AES-2: Have a substantial adverse effect on a scenic vista
- Impact AES-3: Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings along a scenic highway
- Impact AES-4: 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, conflict with applicable zoning and other regulations governing scenic quality
- Impact AES-5: Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area

Air Quality

- Impact AQ-1: Conflict with or obstruct implementation of the applicable air quality plan
- Impact AQ-2b: Result in a cumulatively considerable net increase of any criteria pollutant during operation for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard
- Impact AQ-2c: Result in a cumulatively considerable net increase of any criteria pollutant during combined construction and operation for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard
- Impact AQ-3a: Expose sensitive receptors to substantial toxic air contaminant concentrations and health risks from equipment and vehicle exhaust
- Impact AQ-3c: Expose sensitive receptors to substantial criteria pollutant concentrations during construction

Geology, Soils, Minerals, and Paleontological Resources

- Impact GEO-7: Be located on a subterranean mine that has a shaft, vent, or adit open to the surface

Greenhouse Gas Emissions

- Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment
- Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases

Noise

- Impact NOI-1a: 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 County General Plan or noise ordinance as a result of construction activities
- Impact NOI-1b: 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 County General Plan or noise ordinance from project-generated traffic within the VMVSP project area
- Impact NOI-4: Result in noise impacts due to activities associated with project offsite improvements

Population and Housing

- Impact POP-1: Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)

Less than Significant with Mitigation

Air Quality

- Impact AQ-2a: Result in a cumulatively considerable net increase of any criteria pollutant during construction for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard
- Impact AQ-3d: Expose sensitive receptors to naturally occurring asbestos and associated health risks during construction
- Impact AQ-5: Result in a cumulatively considerable net increase of any criteria pollutant, expose sensitive receptors to substantial pollutant concentrations, or generate odors as a result of construction and operations of offsite improvements
- Impact AQ-6: Result in a cumulatively considerable net increase of any criteria pollutant, expose sensitive receptors to substantial pollutant concentrations, or generate odors as a result of implementation of General Plan Policy TC-Xf improvements

Biological Resources

- Impact BIO-1: Loss of oak woodland
- Impact BIO-2: Loss of riparian woodland
- Impact BIO-3: Loss of jurisdictional wetlands, including seasonal wetlands, seasonal wetland swales, and seeps
- Impact BIO-4: Loss of other waters of the United States, including perennial creek, seasonal creek, intermittent drainage, ephemeral drainage, drainage ditch, quarry pond, and stock pond
- Impact BIO-5: Potential loss of Brandegee's clarkia or other special-status plants
- Impact BIO-7: Potential mortality or disturbance of California red-legged frog within the VMVSP project area
- Impact BIO-8: Potential mortality or disturbance of foothill yellow-legged frog within the VMVSP project area

- Impact BIO-9: Potential mortality or disturbance of northwestern pond turtle within VMVSP project area
- Impact BIO-10: Potential mortality or disturbance of Blainville's horned lizard within VMVSP project area
- Impact BIO-11: Potential mortality or disturbance of nesting special-status and non-special-status birds within the VMVSP project area
- Impact BIO-12: Potential injury, mortality, or disturbance of tree-roosting bats and removal of roosting habitat within the VMVSP project area
- Impact BIO-13: Potential mortality or disturbance of American badger within the VMVSP project area
- Impact BIO-14: Potential mortality or disturbance of ringtail within the VMVSP project area
- Impact BIO-15: Interfere with the movement of resident or migratory wildlife
- Impact BIO-16: Potential conflict with the County General Plan oak protection policies
- Impact BIO-17: Potential introduction and spread of invasive plant species
- Impact BIO-18: Potential loss of sensitive natural communities within the offsite infrastructure improvement areas
- Impact BIO-19: Potential loss of waters of the United States within the offsite infrastructure improvement areas
- Impact BIO-21: Potential loss of waters of the United States within the Bass Lake Road/Hollow Oak Drive intersection improvement area
- Impact BIO-22: Potential impacts on special-status plant species within the offsite infrastructure improvement areas
- Impact BIO-24: Potential mortality or disturbance of listed vernal pool branchiopods and their habitat within offsite infrastructure improvement areas
- Impact BIO-25: Potential mortality or disturbance of California red-legged frog within offsite infrastructure improvement areas
- Impact BIO-26: Potential mortality or disturbance of foothill yellow-legged frog within offsite infrastructure improvement areas
- Impact BIO-27: Potential mortality or disturbance of northwestern pond turtle within offsite infrastructure improvement areas
- Impact BIO-28: Potential mortality or disturbance of Blainville's horned lizard within offsite infrastructure improvement areas
- Impact BIO-29: Potential mortality or disturbance of nesting special-status and non-special-status birds within offsite infrastructure improvement areas
- Impact BIO-30: Potential injury, mortality, or disturbance of tree-roosting bats and removal of roosting habitat within offsite infrastructure improvement areas
- Impact BIO-31: Potential mortality or disturbance of American badger within offsite infrastructure improvement areas

- Impact BIO-32: Potential mortality or disturbance of ringtail within offsite infrastructure improvement areas

Cultural Resources

- Impact CUL-1: Cause a substantial adverse change in the significance of an archaeological resource that is a historical resource as defined in Section 15064.5
- Impact CUL-3: Disturb any human remains, including those interred outside of formal cemeteries
- Impact CUL-4: Result in disturbance to or destruction of cultural resources as a result of offsite infrastructure and General Plan Policy TC-Xf traffic improvements

Geology, Soils, Minerals, and Paleontological Resources

- Impact GEO-1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: (1) 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; (2) strong seismic ground shaking; (3) seismic-related ground failure, including liquefaction; and (4) landslides
- Impact GEO-3: 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 an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse
- Impact GEO-4: Result in fracturing and/or erosion from construction methods that could result in unstable geologic or soil conditions
- Impact GEO-10: Directly or indirectly destroy a unique paleontological resource or unique geologic feature
- Impact GEO-11: Impacts on geological, mineral, and paleontological resources resulting from offsite improvements and General Plan Policy TC-Xf traffic improvements

Greenhouse Gas Emissions

- Impact GHG-3: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment as a result of offsite improvements
- Impact GHG-4: Impacts on greenhouse gas emissions resulting from implementation of General Plan Policy TC-Xf traffic improvements

Hazards and Hazardous Materials

- Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment
- Impact HAZ-8: Expose people or structures, either directly or indirectly to a significant risk of loss, injury, or death involving wildland fires; due to slope, prevailing winds, and other factors, exacerbate wildfire risks; require the installation or maintenance of associated infrastructure that may exacerbate fire risk; or expose people or structures to significant risks, including

downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes

- Impact HAZ-9: Create a significant hazard to the public or the environment as a result of offsite infrastructure and General Plan Policy TC-Xf traffic improvements

Hydrology, Water Quality, and Water Resources

- Impact WQ-1: Violate any water quality standards or otherwise substantially degrade surface water or groundwater quality
- Impact WQ-3i: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite
- Impact WQ-3ii: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite
- Impact WQ-6: Impacts on hydrology, water quality, and water resources resulting from offsite improvements, including General Plan Policy TC-Xf traffic improvements

Noise and Vibration

- Impact NOI-1c: 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 County General Plan or noise ordinance for stationary or non-transportation noise sources during project operation
- Impact NOI-2: Generation of excessive groundborne vibration or groundborne noise levels

Public Services and Utilities

- Impact PSU-2: Require or result in the relocation or construction of new or expanded wastewater treatment or storm water drainage facilities, the construction or relocation of which could cause significant environmental effects
- Impact PSU-3: Require or result in the construction of new water treatment or conveyance facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects

Traffic and Circulation

- Impact TRA-1: Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities
- Impact TRA-2: Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)
- Impact TRA-4: Result in inadequate emergency access
- Impact TRA-5: Impacts on transportation as a result of offsite improvements

Feasibility

CEQA requires that alternatives considered in an EIR be feasible. Section 15364 of the State CEQA Guidelines defines *feasible* as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and

technological factors." CEQA does not require that an EIR determine the ultimate feasibility of a selected alternative, but rather that an alternative be probably feasible. Factors considered in determining an alternative's feasibility included site suitability, infrastructure availability, general plan consistency, consistency with other plans and regulatory limitations, jurisdictional boundaries, economic viability, and whether an alternate site could reasonably be acquired.

4.3 Alternatives Analysis

After the screening process, the County determined that three alternatives—a reduced-wetland-impact alternative, a reduced-development-footprint alternative, and a minimal oak woodland impact alternative—would fulfill the CEQA requirements of meeting most of the project objectives, being feasible, and reducing or eliminating one or more project impacts. In addition, a No-Project Alternative must be considered in an EIR. Therefore, the following alternatives are evaluated in comparison to the proposed VMVSP in this Draft EIR.

- Alternative 1—No-Project Alternative
- Alternative 2—Reduced Wetland Impact
- Alternative 3—Reduced Development Footprint
- Alternative 4—Minimal Oak Impact

Table 4-1 provides a comparison of the types and extent of development associated with the proposed project and the No-Project, Reduced-Wetland-Impact, Reduced-Development-Footprint and Minimal-Oak-Impact Alternatives. Each of the alternatives analyzed is further described in Sections 4.3.1, *Alternative 1—No-Project Alternative*, through 4.3.4, *Alternative 4—Minimal Oak Impact*.

Table 4-1. Alternatives Analyzed

Land Use	Proposed Project	Alternative 1 – No Project	Alternative 2 – Reduced Wetland Impact	Alternative 3 – Reduced Development Footprint	Alternative 4 – Minimal Oak Impact
Developed Acres[a]	1,057 ac (45%)	1,050 (45%)	759 ac (33%)	925 (39%)	516 (22%)
Open Space	1,284 ac (55%)	1,291 (55%)	1,573 (67%)	1,417 ac (61%)	1,825 (78%)
Oak Woodland Impacts	689.6 ac	802.69	554.95 ac	588.87 ac	204.84 ac
Oak Canopy Impacts	227.2 ac	176 ac	204.7 ac	190.5 ac	89 ac
Wetlands Impacts	4.6 ac	2 ac	0.6 ac	3.6 ac	3.7 ac
Residential Land Use (ac)	797 ac	850 ac	662 ac	770 ac	423 ac
Residential – Large Lot – VRL	318[b] du	0	267 du	343 du	0
Residential – Pad Graded – VRL	1,659 du	–	1,445 du	1,202 du	911 du
Estate Residential – 5-acre minimum (RE-5-PD)[c]	–	398 du	–	–	–
Residential – VRM	708 du	–	257 du	422 du	785 du
Residential – VRH	551 du	–	206 du	1,594 du	578 du
Total Dwelling Units	3,236 du	398 du	2,176 du	3,561 du	2,274 du

Land Use	Proposed Project	Alternative 1 – No Project	Alternative 2 – Reduced Wetland Impact	Alternative 3 – Reduced Development Footprint	Alternative 4 – Minimal Oak Impact
Schools (number)	2	1	1	2	1
School (ac)	35 ac	11 ac	20 ac	36 ac	22 ac
Commercial (ac)	16 ac	20 ac	6 ac	25 ac	0 ac
Retail	9 ac		6 ac	25 ac	–
Wine/Sales Facility	3 ac	–	–	–	–
Cultural Arts Center (RF-H)	–	20 ac	–	–	–
Event Center/Monolith	2 ac	–	–	–	–
Community Recreation Facility/Winery	2 ac	–	–	–	–
Bed & Breakfast	Yes	No	No	No	No
Office, Other Uses (ac)	41 ac	–	–	–	–
Office	21 ac	–	–	–	–
Civic – Office – Recreational	20 ac	–	–	–	–
Road Impacts – Outside Residential – Other (ac)	73 ac	159 ac	66 ac	39 ac	22 ac
Vineyards (ac)	45 ac	–	–	–	–
Private Parks (number)	5	0	3	4	1
Public Parks (ac)	47 ac	11 ac	15 ac	54 ac	50 ac
Foundation Park	Yes	No	No	No	No
Lake Park (Active-Passive)	Active	Passive	Passive	Passive	Passive
Amphitheater/Pier/Gazebo	Yes	No	No	No	No
Joint-Use Parks with School(s)	Yes	Yes	Yes	Yes	Yes
Historic Park (Active-Passive)	Active	Passive	Passive	Passive	Passive
View Park	Yes	No	No	No	No
Children Only Park	Yes	No	No	No	No
Public Infrastructure	6 ac	–	–	–	–
Offsite Improvements					
Marble Valley Parkway extension to US 50/ Cambridge Road I/C	X	X	X	X	X
Marble Valley Parkway extension to US 50/Bass Lake Road I/C	X	X	X	X	X
US 50/Cambridge Road I/C improvements	X	X	X	X	X
US 50/Bass Lake Road I/C improvements	X	X	X	X	X
Marble Valley Parkway between east and west	X	X	X	X	X
Lime Rock Valley Road extension to Deer Creek Road	X	X	X	X	X
Potable Water line extension along Cambridge Road	X	X	X	X	X
Potable Water line extension along Bass Lake Road	X	X	X	X	X

Land Use	Proposed Project	Alternative 1 – No Project	Alternative 2 – Reduced Wetland Impact	Alternative 3 – Reduced Development Footprint	Alternative 4 – Minimal Oak Impact
EID sewer and water lines extension	X	X	X	X	X
Dry utility extensions	X	X	X	X	X
Oak Canopy offsite improvements	X				
TC-Xf Improvements					
Improve the Bass Lake Road/US 50 interchange	X	X	X	X	X
Improve the Marble Valley Parkway/Marble Mountain Road intersection	X		X	X	X
Improve the Marble Valley Parkway/Marble Ridge Road intersection	X		X	X	X
Improve the Cambridge Road/Country Club Drive intersection	X	X	X	X	X
Improve the Cambridge Road/Knollwood Drive intersection	X	X	X	X	X
Improve the Cambridge Road/Flying C Road/Crazy Horse Road intersection	X		X	X	X
Improve the Bass Lake Road/Hollow Oak Drive intersection	X		X	X	X
Improve the Bass Lake Road/Country Club Drive intersection	X		X	X	X
Improve the Cambridge Road/Merrychase Drive/US 50 westbound ramps intersection	X	X	X	X	X
Improve the Latrobe Road/Town Center Boulevard intersection	X		X	X	X

ac = acres
du = dwelling units
I/C = interchange
EID = El Dorado Irrigation District
X = present
[a] Excludes roads and parks, which are listed separately.
[b] Includes 14 residential units in areas designated for Agriculture Tourism.
[c] Low-Density Residential.

4.3.1 Alternative 1—No-Project Alternative

Section 15126.6(e)(2) of the State CEQA Guidelines requires every EIR to include an analysis of the No-Project Alternative. Evaluation of the No-Project Alternative allows decision makers to compare the impacts of approving the proposed project to the impacts of not approving the proposed project. As provided by State CEQA Guidelines Section 15126(e)(3)(A), a discussion of the No-Project

Alternative will usually proceed along one of two lines: a "plan-to-plan" comparison when the project is the revision of an existing land use plan, such as the proposed project; or—if the project is other than a land use plan (e.g., a development project on identifiable property)—a comparison of the environmental effects of the property remaining in its existing state against the environmental effects if the proposed project is approved. Under the plan-to-plan comparison, the analysis examines "what would be reasonably 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" (State CEQA Guidelines 15126.6 (e)(2)).

The County currently has an approved plan in place for the VMVSP project area, the Marble Valley Master Plan (approved in 1998), and development of the site is assumed under the current County General Plan. An EIR was prepared for the Marble Valley Master Plan and certified by the County Board of Supervisors. In 2008, a Finding of Consistency was approved by the County for some minor modifications to the originally approved subdivision map. This 2008 plan is the one illustrated in Figure 4-1. Thus, the plan-to-plan comparison is the appropriate analysis for this EIR, and a No-Project Alternative under which the project site remains in its existing state does not require evaluation in this Draft EIR.

The No-Project Alternative assumes the land use would be developed as currently approved for the 398-lot 2-acre-minimum residential lots ("Design E") with underground utilities, located on approximately 850 acres throughout the project site, as shown on Figure 4-1. More development would occur on ridgelines under the No-Project Alternative. The total development footprint of the No-Project Alternative would be 1,050 acres, including the large-lot residential uses, 11 acres for a school, 20 acres for a Cultural Arts Center, 11 acres of public parkland, and approximately 159 acres of roadways. There would be 1,291 acres of open space. Under the No-Project Alternative, historic resources would be protected within conservation easements, open space areas would be private, with no public access, and no trail system would be built to connect to proposed public trails outside the project area.

Aesthetics

Construction of the No-Project Alternative would be very similar to the proposed project and would create changes in views of and from the project site over the course of phased development. However, construction of the No-Project Alternative would require the removal of fewer oak trees, which are located throughout the site and south of Deer Creek and are an onsite visual amenity. Therefore, the impact on visual resources would be reduced under this alternative but would still be a significant and unavoidable impact, as under the proposed project. Under the No-Project Alternative, the effect on portions of US 50 with important scenic viewpoints would be similar to the proposed project because the areas proposed for development are similar: the area next to US 50 would remain undeveloped with mature oak woodlands, intermixed with grassland and riparian vegetative communities while the area south of the project area's entry road from US 50 would be developed. The approved Marble Valley Master Plan would include 71 acres of open space along US 50, and provide direction and guidelines intended to integrate development into the existing landscape to some extent, but the visual impact of the development would still be significant and unavoidable. The proposed project and No-Project Alternative would develop roughly the same amount of area with residential, commercial, and civic land uses that would include buildings visible to all viewer groups. The primary difference between the proposed project and No-Project Alternative affecting visual resources is that the No-Project Alternative has low-density residential development throughout the site, including south of Deer Creek, whereas there would be no

development south of Deer Creek under the proposed project. The proposed project's development pattern of commercial and medium- and high-density residential land uses within the interior of the site would be higher density, whereas development within the interior of the site under the No-Project Alternative would be lower density. Under the No-Project Alternative, development at the interior of the site would appear visually similar when seen from US 50, vantages north of US 50, and from vista views south of the project site. Development in the area south of Deer Creek under the No-Project Alternative would have a greater impact on scenic vistas and the existing visual character and quality of this area because development would be more extensive and include residential development that would be more easily visible from vista views from existing residences and roadways located south of the site and from adjacent viewers that border this portion of the site. Therefore, the No-Project Alternative would result in significant and unavoidable impacts on visual resources, as would the proposed project.

The No-Project Alternative would include a Cultural Arts Center, an elementary school, and some residential development near the site's northern border that would be visible to adjacent viewers, while the proposed project would include an office park, a public school, and a public park. The Cultural Arts Center would be located in the same place as an office building under the proposed project, but the Cultural Arts Center would be larger and more visible from US 50. The No-Project Alternative would also develop more hillsides and ridges than would the proposed project. However, construction of the No-Project Alternative would require the removal of fewer oak trees, which are located throughout the site and south of Deer Creek and are an onsite visual amenity. Both the proposed project and No-Project Alternative would result in new sources of nighttime light. The surrounding area is not well-lit and development would make lighting more visible. The No-Project Alternative would result in slightly less lighting because there would be less commercial development, which tends to be more intensely lit, than the proposed project. The certified EIR for the Marble Valley Master Plan included mitigation measures to reduce outdoor lighting, but the resulting impact would be significant and unavoidable.

Although mitigation measures established for the proposed project would reduce visual impacts under the No-Project Alternative, impacts on visual resources under the No-Project Alternative would be slightly increased compared with those of the proposed project because of development south of Deer Creek and on the site's east, south, and west borders that would affect hillsides and ridges.

Air Quality

The types of air quality impacts under the No-Project Alternative would be similar to those under the proposed project, but of a lesser magnitude. Development would be consistent with the existing County General Plan and would be limited to 398 2-acre-lot dwelling units, 11 acres for a school, 20 acres for an arts center, 11 acres for parkland, and 159 acres for roadways. As with the proposed project, construction and operation of these features would generate criteria pollutant emissions that could exceed the El Dorado County Air Quality Management District's (EDCAQMD) significance thresholds. However, because the extent of construction and operational activities are less under the No-Project Alternative than under the proposed project, criteria pollutant emissions generated by the No-Project Alternative would likely be lower than those estimated for the proposed project. While fewer emissions are expected under the No-Project Alternative, the No-Project Alternative would still exceed EDCAQMD's thresholds and result in a significant air quality impact. The No-Project Alternative would be required to comply with all state and local rules and regulations to

control criteria pollutants. Mitigation measures established for the proposed project would also reduce emissions.

Implementation of the No-Project Alternative could expose new residents within the approved Marble Valley Master Plan area and existing sensitive receptors in adjacent residential developments to significant health risks from criteria pollutants and toxic air contaminants (TAC), including diesel particulate matter (DPM), generated by equipment and vehicle exhaust. Emissions and thus health risks resulting from buildout of the No-Project Alternative would be less than that of the proposed project because there would be less construction and fewer operational emission sources. Criteria pollutants and TAC would also be reduced through best available control technologies identified in mitigation measures in the certified EIR, which required the use of low-emissions construction equipment, as feasible. However, like the proposed project, there may be instances where specific conditions preclude the reduction of health risks below adopted thresholds, resulting in a significant impact.

Similar to the proposed project, receptors could also be exposed to significant naturally occurring asbestos (NOA). The requirements identified in Mitigation Measure AQ-3, discussed in Section 3.2, *Air Quality*, would reduce any significant NOA impacts to a less-than-significant level.

Like the proposed project, the No-Project Alternative would not result in new or worsened odors that would affect a substantial number of people, and odor impacts would be less than significant. Similarly, carbon monoxide (CO) modeling for the No-Project Alternative showed that no new localized violations of the 1-hour or 8-hour ambient air quality standards would occur.

Biological Resources

As compared with the proposed project, biological resource impacts would be reduced under the No-Project Alternative for oak woodland, chaparral habitat, annual grassland, and waters of the United States. Using criteria in the Oak Resources Management Plan (ORMP) (El Dorado County 2017), oak woodland impacts under the No-Project Alternative would be approximately 802.69 acres of oak woodland, compared with 689.4 acres of oak woodland impact under the proposed project. Impacts would be slightly greater than the proposed project for riparian habitat. The No-Project Alternative would also require construction of offsite infrastructure improvements, with similar corresponding impacts on biological resources as the proposed project.

Impacts on some special-status species would generally be less substantial under the No-Project Alternative. However, because the extent of construction is more dispersed throughout the VMVSP area and development in the southern part of the project area would be substantially greater under the No-Project Alternative than under the proposed project, the large contiguous open space area would be eliminated, resulting in greater impacts on wildlife corridors.

The No-Project Alternative would apply mitigation measures similar to those for the proposed project for impacts on oak woodland, jurisdictional and non-jurisdictional waters, nesting birds and bird habitat, valley elderberry longhorn beetle, and California red-legged frog. The proposed project also includes measures for yellow-legged frog, northwestern pond turtle, Blainville's horned lizard, American badger, ringtail, and vernal pool branchiopods that are not included in the certified Marble Valley Master Plan EIR. Therefore, the No-Project Alternative would require avoidance, minimization, and mitigation measures similar to those of the proposed project to reduce these impacts to less-than-significant levels and comply with state regulations.

Cultural Resources

The No-Project Alternative would result in similar impacts on archaeological resources as the proposed project, which are less than significant with the implementation of mitigation measures. The No-Project Alternative would be designed to avoid all but four resources that were recommended eligible. Mitigation measures to recover data from those resources are provided. Indirect impacts on eligible resources from vandalism would be avoided through installation of fencing and signage in combination with education and monitoring. The proposed project would result in direct impacts on two districts and two individually eligible sites. Similar data recovery mitigation would reduce direct impacts to a less-than-significant level and fencing and/or less intrusive measures to redirect potential vandals have been proposed to address indirect impacts. The No-Project Alternative also includes development south of Deer Creek, where the proposed project would include open space. Previous studies indicate that a number of archaeological sites are located south of Deer Creek (Archeo-Tech 1989). Under the No-Project Alternative, more residential development would occur in this area, leading to more potential for indirect impacts from the presence of people. However, the No-Project Alternative would apply mitigation measures similar to those of the proposed project to protect these resources, which would result in a less-than-significant impact.

Geology, Soils, Minerals, and Paleontological Resources

Geology and Soils

The No-Project Alternative would result in the development of residential land uses, open space, and roadways. The number of residential units that would be developed under the No-Project Alternative would be far fewer than that developed under the proposed project, though it would occupy approximately the same acreage. As a result, less construction activity would be required under the No-Project Alternative, which would lead to fewer overall construction impacts than under the proposed project. Site-specific investigation would be necessary to address issues such as slope stability, expansive soils, mine hazards, and earthquake safety. However, the overall types of potential impacts would not be different under the No-Project Alternative than under the proposed project, and the same mitigation requiring geotechnical studies, slope stabilization, and erosion control measures that are provided for the proposed project are included in the certified Marble Valley Master Plan EIR.

Mine Hazards

Impacts related to mine hazards under the No-Project Alternative would be similar to the proposed project. The potential for people to fall into these features and be injured and/or trapped exists under the No-Project Alternative, as it does under the proposed project. As under the proposed project, mitigation measures to establish a process for closing these features and to establish and implement a reporting process for undocumented mining features would reduce the severity of this impact but not to a less-than-significant level. Therefore, as under the proposed project, this impact would be significant and unavoidable under the No-Project Alternative.

Minerals

The impacts on mineral resources under the No-Project Alternative would be similar to those under the proposed project. Construction under the No-Project Alternative would occur in areas with

similar mineral resource zones (MRZs) to the proposed project, although the overall extent of construction would be less. As with the proposed project, there would be a less-than-significant impact on known important mineral resources and no impact on the availability of important mineral resource sites.

Paleontological Resources

The impacts on paleontological resources under the No-Project Alternative would be similar to those under the proposed project but of a lesser magnitude. As with the proposed project, construction could occur in units sensitive for paleontological resources, such as the limestone deposits and Quaternary alluvium and, therefore, result in impacts on paleontological resources. Mitigation Measures GEO-10a, GEO-10b, and GEO-10c, as recommended for the proposed project, would be required for this alternative to address the discovery of fossils. However, because the extent of construction would be significantly less and the overall development footprint would be slightly smaller under the No-Project Alternative than under the proposed project, the impact of the No-Project Alternative would be of a lesser magnitude than the proposed project. The mitigation measures identified for the proposed project would be necessary to reduce impacts to a less-than-significant level under the No-Project Alternative.

Greenhouse Gas Emissions

Similar to criteria air pollutant emissions, construction, and operational GHG emissions associated with the No-Project Alternative would likely be lower than those estimated for the proposed project. However, because the VMVSP would not be adopted under the No-Project Alternative, policies outlined in the VMVSP Sustainability Element intended to reduce GHG emissions would not be incorporated into the project design. Therefore, although operational emissions associated with the No-Project Alternative may be less than the proposed project, development under the No-Project Alternative would generate new vehicle trips and consume fossil fuels, which could conflict with the state's goal to reduce regional per-capita VMT and achieve carbon neutrality. Construction would result in annual GHG emissions from equipment and vehicles and permanent losses of natural lands. Mitigation measures established for the proposed project would reduce GHG emissions generated by the No-Project Alternative. However, similar to the proposed project, the No-Project Alternative's cumulative contribution of GHG emissions would be significant and unavoidable, and the No-Project Alternative could conflict with the 2017 Scoping Plan and the state's long-time climate change goals in Assembly Bill (AB) 1279 and the 2022 Scoping Plan.

Hazards and Hazardous Materials

The impacts related to hazards and hazardous materials under the No-Project Alternative would be similar to those under the proposed project. Under the No-Project Alternative, the total development footprint would be 1,050 acres—only 7 acres less than the proposed project. The number of residential units that would be developed under the No-Project Alternative would be less than the number of units developed under the proposed project. As a result, less construction activity would be required under the No-Project Alternative, which would lead to fewer overall construction impacts related to the potential for hazardous material releases compared with the proposed project. The No-Project Alternative would allow 11 acres for a school, 20 acres for the Cultural Arts Center, and no office park uses, whereas the proposed project would allow 35 acres for two schools, and 16 acres for retail use, and 41 acres for office park. Because there would be fewer business-related wastes or hazard risks, operation-related impacts would be slightly reduced under

the No-Project Alternative compared with the proposed project. All businesses and public facilities would be required to comply with hazardous material–related regulations and would not be expected to result in a significant hazard to the public or environment. Residential impacts, such as generation of household hazardous waste, would be reduced because there would be fewer residences. Impacts would be less than significant, as under the proposed project, but of a lesser magnitude.

The County has not identified specific roads as emergency evacuation routes but encourages residents to learn their local roads in preparation for an emergency (Cathey pers. comm.); therefore, development under the No-Project Alternative would not be expected to result in significant impacts on emergency response or evacuation plans. Under the No-Project Alternative and the proposed project, three points of access would be developed as emergency access routes to and from the project site. This impact would be similar in nature to the proposed project and be less than significant but because there would be less development and fewer residences, this impact would have a lesser magnitude than under the proposed project.

Although development under this alternative would introduce new fire hazards or risk to people and structures in the project area, existing County policies related to fire hazards and fire minimization would be enforced, and subdivision plans would need to be approved by the El Dorado Hills Fire Department or the El Dorado County Fire Protection District and this impact would be less than significant as for the proposed project. Because there would be less development and fewer residents, the risk of people and structures being exposed to fire would be less under the No-Project Alternative than under the proposed project.

Hydrology, Water Quality, and Water Resources

The impacts on hydrology, water quality, and water resources under the No-Project Alternative would be similar in nature to those of the proposed project but of a lesser magnitude. Under the No-Project Alternative, the total development footprint would be 1,050 acres (only 7 fewer acres than under the proposed project), but far fewer residential units would be constructed, resulting in less construction. As with the proposed project, such impacts would be minimized and would be less than significant through compliance with the latest National Pollutant Discharge Elimination System (NPDES) and other water quality requirements (i.e., stormwater pollution prevention plan, Construction General Permit, Small Municipal Separate Storm Sewer System [MS4] Permit, waste discharge requirements [WDRs] for dewatering, other federal and state regulations, County plan standards, and County and other local ordinances) as required by mitigation measures in the EIR. Mitigation measures in the EIR for the Marble Valley Master Plan also requires that final drainage plans demonstrate that post-development drainage will be reduced to pre-development conditions.

With regard to post-development impacts, proper measures to maintain water quality after construction would be required as under the proposed project, which would require preparation of a drainage study and identification of postconstruction drainage system features and water quality protection measures. Source and treatment control measures contained in the State Water Resources Control Board's (State Water Board) MS4 Permit Order No. 2013-0001-DWQ, the County *Storm Water Management Plan* (SWMP) (El Dorado County 2004b) and the County Drainage Manual (El Dorado County 1995), and/or U.S. Environmental Protection Agency (USEPA) guidance and other related guidance documents would be implemented. General site housekeeping and design control measures incorporated into the project design can include conserving natural areas, protecting slopes and channels, and minimizing impervious areas. Treatment control measures may

include use of vegetated swales and buffers, detention basins, wet ponds, or constructed wetlands, infiltration basins, and other low-impact development (LID) technology measures.

Impacts related to placing structures in a 100-year floodplain and altering drainage patterns in a manner that would result in flooding would be similar under the No-Project Alternative because the acreage proposed for development is nearly the same. These impacts would be less than significant, as under the proposed project. Impacts related to flooding that could result from a dam failure would be the same as the proposed project, as the project location is the same and would be less than significant.

The overall development footprint associated with the No-Project Alternative would be only slightly smaller than the proposed project (7 acres less development). Therefore, there would be slightly fewer post-construction-related impacts associated with the No-Project Alternative than under the proposed project.

Land Use Planning and Agricultural Resources

The No-Project Alternative would involve land uses similar to those proposed under the proposed project. The No-Project Alternative would not result in any significant impacts related to land use or agriculture. While a larger portion of the project site would be developed under the No-Project Alternative, because the site is already approved for that development, no land use impacts would occur, while the proposed project would result in a less-than-significant impact.

There would be no impacts associated with conversion of agricultural land—including Prime Farmland, Unique Farmland, or Farmland of Statewide Importance—or forest land to nonagricultural or non-forest use under either the No-Project Alternative or the proposed project because no agricultural or forest lands are present on or adjacent to the site. Similarly, no agricultural or timberland zoning exists on the project site, and none of the site is covered by a Williamson Act contract. There would be no impact under either the proposed project or the No-Project Alternative.

Noise and Vibration

The No-Project Alternative would result in the development of residential land uses, open space, and roadways. The number of residential units that would be developed under the No-Project Alternative would be less than the number of units developed under the proposed project. As a result, less construction activity would be required under the No-Project Alternative. The No-Project Alternative would result in a potentially significant short-term impact from construction noise that could be reduced to a less-than-significant level with the implementation of mitigation measures identified in the certified EIR to reduce noise and limit construction hours. However, under the proposed project, there would be more construction and it would be in closer proximity to newly constructed residences. Mitigation Measure NOI-1a would restrict construction times and reduce noise levels, but the impacts would still be significant and unavoidable. Therefore, the impact under the No-Project Alternative would be less severe than under the proposed project.

The project area is located in an area where many roadways result in traffic noise that exceed the County's 60 day-night average sound level compatibility standard. Traffic noise impacts would be similar under the No-Project Alternative but to a lesser extent because there would be less development under the No-Project Alternative than under the proposed project and because of the distance to sensitive receptors under the No-Project Alternative. Exposure of increased traffic and

operational noise generated by the proposed project on new land uses would be reduced to a less-than-significant level with the implementation of mitigation measures to construct noise barriers and use noise-reducing treatments on structures. Under the No-Project Alternative noise impacts from traffic would only result at the Cultural Arts Center. The certified EIR includes mitigation to reduce the exterior-to-interior noise by at least 25 A-weighted decibels or conduct a site-specific acoustical study to more precisely determine the degree of noise reduction required. Though no specific means to achieve noise reduction are proposed, acoustical insulation or construction of a berm or sound wall could be implemented to reduce traffic noise levels.

In addition, less development under the No-Project Alternative (398 residential units) would result in less operational noise compared with the proposed project (3,236 residential units), because increases in traffic and the associated noise would be proportionately less than under the proposed project. However, there could still be a significant increase in noise in the project area on existing land uses, namely at the single residences located adjacent to the roadway at 2080 Marble Valley Road and 4118 Flying C Road. The No-Project Alternative proposed to implement enhanced acoustical insulation or construct a berm or sound wall to reduce noise levels at this residence. Thus, the impact was considered less than significant with mitigation. However, analysis for the proposed project indicates that due to the location of this residence and the access from Marble Valley Road, and the level of the noise, mitigation would not be feasible. Therefore, this impact would be significant and unavoidable under the No-Project Alternative, as under the proposed project.

As with the proposed project, implementation of the No-Project Alternative would not likely require impact equipment that could generate substantial ground vibrational impacts. However, similar to the proposed project, implementation of the No-Project Alternative could potentially involve some blasting that would generate vibration. Under the No-Project Alternative, as under the proposed project, blasting would be considered less than significant through compliance with applicable regulations. Notification to nearby residents would also be implemented. Impacts would be the same as the proposed project. Because the No-Project Alternative and the proposed project would involve similar types of land uses (residences, open space, roadways), which would require similar types of construction activities, vibration impacts would be similar to those under the proposed project.

Because the project location would be the same as the proposed project, and the resulting construction activity would not differ from the proposed project, development under the No-Project Alternative would also not be located near any public or private airports. Additionally, as discussed in Section 3.10, *Noise and Vibration*, the site is not located within the community noise equivalent level (CNEL) 55 decibel (dB) contours of the Cameron Airpark public-use airport. Thus, impacts pertaining to aircraft overflight noise would be less than significant and would not differ from impacts of the proposed project.

Population and Housing

As with the proposed project, development under the No-Project Alternative would follow the current and anticipated trend of continuing growth in unincorporated El Dorado County. Development under the No-Project Alternative would occur as currently entitled or allowed under existing land use designations, with up to 398 low-density residential units, as opposed to 3,236 units of low, medium, and high density under the proposed project. Assuming the same average people per unit as under the proposed project (3.06 for low density), occupancy of 398 new housing units proposed under the No-Project Alternative would be expected to increase the county's

population by approximately 1,218 people. The No-Project Alternative would result in less growth than the proposed project, and the impact would be less than significant as indicated in the certified EIR.

The project area currently contains no housing units. Therefore, as with the proposed project, development under the No-Project Alternative would not displace any existing housing units or necessitate the construction of replacement housing elsewhere but would instead result in the creation of additional housing units on a currently undeveloped site. As the area contains no housing units, the No-Project Alternative, like the proposed project, would not displace any people or necessitate the construction of replacement housing elsewhere.

Public Services and Utilities

Construction of the No-Project Alternative would result in the development of 1,050 acres (7 fewer acres than the proposed project), including 398 residential units (rather than the 3,236 residential units allowed under the proposed project). Fewer dwelling units and, therefore, fewer residents are expected under this alternative, causing less demand on fire and police services. The No-Project Alternative would result in 269 school-age children rather than 2,191 as under the proposed project, resulting in less demand on schools. As described in Section 3.12, *Public Services and Utilities*, payment of school impact fees, as required by Senate Bill (SB) 50 and provided for under California Government Code Section 65995 et seq., would serve as full and complete mitigation for the demand of additional students on school facilities. Increased school enrollment would not cause significant environmental effects; rather, it would cause only social effects. Similarly, impacts on libraries are of a social nature and would not have environmental effects. Therefore, overall, the No-Project Alternative would result in reduced impacts on public services, as compared with the proposed project, although both would result in less-than-significant impacts.

Because the No-Project Alternative would result in fewer residents than the proposed project, it would also result in a decreased demand on potable water, recycled water, solid waste services, dry utilities, electricity, natural gas, and other energy demands. Wastewater demands under the No-Project Alternative have already been calculated in El Dorado Irrigation District's (EID) planning, so there would be no additional impact. Impacts on utilities would be less than significant under the No-Project Alternative, as under the proposed project. Impacts from the expansion of and connection to infrastructure and offsite improvements would be similar to those under the proposed project, although to a lesser extent because some offsite improvements would not be constructed. Mitigation measures similar to those identified for the proposed project would be necessary to mitigate those impacts. Although energy- and resource-conserving measures would most likely be utilized under the No-Project Alternative, it is not assumed that measures under this alternative would match the energy-saving policies incorporated in the proposed project. Therefore, energy conservation under the No-Project Alternative would be slightly less than for the proposed project, making the impact greater, though the impact would still be less than significant. Because the overall development footprint associated with the No-Project Alternative would be slightly smaller than that of the proposed project, but with far fewer residents, the construction- and operation-related effects would also be of a lesser magnitude, causing less demand for public services, utilities, and energy.

Recreation

Development under the No-Project Alternative would include construction of up to 398 single-family housing units. Using the County's park-planning household sizes of 3.3 people per single-family residential unit, the No-Project Alternative would be expected to introduce approximately 1,313 park users into the area, compared with 9,168 new park users under the proposed project. Although these 1,313 new park users represent 14% of the park users anticipated under the proposed project, this alternative would still increase the demand for parks and recreation facilities. However, the No-Project Alternative would also provide 11 acres of public parkland, which would exceed the combined neighborhood and community parkland requirement of 6.6 acres for 1,313 residents. Under the No-Project Alternative, open space areas would be private, with no public access, and a trail system would not be built to connect to proposed public trails outside the project area. Effects of the No-Project Alternative on the deterioration of existing neighborhood parks would therefore be expected to be less than significant and comparable to those associated with the proposed project.

Because the No-Project Alternative includes park facilities to serve the added park users, the No-Project Alternative, like the proposed project, is not expected to require the construction of new offsite recreational facilities and there would be no impact.

Transportation

The proposed project would include 3,236 dwelling units, 16 acres of commercial, and 41 acres of office land use. At buildout, the No-Project Alternative would result in the development of 398 residential dwelling units, one school, an arts center, one public park, open space, and roadways. The No-Project Alternative would not include commercial office and agricultural tourism land uses or a trail system.

With 2,838 fewer residences and no office development, the No-Project Alternative would generate less VMT than the proposed project. However, the VMT efficiency of the No-Project Alternative, measured in terms of VMT per capita, would be worse than the proposed project because the residential land uses would be comprised entirely of estate residential and there would less commercial development and no retail development. Therefore, the No-Project Alternative impact would be significant, like under the proposed project, but with higher VMT per capita. Like the mitigation identified for the proposed project, modification of the No-Project Alternative to create a more efficient land use mix would be required to reduce this impact to less than significant. That mitigation, which could include reallocating areas proposed to be zoned for residential and/or arts center to commercial office or retail (or adding additional commercial office or retail), would be based on detailed analysis specific to the No-Project Alternative.

A trail system connecting to proposed trails outside the project area would not be constructed under the No-Project Alternative, and therefore impacts on pedestrian, bicycle, and public transit would be greater than under the proposed project. The number of residential units that would be developed under the No-Project Alternative (398 units) is substantially fewer than those planned under the proposed project (3,236 units), and the No-Project Alternative would not include office uses or areas of agricultural tourism.

Application of Screening Criteria

Ability to Meet Project Objectives

The County's primary objective for the proposed project is to create development patterns that make the most efficient and feasible use of existing infrastructure and public services while promoting a sense of community. The No-Project Alternative would make efficient and feasible use of existing infrastructure, although not to the same extent that the proposed project would, but the No-Project Alternative would not necessarily promote a sense of community in the same manner. All development would be large lot low density, and neighbors would be distant. The No-Project Alternative would, at least to some extent, meet 3 of the 16 additional project objectives:

- Utilize existing infrastructure and public services.
- Improve connectivity of the regional roadway network.
- Protect important cultural resources

The No-Project Alternative would not meet other objectives listed in Section 4.2.1, *Methods and Screening Criteria*. Because density would be low and spread out, the No-Project Alternative would not meet objectives related to curtailing suburban sprawl, promoting walkable communities, encouraging alternative transportation including bicycling and public transit, fostering sustainable communities, and preserving wildlife corridors. Because the trail system and open space areas would be private, it would not meet objectives related to encouraging recreational opportunities. The lack of medium- and high-density housing would prevent the No-Project Alternative from meeting objectives to broaden the housing stock in the area and no facilities that would promote the El Dorado County agri-tourism industry are included in the No-Project Alternative.

The No-Project Alternative, which is currently approved for 398 2-acre-minimum residential lots, would not be consistent with the MTP/SCS. The MTP/SCS calls for a variety of housing options on varying lot sizes, reduced VMT, increased transit ridership, and increased travel by non-motorized travel modes (bike and walk).

Impact Avoidance

The No-Project Alternative would result in development of only 7 fewer acres but nearly 88% fewer dwelling units and would therefore reduce impacts on resource areas related to population and traffic. Impacts on air quality, noise, population and housing, and public services would be substantially reduced, and the impact related to wastewater would be eliminated because the No-Project Alternative is accounted for in EID's projections. Impacts on GHGs would be less because the No-Project Alternative would have less population and traffic through the immediate area. Some impacts on biological resource would be reduced because there would be fewer acres developed but impacts on cultural resources would be similar to the proposed project because similar known cultural resources would be avoided, and similar mitigation measures would be implemented. Because there would be no changes to land use designations or zoning, land use impacts would be eliminated.

Feasibility

Implementation of the No-Project Alternative would be possible because the 1998 Marble Valley Master Plan has been approved but is expected to experience a long absorption time as larger lots

have less demand and require more time to build out. This alternative would result in substantially fewer residential units within the same acreage but may be more economically difficult to develop (e.g., infrastructure costs per residential unit would be higher than the proposed project).

4.3.2 Alternative 2—Reduced Wetland Impact

The Reduced-Wetland-Impact Alternative, shown in Figure 4-2, is intended to reduce wetland impacts compared with the proposed project through the selective reduction of developed acreage from 1,051 to 759 of the site's 2,341 total acres. Through changes to the location and density of development, the impact on wetlands was reduced from 4.6 acres under the proposed project to 0.6 acre under Alternative 2. The vineyard landscaping theme and associated uses would not be developed under the Reduced-Wetland-Impact Alternative, and neither would the office park or Foundation Park. A total of 662 acres of residential, 66 acres of roadways, and 1,573 acres of open space land uses would be developed under the Reduced-Wetland-Impact Alternative (Table 4-1). A total of 6 acres of retail uses, one 20-acre school and joint-use park site, and 15 acres of public parks would be developed. In addition, three private neighborhood parks would be dedicated. No public parks would be included. Buildout of Alternative 2 would result in the development of up to 2,176 residential units, including 267 large-lot, 1,445 low-density, 257 medium-density, and 206 high-density units. Open space areas would be restricted to private use with no public access; the private and public trail system would be reduced or eliminated; and the historic quarrying resources would be protected by a conservation easement and possibly fenced.

Aesthetics

Proposed development under the Reduced-Wetland-Impact Alternative would be reduced, in both acreage of footprint and number of dwelling units, compared with the proposed project. However, overall construction of the Reduced-Wetland-Impact Alternative would be very similar in appearance to the proposed project and would create changes in views of and from the project site over the course of phased development. Construction of the Reduced-Wetland-Impact Alternative would require the removal of fewer oak trees, which are located throughout the site and south of Deer Creek and are an onsite visual amenity. Therefore, the impact on visual resources would be reduced under this alternative but would still be a significant and unavoidable impact, as under the proposed project. The effects of the Reduced-Wetland-Impact Alternative on portions of US 50 with important scenic viewpoints would be similar to the proposed project because the area next to US 50 would remain in open space. Under the Reduced-Wetland-Impact Alternative there would be development just south of the project area's entry road off of US 50, as under the proposed project; however, it would be a village park and a school instead of higher-intensity office park uses as under the proposed project. Similar to the proposed project, the area south of Deer Creek would not be developed. In addition, under the Reduced-Wetland-Impact Alternative, the interior of the site would be less developed. The area around Marble Lake and east of the main entry road, which would serve as the village center under the proposed project, would be left in open space and would not be developed with commercial and higher-density residential land uses.

County policies, zoning ordinances (130.14.170 Outdoor Lighting), design review, and the proposed VMVSP would ensure that the proposed project minimizes lighting impacts to the degree possible. Specifically, County Code Section 130.14.170 requires shielding to avoid impacts on adjoining areas. Both the proposed project and Reduced-Wetland-Impact Alternative would result in new sources of nighttime light in an area that is currently unlit. Mitigation measures identified for the proposed

project would reduce visual impacts under the Reduced-Wetland-Impact Alternative by reducing the amount of glare coming from buildings located within oak woodland and grassland areas. Regardless, the Reduced-Wetland-Impact Alternative would substantially increase the amount of ambient light in the vicinity compared with existing conditions, resulting in visible light pollution and introducing ambient sky glow to the project vicinity. Even with the presence of the remaining tree canopy, new permanent sources of light would be introduced from lighted residences, commercial and entertainment areas, walkways, roadways, parking lots, and accent lighting that would be visible to all viewer groups and would greatly increase light at the project site, which is currently unlit, and result in significant and unavoidable impacts. However, the Reduced-Wetland-Impact Alternative would result in less lighting than under the proposed project, because there would be fewer residences and less commercial development, which tends to be more intensely lit. All of these factors would reduce the Reduced-Wetland-Impact Alternative's impact on scenic vistas and visual resources compared with the proposed project. Mitigation Measures BIO-1a, BIO-1b, BIO-1c, BIO-1d, BIO-1e, AES-2, and AES-4 recommended for the proposed project would reduce visual impacts under this alternative, although, like the proposed project, not to a less-than-significant level.

Air Quality

The types of air quality impacts under the Reduced-Wetland-Impact Alternative would be similar to those under the proposed project, but of a lesser magnitude. As with the proposed project, construction and operation of new buildings would generate criteria pollutant emissions that could exceed the EDCAQMD's significance thresholds. Because the extent of construction and operational activities are less under the Reduced-Wetland-Impact Alternative than under the proposed project, criteria pollutant emissions generated by the Reduced-Wetland-Impact Alternative would likely be lower than those estimated for the proposed project. Mitigation Measures AQ-2a through AQ-2f, identified in Section 3.2, *Air Quality*, Mitigation Measures GHG-1 and GHG-2, identified in Section 3.6, *Greenhouse Gas Emissions,* and Mitigation Measure TRA-2, identified in Chapter 3.14, *Transportation and Circulation*, could be implemented to reduce emissions, but the potential to exceed EDCAQMD's thresholds and conflict with applicable air quality attainment plans would remain.

Implementation of the Reduced-Wetland-Impact Alternative could expose new residents and adjacent sensitive receptors to significant health risks from criteria pollutants and TACs, including DPM, generated by equipment and vehicle exhaust. Emissions and thus health risks resulting from buildout of the Reduced-Wetland-Impact Alternative would be less than that of the proposed project because there would be less construction and fewer operational emission sources. Construction TAC emissions would be reduced through Mitigation Measures AQ-2b, AQ-2c, and GHG-1. However, like the proposed project, there may be instances where specific conditions preclude the reduction of health risks from exposure to project-generated TACs during construction to below adopted thresholds, resulting in a significant impact.

Similar to the proposed project, receptors could be exposed to significant NOA impacts. The requirements identified in Mitigation Measure AQ-3, discussed in Section 3.2, *Air Quality*, would reduce any significant NOA impacts to a less-than-significant level.

Like the proposed project, the Reduced-Wetland-Impact Alternative would not result in new or worsened odors that would affect a substantial number of people, and odor impacts would be less than significant. Similarly, CO modeling for the proposed project showed that no new localized violations of the 1-hour or 8-hour ambient air quality standards would occur, and the same

conclusion would be expected for the Reduced-Wetland-Impact Alternative, which would result in fewer vehicle trips and congestion.

Biological Resources

The impacts on biological resources under the Reduced-Wetland-Impact Alternative as compared with the proposed project would be slightly reduced for riparian habitat; slightly reduced for chaparral habitat; and substantially reduced for oak woodland, annual grassland, and waters of the United States. Due to the increased amount of open space in the northern part of the project area, there would be less removal of most of the plant communities and impacts on waters of the United States would be limited to areas needed for road crossings. Using criteria in the ORMP, oak woodland impacts under Alternative 2 would be 554.95 acres of oak woodland, compared with 689.4 acres of oak woodland impact under the proposed project.. Impacts on waters of the United States would be approximately 0.613 acre under this alternative, compared with 4.585 acres under the proposed project. The riparian impacts would occur in the area along Marble Creek near the confluence with Deer Creek and would be less than the proposed project because the proposed project includes a road that crosses Deer Creek and the adjacent riparian area, whereas Alternative 2 does not.

Impacts on special-status plant species would be similar to those under the proposed project. Impacts on special-status wildlife species would generally be less than those of the proposed project for those species that utilize oak woodland, chaparral, annual grassland, and waters of the United States (including white-tailed kite, burrowing owl, Blainville's horned lizard, and special-status bats) and slightly less for species that utilize riparian habitat (special-status bats). For California red-legged frog and northwestern pond turtle, the Reduced-Wetland-Impact Alternative would affect less potential aquatic habitat (pond) than would the proposed project. The restriction of use and elimination or reduction of a trail system in the open space areas would decrease impacts on wildlife movement and potentially on special-status species that utilize oak woodland as compared with the proposed project.

Mitigation Measures BIO-1a through BIO-22b, as proposed for the project (listed in the Executive Summary Table ES-1, and described in Section 3.3, *Biological Resources*), would still be needed under the Reduced-Wetland-Impact Alternative to ensure that impacts on biological resources are reduced to a less-than-significant level. Because the extent of construction would be less under the Reduced-Wetland-Impact Alternative than under the proposed project, the impact on most biological resources identified in the project area would be of a lesser magnitude.

Cultural Resources

Impacts on archaeological resources under the Reduced-Wetland-Impact Alternative would be similar to those of the proposed project for known resources, but slightly less for unknown archaeological resources. Under the Reduced-Wetland-Impact Alternative, the development footprint would be smaller, generally resulting in a reduced potential for inadvertent impacts on archaeological resources during construction. Additionally, there would be less access to the larger open space area, reducing the potential for vandalism or accidental disturbance or damage to known resources. Additionally, although the Marble Valley Limestone Mining District would be within a historic park and potentially fenced, it would be a passive historic park. It is likely that interpretation and active conservation of the historic mining district would be minimal. As with the proposed project, construction would occur in areas sensitive for cultural resources and, therefore,

could result in impacts on archaeological resources. In order to reduce impacts on archaeological resources to a less-than-significant level, Mitigation Measures CUL-1a, CUL-1b, CUL-1c, CUL-1d, CUL-1e, CUL-3, and CUL-4, as proposed for the project, would need to be implemented with the Reduced-Wetland-Impact Alternative.

Geology, Soils, Minerals, and Paleontological Resources

Geology and Soils Resources

The Reduced-Wetland-Impact Alternative would result in the development of residential and commercial land uses, open space, and roadways. The number of residential units and total footprint acreage that would be developed under the Reduced-Wetland-Impact Alternative would be less than that developed under the proposed project. As a result, less construction activity would be required under the Reduced-Wetland-Impact Alternative, which would lead to fewer overall construction impacts than under the proposed project. Site-specific investigation would be necessary to address issues such as slope stability, expansive soils, mine hazards, and earthquake safety. However, the overall types of potential impacts would not be different under the Reduced-Wetland-Impact Alternative than under the proposed project and the same types of mitigation measures would be necessary to reduce this impact to a less-than-significant level.

Mine Hazards

Impacts related to mine hazards under the Reduced-Wetland-Impact Alternative would be similar to the proposed project. The potential for people to fall into these features and be injured and/or trapped exists under the Reduced-Wetland-Impact Alternative, as it does under the proposed project. As under the proposed project, mitigation measures to establish a process for closing these features and to establish and implement a reporting process for undocumented mining features would reduce the severity of this impact but not to a less-than-significant level. Therefore, as under the proposed project, this impact would be significant and unavoidable under the Reduced-Wetland-Impact Alternative.

Minerals

The impacts on mineral resources under the Reduced-Wetland-Impact Alternative would be similar to those of the proposed project but of a lesser magnitude. Construction under the Reduced-Wetland-Impact Alternative would take place in the same or in nearby areas with the same or similar MRZs. As with the proposed project, although the extent of construction would be less, there would be a less-than-significant impact on known important mineral resources and no impact on the availability of important mineral resource sites.

Paleontological Resources

The impacts on paleontological resources under the Reduced-Wetland-Impact Alternative would be similar to those under the proposed project but of a slightly lesser magnitude. As with the proposed project, this construction could take place in units sensitive for paleontological resources, such as the limestone deposits and Quaternary alluvium, and therefore could result in impacts on paleontological resources. Because, however, the extent of construction is less under the Reduced-Wetland-Impact Alternative than under the proposed project, the impact would be of a slightly lesser magnitude. As with the proposed project, implementation of mitigation measures identified

for the proposed project would reduce impacts under the Reduced-Wetland-Impact Alternative to a less-than-significant level.

Greenhouse Gas Emissions

GHG impacts under the Reduced-Wetland-Impact Alternative would be similar to those under the proposed project, but of a lesser magnitude. Similar to criteria air pollutant emissions, construction and operational GHG emissions associated with the Reduced-Wetland-Impact Alternative would likely be lower than those estimated for the proposed project because of the reduced level of development. Compliance with VMVSP Sustainability Element policies would reduce construction and operational GHG emissions consistent with the relative reductions estimated for the proposed project.

Although GHGs resulting from buildout of the Reduced-Wetland-Impact Alternative may be less than the proposed project, development would generate new vehicle trips and consume fossil fuels, which could conflict with the state's decarbonization and carbon neutrality goal. The requirements listed in Mitigation Measures GHG-1, GHG-2, AQ-2b, and AQ-2c, as proposed for the project in Section 3.6, *Greenhouse Gas Emissions*, or similarly effective measures would still be needed under the Reduced-Wetland-Impact Alternative. However, even with mitigation, the Reduced-Wetland-Impact Alternative's cumulative contribution of GHG emissions would be significant and unavoidable, and the alternative could conflict with the 2017 Scoping Plan and the state's long-time climate change goals in AB 1279 and the 2022 Scoping Plan.

Hazards and Hazardous Materials

Impacts on hazards and hazardous materials under the Reduced-Wetland-Impact Alternative would be similar to those of the proposed project but of a lesser magnitude. Under the Reduced-Wetland-Impact Alternative, the construction footprint would decrease from 1,057 acres under the proposed project to 759 acres to avoid wetlands. The Reduced-Wetland-Impact Alternative would develop 1,060 fewer residential units than the proposed project and would develop less commercial space than under the proposed project. As a result, less construction activity would be required under the Reduced-Wetland-Impact Alternative, which would lead to fewer overall construction impacts associated with hazardous materials use than under the proposed project. As under the proposed project, mitigation measures to address NOA (Mitigation Measure AQ-3) and environmental assessments (Mitigation Measures HAZ-2a, HAZ-2b, and HAZ-2c) would be required to reduce construction impacts to a less-than-significant level under this alternative.

Operation-related impacts would also be reduced compared with the proposed project. Much less business-related waste or hazard risk would result because there would be less commercial development. Therefore, business-related hazardous materials impacts under this alternative would not be expected to result in a significant hazard to the public or the environment. Residential impacts, such as generation of household hazardous waste, would be expected to be reduced, as there would be 1,060 fewer residential units and this impact would be less than significant, as under the proposed project.

The County has not identified specific roads as emergency evacuation routes but encourages residents to learn their local roads in preparation for an emergency (Cathey pers. comm.); therefore, development under this alternative would not be expected to cause significant impacts on emergency response or evacuation plans. Because there would be less development and fewer

residences under the Reduced-Wetland-Impact Alternative, this impact would be similar but of lesser magnitude than under the proposed project.

Although development under this alternative would introduce new fire hazards or fire risk to people and structures in the project area, existing County policies related to fire hazards and fire minimization would be enforced and subdivision plans would need to be approved by the El Dorado Hills Fire Department or El Dorado County Fire Protection District. Because there would be less development, fewer residences, and fewer residents, the risk of fire to people and structures would be less under the Reduced-Wetland-Impact Alternative than under the proposed project.

Hydrology, Water Quality, and Water Resources

The impacts on hydrology, water quality, and water resources under the Reduced-Wetland-Impact Alterative would be similar in nature to those of the proposed project but of a lesser magnitude. Under the Reduced-Wetland-Impact Alternative, the total acreage of the project footprint would be reduced to 759 of the site's 2,341 total acres and there would be 1,537 acres of open space. In addition, other impacts on water quality, including the discharge of dredged or fill material into waters of the United States (which could affect beneficial uses of the wetlands, such as riparian and wildlife habitat) would be minimized under the Reduced-Wetland-Impact Alternative.

Similar to the proposed project, impacts related to hydrology, water quality, and water resources would be minimized and would be less than significant through compliance with the latest NPDES and other water quality requirements (i.e., Construction General Permit, Small MS4 Permit, WDRs for dewatering, other federal and state regulations, County plan standards, and County and other local ordinances). In addition, Mitigation Measures BIO-1a through BIO-1c, BIO-3a, and BIO-3b, as recommended for the proposed project, would be required to reduce potential water quality impacts where wetlands or other waters may be affected by construction. In addition, the construction of 14 bridges could adversely affect water quality.

With regards to post-development impacts, proper measures to maintain water quality after construction would be required as under the proposed project. Source and treatment control measures contained in the State Water Board MS4 Permit Order No. 2013-0001-DWQ, the County SWMP (El Dorado County 2004b) and the County Drainage Manual (El Dorado County 1995), and/or USEPA guidance and other related guidance documents would be implemented. General site housekeeping and design control measures incorporated into the project design can include conserving natural areas, protecting slopes and channels, and minimizing impervious areas. Treatment control measures may include use of vegetated swales and buffers, detention basins, wet ponds, or constructed wetlands, infiltration basins, and other LID technology measures.

Impacts related to placing structures in a 100-year floodplain and altering drainage patterns in a manner that would result in flooding would be similar under the Reduced-Wetland-Impact Alternative though of a lesser magnitude because there would be less development and it would be situated to avoid wetlands which would reduce development in low-lying areas and areas that encourage natural floodwater retention, detention, and percolation. These impacts would be less than significant, as under the proposed project. Impacts related to flooding that could result from a dam failure would be the same as the proposed project, because the project location is the same, and may require implementation of mitigation similar to Mitigation Measure GEO-3d. Mitigation Measure GEO-3d or a similar measure would require evaluation of detention basin embankments, depending on project design specifics, to reduce this impact to a less-than-significant level.

Due to the restriction in the amount of acreage allowed for development under the Reduced-Wetland-Impact Alternative, impacts related to hydrology and water quality would be of a lesser magnitude. The overall development footprint associated with the Reduced-Wetland-Impact Alternative would be less, as would be the construction-related impacts associated with the Reduced-Wetland-Impact Alternative.

Land Use Planning and Agricultural Resources

The Reduced-Wetland-Impact Alternative would involve similar land uses to those proposed under the proposed project. Impacts on land use planning and agricultural resources would be essentially the same as the proposed project. As with the proposed project, development under this alternative would result in the conversion of currently undeveloped land to urban uses and would rearrange the types of planned land uses on the project site. Similar to the proposed project, the Reduced-Wetland-Impact Alternative would not result in any significant impacts related to agriculture and would not divide a community. No important farmland exists on the project site, so development of the site would not result in impacts related to agriculture. Like the proposed project, the Reduced-Wetland-Impact Alternative would likely result in the inclusion of the area in the El Dorado Hills Community Region, which would not be consistent with the General Plan Land Use Diagram and would result in a significant and unavoidable impact.

Noise and Vibration

The Reduced-Wetland-Impact Alternative would result in a smaller development footprint, over 1,000 fewer dwelling units, over 200,000 square feet less commercial space, and more open space than the proposed project. While it is possible the units in the area may be developed over as many years as the proposed project, there are fewer units to develop and the time needed to actively construct them would likely be less than for the proposed project. It is likely that both construction and operation would have reduced impacts relative to the proposed project. Construction noise would be dispersed differently in the project area than the proposed project due to the differing layouts of land uses between the proposed project and this alternative. Fewer existing residences would be exposed to construction noise under the Reduced-Wetland-Impact Alternative because there would be less development near the boundaries of the project area. However, the sensitive land uses that are exposed to construction noise would experience levels noise comparable to those of the proposed project. Thus, Mitigation Measure NOI-1a would still be required to reduce construction noise impacts, though likely not to a less-than-significant level.

Overall, there would be fewer residents and no office employees, and the associated vehicle traffic to generate operational noise under the Reduced-Wetland-Impact Alternative. Traffic noise would occur in slightly different areas than the proposed project. Because the exposure of increased traffic and operational noise generated by the proposed project on new land uses would be significant and unavoidable even with implementation of Mitigation Measure NOI-1b, the exposure of traffic and operational noise generated by Alternative 2 on new land uses would also be significant and unavoidable with Mitigation Measure NOI-1b implemented. Noise impacts resulting from Alternative 2 on sensitive land uses would be the same as the proposed project.

Although Alternative 2 would result in less operational noise than under the proposed project, there could still be a significant increase in noise in the project area on existing land uses, namely at the single residences located adjacent to the roadway at 2080 Marble Valley Road and 4118 Flying C Road. Due to the location of this residence, it is likely that there would be a significant increase in

noise even with the lesser level of development under Alternative 2. Thus, Alternative 2 would also result in a substantial permanent increase in noise. This impact would be significant and unavoidable, the same determination as the proposed project.

As with the proposed project, implementation of Alternative 2 would not likely require impact equipment that could generate substantial ground vibrations. However, similar to the proposed project, implementation of Alternative 2 could potentially involve some blasting that would generate vibration, but Mitigation Measure NOI-2 would reduce blasting impacts to a less-than-significant level. Because of the type of land uses (residences, open space, roadways) and the resulting construction activities, vibration impacts would not differ substantially from the proposed project.

Because the project location would be the same as for the proposed project, development under Alternative 2 would also not be located near any public or private airports. Additionally, as discussed in Section 3.10, *Noise and Vibration*, the site is not located within the CNEL 55 dB contours of the Cameron Airpark public-use airport. Thus, impacts pertaining to aircraft overflight noise would be less than significant and would not differ from impacts of the proposed project.

Population and Housing

The Reduced-Wetland-Impact Alternative would induce slightly less population growth than the proposed project. Compared with the proposed project, development of the Reduced-Wetland-Impact Alternative would decrease the total number of dwelling units from 3,236 to 2,176. Using projected population factors of average people per unit (3.06 for low density, 2.61 for medium density, and 2.49 for high density), occupancy of the 2,176 new dwelling units associated with this alternative would be expected to increase the county's population by approximately 6,423 people, compared with 9,227 under the proposed project. Therefore, although the Reduced-Wetland-Impact Alternative would not result in as much population growth, this impact would remain significant and unavoidable.

The project area currently contains no housing units. Therefore, as with the proposed project, development under the Reduced-Wetland-Impact Alternative would not displace any existing housing units or necessitate the construction of replacement housing elsewhere but would instead result in the creation of additional housing units on a largely undeveloped site presently surrounded by existing residential and commercial uses. As the area contains no housing units, the Reduced-Wetland-Impact Alternative, like the proposed project, would not displace any people or necessitate the construction of replacement housing elsewhere.

Public Services and Utilities

The impacts related to public services and utilities under the Reduced-Wetland-Impact Alternative would be similar to those under the proposed project but of a lesser magnitude and would be less than significant. The Reduced-Wetland-Impact Alternative would develop 1,060 fewer residential units than the proposed project. With fewer dwelling units and, therefore, fewer residents expected under this alternative, there would be less demand on fire and police services, schools, and libraries than those of the proposed project. It would result in 1,473 school-age children rather than 2,191 under the proposed project, which would result in a reduced demand on schools. Only one 20-acre school is included in the Reduced-Wetland-Impact Alternative whereas two schools on 35 acres are included in the proposed project. If the school did not have sufficient capacity for the proposed project's school-age children, the school district would decide which schools the students would

attend. As described in Section 3.12, *Public Services and Utilities*, payment of school impact fees, as required by SB 50 and provided for under California Government Code Section 65995 et seq., would serve as full and complete mitigation for the demand of additional students on school facilities. Increased school enrollment would not cause significant environmental effects; rather, it would cause only social effects. Similarly, impacts on libraries are of a social nature and would not have environmental effects.

The Reduced-Wetland-Impact Alternative would result in less wastewater impacts than the proposed project. Whereas the proposed project would result in a demand of 0.79 million gallons per day (mgd), this alternative would result in 0.51 mgd.[1] The Deer Creek Wastewater Treatment Plant (WWTP) is permitted for 3.6 mgd average dry weather flow and currently treats an average of 2.64 mgd. The addition of 0.51 mgd of demand from the Reduced-Wetland-Impact Alternative would result in a total of 3.15 mgd, which would not exceed the permitted capacity of 3.6 mgd. Whereas the proposed project would have 9,227 residents, this alternative would generate approximately 6,423 residents[2], resulting in less demand on potable water, recycled water, solid waste services, electricity, natural gas, and other energy demands. Impacts on utilities would be less than significant under the Reduced-Wetland-Impact Alternative, as under the proposed project. Impacts from the expansion of and connection to infrastructure and offsite improvements would be similar to those under the proposed project, although to a lesser extent because some offsite improvements may not need to be constructed. Mitigation measures similar to those identified for the proposed project would be necessary to mitigate those impacts. Energy- and resource-conserving measures under the Reduced-Wetland-Impact Alternative would likely be similar to the energy-saving policies incorporated in the proposed project. Therefore, energy conservation under the Reduced-Wetland-Impact Alternative would be similar to the proposed project and the impact would be less than significant. Because the overall development footprint associated with the Reduced-Wetland-Impact Alternative would be similar to the proposed project, construction and operation of this alternative would cause similar demand for public services, utilities, and energy.

Recreation

Development of the Reduced-Wetland-Impact Alternative would include construction of up to 1,969 single-family and 206 multifamily housing units and would increase the population in an area currently deficient in village and community parkland. Using the County's park-planning household sizes of 3.3 people per single-family residential unit and 2.1 per multifamily unit, the Reduced-Wetland-Impact Alternative would be expected to introduce up to 6,930 new park users into the area, compared with the 9,168 new park users anticipated for the proposed project. New park users under the Reduced-Wetland-Impact Alternative represent 76% of the new users associated with the proposed project. This alternative would provide 15 acres of public parkland plus 12 acres of private parkland, and approximately 20 acres of additional acreage as part of the joint-use school facility. Because school facilities are not considered dedicated parkland and Section 120.12.090 of the El Dorado County Code considers private parkland dedication at rates ranging from 50 to 75% of public parkland, the combined public and private park acreage would not meet the parkland requirement of approximately 35 acres for 6,930 residents. At a rate of 50%, the 12 acres of private parkland would count as the equivalent of 6 acres of public parkland; at the maximum rate of 75%,

[1] 1,969 low- and medium-density residential units * 240 gallons per day (gpd) = 472,560 gpd average dry weather flow, or 0.47 mgd. 206 high-density EDUs * 180 gpd = 37,080 ADWF, or 0.037 mgd. 0.037 + 0.47 = 0.51 mgd.

[2] 1,712 VRL*3.06=5,239; 257 VRM*2.61=671; 206 VRH*2.49=513: 5,239+671+513 = 6,423 residents

the 12 acres of private parkland would be equivalent to 9 acres of public parkland. The rate at which private parkland is credited for individual development projects is based on approval by the El Dorado County Board of Supervisors (El Dorado County Code 120.12.090). Together, the public and private parkland would count as the equivalent of 21 to 24 acres of public parkland. Under this alternative open space areas would be restricted to private use, with no public access. The private and public trail system would be reduced or eliminated while the population increases, resulting in less open space acreage and trail mileage available to users. Therefore, the effects of the Reduced-Wetland-Impact Alternative on the deterioration of existing neighborhood parks would be greater than those associated with the proposed project. Mitigation, in the form of an additional 11 to 14 acres of dedicated public parkland or payment of in-lieu fees to meet the parkland dedication requirements, would reduce this significant impact to a less-than-significant level.

Although the Reduced-Wetland-Impact Alternative includes park facilities to serve the added park users, the Reduced-Wetland-Impact Alternative, unlike the proposed project, does not meet the parkland requirement for its projected population and could therefore require the construction of new offsite recreational facilities. This would be a greater impact than that of the proposed project. Mitigation, in the form of an additional 11 to 14 acres of dedicated parkland or payment of in-lieu fees to meet the parkland dedication requirements, would reduce this significant impact to a less-than-significant level.

Transportation and Circulation

The proposed project would include 3,236 dwelling units, 16 acres of commercial, and 41 acres of office land use. At buildout, the Reduced-Wetland-Impact Alternative would result in the development of 2,175 residential dwelling units, 6 acres of commercial retail land use, one school, one public park, open space, and roadways. The Reduced-Wetland-Impact Alternative would not include commercial office land uses and a trail system connecting to proposed trails outside the project area would be reduced or eliminated. The Reduced-Wetland-Impact Alternative would include a mix of residential densities (VRL, VRM, and VRH), but with a higher share allocated to VRL (lower density) units when compared to the proposed project.

With 1,061 fewer residences, less retail development, and no office development, the Reduced-Wetland-Impact Alternative would generate less VMT than the proposed project. However, the VMT efficiency of the Reduced-Wetland-Impact Alternative, measured in terms of VMT per capita, would be worse than the proposed project since the residential land uses would have a higher proportion of lower density units and there would be less commercial development. Therefore, the Reduced-Wetland-Impact Alternative impact would be significant like the proposed project, but with higher VMT per capita, resulting in a greater impact. Like the mitigation identified for the proposed project, modification of the Reduced-Wetland-Impact Alternative to create a more efficient land use mix would be required to reduce this impact to less than significant. That mitigation, which could include increasing residential densities, reallocating areas proposed to be zoned for residential being zoned for commercial office or retail (or adding additional commercial office or retail), would be based on detailed analysis specific to the Reduced-Wetland-Impact Alternative.

A trail system connecting to proposed trails outside the project area that would be constructed under the proposed project would either be reduced or eliminated under the Reduced-Wetland-Impact Alternative, resulting in greater impacts to pedestrian and bicycle circulation. Demand for transit services and facilities associated with this alternative would be anticipated to be approximately two-thirds of that estimated for the proposed project. Because demand exceeds

capacity at existing park-and-ride facilities, however, this could result in a significant impact, requiring mitigation similar to that proposed under Mitigation Measure TRA-1.

Consideration of Screening Criteria

Ability to Meet Project Objectives

The County's primary objective for the proposed project is to create development patterns that make the most efficient and feasible use of existing infrastructure and public services while promoting a sense of community. The Reduced-Wetland-Impact Alternative would make efficient and feasible use of existing infrastructure to the same extent that the proposed project would, but it would not necessarily promote a sense of community in the same manner because it would lack many of the defining elements that are present in the proposed project. No vineyards would be developed, and the small amount of commercial development would be located at the far north end of the project area, not centrally as in the proposed project. The Reduced-Wetland-Impact Alternative would, to some extent, meet 9 of the 16 project objectives.

- Be consistent with MTP/SCS
- Assist in meeting future RHNA needs.
- Broaden the housing stock in El Dorado Hills and Cameron Park.
- Utilize existing infrastructure and public services.
- Improve connectivity of the regional roadway network.
- Encourage future transit opportunities.
- Minimize impacts on oak woodlands.
- Preserve natural habitats and set aside wildlife corridors.
- Protect important cultural resources.

The Reduced-Wetland-Impact Alternative would not meet other objectives listed in Section 4.2.1, *Methods and Screening Criteria*. Because density would be lower and spread out, the Reduced-Wetland-Impact Alternative would not meet objectives related to curtailing suburban sprawl, promoting walkable communities, encouraging alternative transportation including bicycling and public transit, and fostering sustainable communities. Because no trail system would be built and open space areas would be private, it would not meet objectives related to encouraging recreational opportunities. No facilities that would promote the El Dorado County agri-tourism industry are included in the Reduced-Wetland-Impact Alternative.

Impact Avoidance

The Reduced-Wetland-Impact Alternative would reduce impacts on wetlands and on riparian habitat, on special-status species occupying wetland and riparian habitat and on oak woodlands. This alternative would also result in development of nearly 300 fewer acres and approximately 30% fewer dwelling units and would therefore reduce impacts on resource areas related to population. Impacts on air quality, GHG, construction and operation noise, hazardous materials, and demand for public services and utilities would be reduced. Impacts on cultural resources could be increased because the preservation and interpretation under the proposed project would not occur under the

Reduced-Wetland-Impact Alternative. Likewise, because the energy-saving policies in the VMVSP would not be implemented impacts related to energy use would also be greater.

Feasibility

Implementation of the Reduced-Wetland-Impact Alternative may not be economically feasible as the reduction in residential units is more than 30%.

4.3.3 Alternative 3—Reduced Development Footprint

Compared with the proposed project, Alternative 3, the Reduced-Development-Footprint Alternative, would reduce the amount of developable land by approximately 132 acres, and is intended to reduce oak woodland and wetland impacts. The Reduced-Development-Footprint Alternative would leave more of the south part of the project area as open space and would have larger areas designated for medium density land uses toward the center of the project area. Of the 2,341 acres, approximately 925 acres would be developable under the Reduced-Development-Footprint Alternative, with 770 acres proposed for residential uses and 155 acres for other non-open space uses. Buildout of the Reduced-Development-Footprint Alternative would result in development of 3,561 dwelling units, of which 343 would be large lot, 1,202 low density, 422 medium density, and 1,594 high density. Roads would occupy 39 acres; commercial uses would occupy 25 acres; and four private parks and two public parks would occupy 54 acres. Two schools, totaling 36 acres, would also be dedicated under Alternative 3. Approximately 1,417 acres would be devoted to open space, although the public and private trail system would be reduced under the Reduced-Development-Footprint Alternative, and open space areas would be restricted to private use with no public access. The historic quarry and kiln resources would be fenced. The proposed wildlife corridor on the western edge of the project area, along with connectivity to the Bass Lake undercrossing, would be eliminated under Alternative 3. Figure 4-3 presents the conceptual development pattern of the Reduced-Development-Footprint Alternative.

Aesthetics

Construction of the Reduced-Development-Footprint Alternative would be similar to the proposed project and would create changes in views of and from the project site over the course of phased development. However, construction of the Reduced-Development-Footprint would require the removal of fewer oak trees, which are located throughout the site and south of Deer Creek and are an onsite visual amenity. Therefore, this impact would be reduced under this alternative, but would still be a significant and unavoidable impact as under the proposed project. Under the Reduced-Development-Footprint Alternative, the effect on portions of US 50 with important scenic viewpoints would be similar to the proposed project because the areas proposed for development are similar: the area next to US 50 would remain in open space while the area south of the project area's entry road from US 50 would be developed as village commercial and medium-density residential that would be of similar intensity to the office park uses under proposed project. Similar to the proposed project, the area south of Deer Creek would not be developed. In addition, under the Reduced-Development-Footprint Alternative, areas immediate north of Deer Creek would not be developed, and the interior of the site would be less developed than under the proposed project. There would be high-density residential land uses around Marble Lake under the Reduced-Development-Footprint Alternative, very much like the proposed project.

County policies, zoning ordinances (130.14.170 Outdoor Lighting), design review, and the proposed VMVSP would ensure that the proposed project minimizes lighting impacts to the degree possible. Specifically, County Code Section 130.14.170 requires shielding to avoid impacts on adjoining areas. Both the proposed project and Reduced-Development-Footprint Alternative would result in new sources of nighttime light in an area that is currently unlit. Mitigation measures identified for the proposed project would reduce visual impacts under the Reduced-Development-Footprint Alternative by reducing the amount of glare coming from buildings located within oak woodland and grassland areas. Regardless, the Reduced-Development-Footprint Alternative would substantially increase the amount of ambient light in the vicinity compared with existing conditions, resulting in visible light pollution and introducing ambient sky glow to the project vicinity. Even with the presence of the remaining tree canopy, new permanent sources of light would be introduced from lighted residences, commercial and entertainment areas, walkways, roadways, parking lots, and accent lighting that would be visible to all viewer groups and would greatly increase light at the project site, which is currently unlit, and result in significant and unavoidable impacts. However, the Reduced-Development-Footprint Alternative would result in less lighting than the proposed project, because there would be more residences and commercial development in the proposed project, which tends to be more intensely lit. All of these factors would reduce the Reduced-Development-Footprint Alternative's impact on scenic vistas and visual resources compared with the proposed project. Mitigation Measures BIO-1a, BIO-1b, BIO-1c, BIO-1d, BIO-1e, AES-2, and AES-4 established for the proposed project would reduce visual impacts under this alternative but not to a less-than-significant level.

Air Quality

The types of air quality impacts under the Reduced-Development-Footprint Alternative would be similar to those under the proposed project. Construction emissions would be of a slightly greater magnitude because this alternative would result in the construction of more residences. However, due to the reduced commercial development, this alternative would result in approximately 5% less VMT. As with the proposed project, construction and operation of new building would generate criteria pollutant emissions that could exceed the EDCAQMD's significance thresholds. Similar impacts from operational emissions would be expected, but there is the potential for ROG emissions from consumer products to be slightly higher under Alternative 3, relative to the proposed project, as a result of the greater number of residential units. Mitigation Measures AQ-2a through AQ-2f, identified in Section 3.2, *Air Quality*, Mitigation Measures GHG-1 and GHG-2, identified in Section 3.6, *Greenhouse Gas Emissions,* and Mitigation Measure TRA-2, identified in Chapter 3.14, *Transportation and Circulation*, could be implemented to reduce emissions, but the potential to exceed EDCAQMD's thresholds and conflict with applicable air quality attainment plans would remain.

Implementation of the Reduced-Development-Footprint Alternative could expose new residents and adjacent sensitive receptors to significant health risks from criteria pollutants and TAC, including DPM, generated by equipment and vehicle exhaust. Emissions and thus health risks resulting from buildout of the Reduced-Development-Footprint Alternative could be slightly greater than under the proposed project because there would be more construction. Construction TAC emissions would be reduced through Mitigation Measures AQ-2b, AQ-2c, and GHG-1. However, like the proposed project, there may be instances where specific conditions preclude the reduction of health risks from exposure to project-generated TACs during construction to below adopted thresholds, resulting in a significant impact.

Similar to the proposed project, receptors could be exposed to significant NOA impacts. The requirements identified in Mitigation Measure AQ-3, discussed in Section 3.2, *Air Quality*, would reduce any significant NOA impacts to a less-than-significant level.

Like the proposed project, the Reduced-Development-Footprint Alternative would not result in new or worsened odors that would affect a substantial number of people, and odor impacts would be less than significant. Similarly, CO modeling for the proposed project showed that no new localized violations of the 1-hour or 8-hour ambient air quality standards would occur, and the same conclusion would be expected for the Reduced-Development-Footprint Alternative, which would result in fewer vehicle trips and congestion.

Biological Resources

Biological resource impacts would be similar under the Reduced-Development-Footprint Alternative for riparian habitat and reduced for oak woodland, chaparral habitat, annual grassland, and waters of the United States, as compared with the proposed project. Due to the increased amount of open space in the southern half of the project area, there would be less removal of all plant communities. Using criteria in the ORMP, oak woodland impacts under Alternative 3 would be 588.87 acres of oak woodland, compared with 689.4 acres of oak woodland impact under the proposed project. Impacts on waters of the United States would be approximately 3.629 acres under this alternative, compared with 4.585 acres under the proposed project.

Impacts on special-status plant species would be similar to those under the proposed project. Impacts on special-status wildlife species would generally be less than those of the proposed project for species that utilize oak woodland, chaparral, annual grassland, and wetlands (including white-tailed kite, burrowing owl, Blainville's horned lizard, and special-status bats) and similar for species that utilize riparian habitat (special-status bats). For California red-legged frog and western pond turtle, the Reduced-Development-Footprint Alternative would affect the same amount of potential aquatic habitat (pond) as the proposed project. The restriction of use and reduction of a trail system in the open space areas would decrease impacts on wildlife movement and potentially on special-status species that utilize oak woodland as compared with the proposed project. However, the proposed wildlife corridor on the western boundary of the project area, along with connectivity to the Bass Lake undercrossing of US 50, would be eliminated under the Reduced-Development-Footprint Alternative, increasing the impact of this alternative on wildlife movement in a north-south direction compared with the proposed project.

Mitigation Measures BIO-1a through BIO-22b, as proposed for the project (listed in the Executive Summary Table ES-1, and described in Section 3.3, *Biological Resources*), would be needed under this alternative to ensure impacts on biological resources are reduced to a less-than-significant level. Because the extent of construction would be smaller under the Reduced-Development-Footprint Alternative than under the proposed project, the impact on most biological resources identified in the project area would be of a lesser magnitude.

Cultural Resources

The impacts on archaeological resources under the Reduced-Development-Footprint Alternative would be similar to those of the proposed project overall, in that most Native American resources would be avoided, but there would be a slightly greater impact on historic-period resources. Under the Reduced-Development-Footprint Alternative, the development footprint would be

approximately 132 acres smaller and therefore reduce the potential to generally affect archaeological resources both directly and indirectly. The southern portion of the project would remain undeveloped, avoiding impacts on eligible Native American archaeological sites and portions of the archaeological district. However, there would be greater impacts on the historic-period archaeological resources associated with the Marble Valley Limestone Mining District. The major features of the resource would be fenced but preservation or interpretive efforts would not occur. Additionally, some Native American sites in the northern part of the project area that contribute to the Marble Valley Archaeological District would be directly affected by residential construction. Finally, the Reduced-Development-Footprint Alternative would result in the construction of 325 more residential units than the proposed project and therefore would introduce more people to the area and increase the potential for site disturbance or vandalism. In order to reduce impacts on archaeological resources to a less-than-significant level, Mitigation Measures CUL-1a, CUL-1b, CUL-1c, CUL-1d, CUL-1e, CUL-3, and CUL-4, as proposed for the project, would need to be implemented. Because less area would be subject to development and excavation, and the southern portion of the site would be no more accessible that it currently is, impacts under the Reduced-Development-Footprint Alternative would be slightly less than under the proposed project.

Geology, Soils, Minerals, and Paleontological Resources

Geology and Soils Resources

The impacts on geology and soils under the Reduced-Development-Footprint Alternative would be similar to those of the proposed project. More residential units would be developed under the Reduced-Development-Footprint Alternative than under the proposed project but with a different density mixture and within a smaller footprint. Consequently, a similar level of construction activity would be required under the Reduced-Development-Footprint Alternative, which would lead to a similar level of overall construction impacts compared with the proposed project. Site-specific investigation would be necessary to address issues such as slope stability, expansive soils, mine hazards, and earthquake safety. The overall types and magnitude of potential impacts would not be different under the Reduced-Development-Footprint Alternative than under the proposed project, and Mitigation Measures GEO-1, GEO-3a, GEO-3b, GEO-3c, GEO-3d, and GEO-4, identified for the proposed project, would be necessary under this alternative as well.

Mine Hazards

Impacts related to mine hazards under the Reduced-Development-Footprint Alternative would be similar to the proposed project. The potential for people to fall into these features and be injured and/or trapped exists under the Reduced-Development-Footprint Alternative, as it does under the proposed project. As under the proposed project, mitigation measures to establish a process for closing these features and to establish and implement a reporting process for undocumented mining features would reduce the severity of this impact but not to a less-than-significant level. Therefore, as under the proposed project, this impact would be significant and unavoidable under the Reduced-Development-Footprint Alternative.

Minerals

The impacts on mineral resources under the Reduced-Development-Footprint Alternative would be similar to those of the proposed project. Construction under the Reduced-Development-Footprint Alternative would occur in the same or nearby areas with the same or similar MRZs. As with the

proposed project, although the construction would be different, resulting in more residences within a smaller footprint, there would be a less-than-significant impact on known important mineral resources and no impact on the availability of important mineral resource sites.

Paleontological Resources

The impacts on paleontological resources under the Reduced-Development-Footprint Alternative would be similar to those under the proposed project but of a slightly lesser magnitude. Under the Reduced-Development-Footprint Alternative, the construction footprint would decrease to avoid oak woodlands and wetlands. As with the proposed project, this construction could occur in units sensitive for paleontological resources, such as the limestone deposits and Quaternary alluvium, and therefore could result in impacts on paleontological resources. Because the footprint of construction is slightly less under the Reduced-Development-Footprint Alternative than under the proposed project, the impact would be of a slightly lesser magnitude.

Greenhouse Gas Emissions

GHG impacts under the Reduced-Development-Footprint Alternative would be similar to those under the proposed project, but of a greater magnitude. Similar to criteria air pollutant emissions, construction and operational GHG emissions associated with the Reduced-Development-Footprint Alternative would likely be slightly greater than those estimated for the proposed project. However, due to the reduced commercial development, this alternative would result in approximately 5% less VMT resulting in slightly less operational GHG emissions. Compliance with VMVSP Sustainability Element policies would reduce construction and operational GHG emissions consistent with the relative reductions estimated for the proposed project.

Accordingly, because GHG emissions would be significant under the proposed project, impacts under the Reduced-Development-Footprint Alternative would likewise be significant. Specifically, development would generate new vehicle trips and consume fossil fuels, which could conflict with the state's decarbonization and carbon neutrality goal. The requirements listed in Mitigation Measures GHG-1, GHG-2, AQ-2b, and AQ-2c, as proposed for the project in Section 3.6, *Greenhouse Gas Emissions*, or similarly effective measures would still be needed under the Reduced-Development-Footprint Alternative. However, even with mitigation, the Reduced-Development-Footprint Alternative's cumulative contribution of GHG emissions would be significant and unavoidable, and the alternative could conflict with the 2017 Scoping Plan and the state's long-time climate change goals in AB 1279 and the 2022 Scoping Plan.

Hazards and Hazardous Materials

Impacts on hazards and hazardous materials under the Reduced-Development-Footprint Alternative would be similar to those of the proposed project. Under the Reduced-Development-Footprint Alternative, the construction footprint would decrease by 132 acres. This alternative would develop 3,561 residential units on 770 acres as opposed to the proposed project, which would develop 3,236 dwelling units on 797 acres. This alternative would develop 25 acres of retail space versus 57 acres of commercial space under the proposed project. Four private parks and 54 acres of public parkland would occur under this alternative rather than the 47 acres in the proposed project, and 1,417 acres of open space would be built under this alternative as opposed to the 1,284 acres of open space included in the proposed project. As a result, more construction activity would occur for residential development, and less construction activity would occur for commercial space, all on less acreage,

under the Reduced-Development-Footprint Alternative, which would lead to similar overall construction impacts as under the proposed project. Mitigation measures identified for the proposed project would be required and would reduce this impact to a less-than-significant level.

Operation-related impacts would be similar to those of the proposed project, with the Reduced-Development-Footprint Alternative allowing more residential units but less retail space than the proposed project would allow. Residential impacts, such as generation of household hazardous waste, would be increased because there would be more residences, but generation of hazardous waste from businesses would decrease. As under the proposed project, businesses and residences would be expected to comply with hazards-related regulations and would not be expected to result in significant hazards to the public or environment and this impact would be less than significant.

The County has not identified specific roads as emergency evacuation routes but encourages residents to learn their local roads in preparation for an emergency (Cathey pers. comm.); therefore, development under this alternative would not be expected to cause significant impacts on emergency response or evacuation plans. Therefore, this impact would be similar as under the proposed project.

Although development under this alternative would introduce new fire hazards or fire risk to people and structures in the project area, existing County policies related to fire hazards and fire minimization would be enforced and subdivision plans would need to be approved by the El Dorado Hills Fire Department or El Dorado County Fire Protection District. Because there would be less development but a similar amount of residential units as under the proposed project, the risk of fire to people and structures would be similar under the Reduced-Development-Footprint Alternative as under the proposed project.

Hydrology, Water Quality, and Water Resources

The impacts on hydrology, water quality, and water resources under the Reduced-Development-Footprint Alternative would be similar in nature to those of the proposed project but of a lesser magnitude. Under the Reduced-Development-Footprint Alternative, total acreage footprint would be reduced to 925 of the site's 2,341 total acres and there would be 1,417 acres of open space. In addition, other impacts on water quality, including the discharge of dredged or fill material into waters of the United States (which could affect beneficial uses of the wetlands, such as riparian and wildlife habitat) would be minimized under this alternative.

As with the proposed project, such impacts would be minimized and would be less than significant through compliance with the latest NPDES and other water quality requirements (i.e., Construction General Permit, Small MS4 Permit, WDRs for dewatering, other federal and state regulations, County plan standards, and County and other local ordinances). In addition, Mitigation Measures BIO-1a through BIO-1c, BIO-3a, and BIO-3b, as recommended for the proposed project, would be required to reduce potential water quality impacts where wetlands or other waters may be affected by construction.

With regards to post-development impacts, proper measures to maintain water quality after construction would be required as under the proposed project. Source and treatment control measures contained in the State Water Board MS4 Permit Order 2013-0001-DWQ, the County SWMP (El Dorado County 2004b) and the County Drainage Manual (El Dorado County 1995), and/or USEPA guidance and other related guidance documents would be implemented. General site housekeeping and design control measures incorporated into the project design can include

conserving natural areas, protecting slopes and channels, and minimizing impervious areas. Treatment control measures may include use of vegetated swales and buffers, detention basins, wet ponds, or constructed wetlands, infiltration basins, and other LID technology measures.

Impacts related to placing structures in a 100-year floodplain and altering drainage patterns in a manner that would result in flooding would be similar under the Reduced-Development-Footprint Alternative though of a lesser magnitude because fewer acres would be developed. These impacts would be less than significant, as under the proposed project. Impacts related to flooding that could result from a dam failure would be the same as the proposed project, as the project location is the same, and could be reduced to a less-than-significant level by implementing the same mitigation measures.

Because the footprint of construction would be less under the Reduced-Development-Footprint Alternative than under the proposed project (i.e., there is less acreage of overall development, and more acres of open space), construction-related impacts associated with hydrology and water quality would be of a lesser magnitude.

Land Use Planning and Agricultural Resources

The Reduced-Development-Footprint Alternative, like the proposed project, would result in the conversion of currently undeveloped land to urban uses, rearranging the types of planned land uses on the project site. Compared with the proposed project, this alternative would increase the total number of dwelling units by 325 and decrease the development footprint by 132 acres. However, this alternative would involve similar land uses to those proposed under the proposed project and impacts would be the same as the proposed project.

Similar to the proposed project, this alternative would not result in any significant impacts related to agriculture and would not divide a community. Like the proposed project, the Reduced-Development-Footprint Alternative would likely result in the inclusion of the area in the El Dorado Hills Community Region which would not be consistent with the General Plan Land Use Diagram; however, the impact would be less than significant. No important farmland exists on the project site, so this alternative would also not result in impacts related to agriculture.

Noise and Vibration

The Reduced-Development-Footprint Alternative would construct a smaller development footprint than the proposed project, but it would result in a greater number of dwelling units, retail space, and open space than the proposed project and a fewer number of office units. Although the specific number of units and area would differ between the alternatives, the amount of existing residences affected by construction noise would be comparable to the proposed project. Sensitive land uses that are exposed to construction noise would experience comparable levels of noise compared with the proposed project. As with the proposed project, Mitigation Measure NOI-1a would be required to mitigate construction noise impacts, though not to a less-than-significant level.

Increased residential unit development would result in more severe residential operational noise than under the proposed project, because there would be a greater number of residents generating traffic noise. However, this alternative would have less office space and associated vehicle traffic to generate noise. In total, this alternative would result in slightly less developed square footage than the proposed project, and therefore traffic volumes would be lower by approximately 5%. Consequently, the operational impacts on new land uses in the project area would be slightly less

than the proposed project. Mitigation Measure NOI-1b would still be required, however, to ensure that new land uses would not be exposed to excessive noise.

Although the Reduced-Development-Footprint Alternative would result in slightly less operational noise because there would be less developed square footage than under the proposed project, there could still be a significant increase in noise in the project area on existing land uses, namely at the single residences located adjacent to the roadway at 2080 Marble Valley Road and 4118 Flying C Road. Due to the location of this residence, it is likely that there would be a significant increase in noise even with the lesser level of development under Alternative 3. Thus, the Reduced-Development-Footprint Alternative would also result in a substantial permanent increase in noise. This impact would be significant and unavoidable, the same determination as the proposed project.

As with the proposed project, implementation of the Reduced-Development-Footprint Alternative would not likely require impact equipment that could generate substantial ground vibrations. However, similar to the proposed project, implementation of the Reduced-Development-Footprint Alternative could potentially involve some blasting that would generate vibration, but Mitigation Measure NOI-2 would reduce blasting impacts to a less-than-significant level. Because of the type of land uses (residences, open space, roadways) and the resulting construction activities, vibration impacts would not differ substantially from the proposed project.

Because the project location would be the same as for the proposed project, development under the Reduced-Development-Footprint Alternative would also not be located near any public or private airports. Additionally, as discussed in Section 3.10, *Noise and Vibration*, the site is not located within the CNEL 55 dB contours of the Cameron Airpark public-use airport. Thus, impacts pertaining to aircraft overflight noise would be less than significant and would not differ from impacts of the proposed project.

Population and Housing

The Reduced-Development-Footprint Alternative would increase density, resulting in development of 3,561 dwelling units rather than the 3,236 units proposed under the proposed project. Of these, 343 would be large-lot, 1,202 low-density, 422 medium-density, and 1,594 high-density residential units. Using projected population factors of average people per unit (3.06 for low density, 2.61 for medium density, and 2.49 for high density), occupancy of the 3,561 dwelling units associated with this alternative would be expected to increase the county's population by approximately 9,798 people, which is 521 more than the proposed project. This alternative would induce slightly more population growth than the proposed project, and the impact would be significant and unavoidable.

The project area currently contains no housing units. Therefore, as with the proposed project, development under this alternative would not displace any existing housing units or necessitate the construction of replacement housing elsewhere but would instead result in the creation of additional housing units on a largely undeveloped site presently surrounded by existing residential and commercial uses. As the area contains no housing units, this alternative, like the proposed project, would not displace any people or necessitate the construction of replacement housing elsewhere.

Public Services and Utilities

The impacts related to public services and utilities under the Reduced-Development-Footprint Alternative would be similar to those under the proposed project but of a slightly higher magnitude.

Under the Reduced-Development-Footprint Alternative, the construction footprint would decrease by 132 acres, but would increase the number of residents. This alternative would develop 3,561 residential units on 770 acres as opposed to the proposed project, which would develop 3,236 dwelling units on 797 acres.

The increase in the number of dwelling units would result in more demand on schools, parks, and libraries than the proposed project. It would also result in a slightly higher demand on wastewater, potable water, recycled water, and solid waste services. More dwelling units and, therefore, more residents are expected under this alternative, causing more demand on fire and police services. This alternative would result in 2,411 school-age children rather than 2,191 as under the proposed project, resulting in more demand on schools. As described in Section 3.12, *Public Services and Utilities*, payment of school impact fees, as required by SB 50 and provided for under California Government Code Section 65995 et seq., would serve as full and complete mitigation for the demand of additional students on school facilities. Increased school enrollment would not cause significant environmental effects; rather, it would cause only social effects. Similarly, impacts on libraries are of a social nature and would not have environmental effects.

The Reduced-Development-Footprint Alternative would result in less wastewater impacts than the proposed project. This alternative would result in 0.76 mgd of wastewater average dry weather flow,[3] whereas the proposed project would result in a demand of 0.79 mgd. The Deer Creek WWTP is permitted for 3.6 mgd average dry weather flow and currently treats an average of 2.64 mgd. The addition of 0.76 mgd of demand from this alternative would result in a total of 3.4 mgd, which would not exceed the permitted capacity of 3.6 mgd.

The Reduced-Development-Footprint Alternative would result in up to 9,798 residents[4], whereas the proposed project would result in up to 9,227 residents. This would result in an increased demand on potable water, recycled water, solid waste services, dry utilities, electricity, natural gas, and other energy demands. As described in Section 3.12, *Public Services and Utilities*, Impact PSU-10, the same energy- and resource-conserving effects that would occur under the proposed project would occur under this alternative. Although the overall development footprint associated with this alternative would be slightly smaller than under the proposed project, resulting in slightly less construction-related effects, the increase in residents would create a slightly higher demand for public services, utilities, and energy.

Recreation

Development under the Reduced-Development-Footprint Alternative would include construction of up to 1,967 single-family and 1,594 multifamily housing units, increasing the population in an area currently deficient in village and community parkland. Using the County's park-planning household sizes of 3.3 people per single-family residential unit and 2.1 people per multifamily unit, this alternative would be expected to introduce approximately 9,838 park users into the area, compared with 9,168 new park users for the proposed project, or 107% of the park users anticipated under the proposed project. The Reduced-Development-Footprint Alternative would provide 54 acres of new public parkland, exceeding the 49 acres of parkland required to accommodate 9,838 people. Effects of this alternative on the deterioration of existing neighborhood parks would therefore be

[3] 1,967 low- and medium-density residential units * 240 gpd = 472,080 ADWF, or 0.47 mgd. 1,594 high-density EDUs * 180 gpd = 286,920 ADWF, or 0.29 mgd. 0.47+0.29=0.76

[4] 1,545 VRL*3.06=4,728; 422 VRM*2.61=1,101; 1,594 VRH*2.49=3,969: 4,728+1,101+3,969= 9,798 residents.

expected to be less than those associated with the proposed project, which would be less than significant.

Because the Reduced-Development-Footprint Alternative includes park facilities to serve the added park users, the Reduced-Development-Footprint Alternative, like the proposed project is not expected to require the construction of new offsite recreational facilities and there would be no impact.

Transportation and Circulation

The proposed project would include 3,236 dwelling units, 16 acres of commercial, and 41 acres of office land use. At buildout, the Reduced-Development-Footprint Alternative would result in the development of 3,561 residential dwelling units, 25 acres of commercial retail land use, two schools, several public parks, open space, and roadways. The Reduced-Development-Footprint Alternative would not include commercial office land uses and a trail system connecting to proposed trails outside the project area would be reduced. The Reduced-Development-Footprint Alternative would include a mix of residential densities (VRL, VRM, and VRH), but with a higher share allocated to VRM and VRH (higher density) units compared to the proposed project.

With 325 more residences, a similar amount of retail development, and no office development, the Reduced-Development-Footprint Alternative would generate less VMT than the proposed project. The VMT efficiency of the Reduced-Development-Footprint Alternative, measured in terms of VMT per capita, would be similar to the proposed project even with the allocation of residential land use to higher-density units, since the alternative lacks office development. Therefore, the Reduced-Development-Footprint Alternative impact would be significant, with similar VMT per capita to the proposed project, resulting in a similar impact. Like the mitigation identified for the proposed project, modification of the Reduced-Development-Footprint Alternative to create a more efficient land use mix would be required to reduce this impact to less than significant. That mitigation, which could include reallocating areas proposed to be zoned for residential being zoned for commercial office or retail, would be based on detailed analysis specific to the Reduced-Development-Footprint Alternative.

A trail system connecting to proposed trails outside the project area would be reduced under the Reduced-Development-Footprint Alternative as compared with the proposed project resulting in a slightly greater impact on bicycle and pedestrian circulation. Demand for transit services and facilities associated with this alternative would be anticipated to be similar to that estimated for the proposed project. Because demand exceeds capacity at existing park-and-ride facilities, however, this could result in a significant impact, requiring mitigation similar to that proposed under Mitigation Measure TRA-1.

Consideration of Screening Criteria

Ability to Meet Project Objectives

The County's primary objective for the proposed project is to create development patterns that make the most efficient and feasible use of existing infrastructure and public services while promoting a sense of community. The Reduced-Development-Footprint Alternative would make efficient and feasible use of existing infrastructure to the same extent that the proposed project would. The inclusion of village parks and the location of residential units would likely help to promote a sense of community though it would lack the commercial center that provides a different

type of gathering space for neighbors. The Reduced-Development-Footprint Alternative would, at least to some extent meet 11 of the 16 additional project objectives.

- Be consistent with MTP/SCS
- Curtail suburban sprawl.
- Assist in meeting future RHNA needs.
- Broaden the housing stock in El Dorado Hills and Cameron Park.
- Provide a strong community identity and quality built environment.
- Utilize existing infrastructure and public services.
- Improve connectivity of the regional roadway network.
- Encourage future transit opportunities.
- Minimize impacts on oak woodlands.
- Preserve natural habitats and set aside wildlife corridors.
- Protect important cultural resources.

The Reduced-Development-Footprint Alternative would not meet other objectives listed in Section 4.2.1, *Methods and Screening Criteria*. No trail or bike path system would be constructed; therefore, the Reduced-Development-Footprint Alternative would not meet objectives related to encouraging non-motorized transportation and recreational opportunities, or expansion of the regional trail system. The location of development would result in greater impacts on the historic district, which would be fenced, but no interpretation would occur. No facilities that would promote the El Dorado County agri-tourism industry are included in the Reduced-Development-Footprint Alternative.

Impact Avoidance

The Reduced-Development-Footprint Alternative would reduce impacts on oak woodlands, wetlands, and on special-status species that occupy those habitats. It would also reduce impacts on plant communities, as a large portion of the southern area of the site would be left undeveloped. This alternative would also result in development of 132 fewer acres, though it would result in more dwelling units and more population growth. Because the footprint would be smaller, impacts on hydrology, undiscovered cultural resources, and paleontological resources would be slightly reduced. However, because there are more residential units, and therefore more residents, impacts related to population, such as demand for public services and utilities, would be greater. Impacts on biological resources would be reduced because there would be fewer acres developed but impacts on cultural resources, particularly this historic district, could be increased because the preservation and interpretation under the proposed project would not occur under this alternative. Likewise, because the energy-saving policies in the VMVSP would not be implemented, impacts related to energy use would also be greater.

Feasibility

Implementation of the Reduced-Development-Footprint Alternative would likely be economically feasible as the number of residential units is comparable. However, the larger percentage of multifamily units may reduce the feasibility of this alternative.

4.3.4 Alternative 4—Minimal Oak Impact

Compared with the proposed project, Alternative 4, the Minimal-Oak-Impact Alternative, would reduce the amount of developable land by approximately 541 acres, and is intended to reduce oak woodland impacts. The Minimal-Oak-Impact Alternative would leave more of the south part of the project area as open space and would have larger areas designated for medium-density land uses in the center and to the east of the project area. Of the 2,341 acres, approximately 516 acres would be developable under the Minimal-Oak-Impact Alternative, with 423 acres proposed for residential uses, one 22-acre school and joint-use park site, 22 acres of roadway, and 50 acres of public parks. In addition, one private neighborhood park would be dedicated. No commercial development would occur under this alternative. Buildout of Alternative 4 would result in the development of up to 2,274 residential units, including 911 low-density, 785 medium-density, and 578 high-density units. There would be no large-lot residential units under this alternative. Approximately 1,825 acres would be devoted to open space, reducing oak canopy impacts to 89 acres from 227.2 acres under the proposed project under General Plan Policy 7.4.4.4, and reducing oak woodland impacts to 204.84 acres from 689.6 acres under the proposed project under the ORMP. Figure 4-4 presents the conceptual development pattern of the Minimal-Oak-Impact Alternative.

Open space areas would be restricted to private use with no public access; the private and public trail system would be reduced or eliminated; and the historic quarry resources would be protected by a conservation easement and possibly fenced.

Aesthetics

Aesthetic impacts under the Minimal-Oak-Impact Alternative would be similar to those under the proposed project, but of a lesser magnitude. Construction of the Minimal-Oak-Impact Alternative would be similar to the proposed project and would create changes in views of and from the project site over the course of phased development. However, construction of the Minimal-Oak-Impact Alternative would require the removal of fewer oak trees, which are located throughout the site and south of Deer Creek and are an onsite visual amenity. Therefore, this impact would be reduced under this alternative, but would still be a significant and unavoidable impact as under the proposed project. Under the Minimal-Oak-Impact Alternative, the effect on portions of US 50 with important scenic viewpoints would be reduced compared with the proposed project because the areas proposed for development differ: the area next to US 50 would remain in open space as with the proposed project, while the area south of the project area's entry road from US 50 would be developed as public school and village park under the Minimal-Oak-Impact Alternative, whereas office park uses are located in this area under the proposed project. Similar to the proposed project, the area south of Deer Creek would not be developed. In addition, under the Minimal-Oak-Impact Alternative, areas immediate north of Deer Creek would not be developed, and the interior of the site would be less developed than under the proposed project. There would be high-density residential land uses around Marble Lake under the Minimal-Oak-Impact Alternative, very much like the proposed project. No village commercial or office space land uses are proposed under the Minimal-Oak-Impact Alternative.

County policies, zoning ordinances (130.14.170 Outdoor Lighting), design review, and the proposed VMVSP would ensure that the proposed project minimizes lighting impacts to the degree possible. Specifically, County Code Section 130.14.170 requires shielding to avoid impacts on adjoining areas. Both the proposed project and Minimal-Oak-Impact Alternative would result in new sources of nighttime light in an area that is currently unlit. Mitigation measures identified for the proposed

project would reduce visual impacts under the Minimal-Oak-Impact Alternative by reducing the amount of glare coming from buildings located within oak woodland and grassland areas. Regardless, the Minimal-Oak-Impact Alternative would substantially increase the amount of ambient light in the vicinity compared with existing conditions, resulting in visible light pollution and introducing ambient sky glow to the project vicinity. Even with the presence of the remaining tree canopy, new permanent sources of light would be introduced from lighted residences, walkways, roadways, parking lots, and accent lighting that would be visible to all viewer groups and would greatly increase light at the project site, which is currently unlit, and result in significant and unavoidable impacts. However, the Minimal-Oak-Impact Alternative would result in less lighting than the proposed project, because there would be more residences, office spaces, and commercial development in the proposed project, which tends to be more intensely lit. All of these factors would reduce the Minimal-Oak-Impact Alternative's impact on scenic vistas and visual resources compared with the proposed project. Mitigation Measures BIO-1a, BIO-1b, BIO-1c, BIO-1d, BIO-1e, AES-2, and AES-4 established for the proposed project would reduce visual impacts under this alternative but not to a less-than-significant level.

Air Quality

The types of air quality impacts under the Minimal-Oak-Impact Alternative would be similar to those under the proposed project, but of a lesser magnitude. As with the proposed project, construction and operation of new buildings would generate criteria pollutant emissions that could exceed the EDCAQMD's significance thresholds. Because the extent of construction and operational activities are less under the Minimal-Oak-Impact Alternative than under the proposed project, criteria pollutant emissions generated by the Minimal-Oak-Impact Alternative would likely be lower than those estimated for the proposed project. Mitigation Measures AQ-2a through AQ-2f, identified in Section 3.2, *Air Quality*, Mitigation Measures GHG-1 and GHG-2, identified in Section 3.6, *Greenhouse Gas Emissions,* and Mitigation Measure TRA-2, identified in Chapter 3.14, *Transportation and Circulation*, could be implemented to reduce emissions, but the potential to exceed EDCAQMD's thresholds and conflict with applicable air quality attainment plans would remain.

Implementation of the Minimal-Oak-Impact Alternative could expose new residents and adjacent sensitive receptors to significant health risks from criteria pollutants and TAC, including DPM, generated by equipment and vehicle exhaust. Emissions and thus health risks resulting from buildout of the Minimal-Oak-Impact Alternative would be less than that of the proposed project because there would be less construction and fewer operational emission sources. Construction TAC emissions would be reduced through Mitigation Measures AQ-2b, AQ-2c, and GHG-1. However, like the proposed project, there may be instances where specific conditions preclude the reduction of health risks from exposure to project-generated TACs during construction to below adopted thresholds, resulting in a significant impact.

Similar to the proposed project, receptors could be exposed to significant NOA impacts. The requirements identified in Mitigation Measure AQ-3, discussed in Section 3.2, *Air Quality*, would reduce any significant NOA impacts to a less-than-significant level.

Like the proposed project, the Minimal-Oak-Impact Alternative would not result in new or worsened odors that would affect a substantial number of people, and odor impacts would be less than significant. Similarly, CO modeling for the proposed project showed that no new localized violations of the 1-hour or 8-hour ambient air quality standards would occur, and the same conclusion would

be expected for the Minimal-Oak-Impact Alternative, which would result in fewer vehicle trips and congestion.

Biological Resources

Biological resource impacts would be substantially reduced under the Minimal-Oak-Impact Alternative for oak woodland and reduced to a lesser extent for riparian habitat, chaparral habitat, annual grassland, and waters of the United States, as compared with the proposed project. Due to smaller development footprints of this alternative, there would be less removal of all plant communities. Using criteria in the ORMP, oak woodland impacts under Alternative 2 would be 204.84 acres of oak woodland, compared with 689.4 acres of oak woodland impact under the proposed project. Impacts on waters of the United States would be approximately 3.699 acres under this alternative, compared with 4.585 acres under the proposed project.

Impacts on special-status plant species would be less than those under the proposed project. Impacts on special-status wildlife species would generally be less than those of the proposed project for species that utilize oak woodland, riparian habitat, chaparral, annual grassland, and wetlands (including white-tailed kite, burrowing owl, Blainville's horned lizard, and special-status bats). For California red-legged frog and northwestern pond turtle, the Minimal-Oak-Impact Alternative would affect the same amount of potential aquatic habitat (pond) as the proposed project. The restriction of use and reduction of a trail system in the open space areas would decrease impacts on wildlife movement and potentially on special-status species that utilize oak woodland as compared with the proposed project. However, the proposed wildlife corridor on the western boundary of the project area, along with connectivity to the Bass Lake undercrossing of US 50, would be eliminated under the Minimal-Oak-Impact Alternative, increasing the impact of this alternative on wildlife movement in a north-south direction compared with the proposed project.

Mitigation Measures BIO-1a through BIO-22b, as proposed for the project (listed in the Executive Summary Table ES-1, and described in Section 3.3, *Biological Resources*), would be needed under this alternative in order to ensure impacts on biological resources are reduced to a less-than-significant level. Because the extent of construction would be smaller under the Minimal-Oak-Impact Alternative than under the proposed project, the impact on biological resources identified in the project area would be of a lesser magnitude.

Cultural Resources

Impacts on archaeological resources under the Minimal-Oak-Impact Alternative would be less than those of the proposed project. This alternative would result in approximately 50% less developed acreage than the proposed project. Several known sites that could be affected under the proposed project would be in areas designated for open space under this alternative. Under the Minimal-Oak-Impact Alternative, the development footprint would be smaller, generally resulting in a reduced potential for inadvertent impacts on archaeological resources during construction. Additionally, there would be less access to the larger open space area, reducing the potential for vandalism or accidental disturbance or damage to known resources. Additionally, while the Marble Valley Limestone Mining District would be included in a historic park and potentially fenced, it would be a passive historic park. It is likely that interpretation and active conservation of the historic mining district would be minimal. As with the proposed project, construction would occur in areas sensitive for cultural resources and, therefore, could result in impacts on archaeological resources. In order to reduce impacts on archaeological resources to a less-than-significant level, Mitigation Measures

CUL-1a, CUL-1b, CUL-1c, CUL-1d, CUL-1e, CUL-3, and CUL-4, as proposed for the project, would need to be implemented with the Minimal-Oak-Impact Alternative.

Geology, Soils, Minerals, and Paleontological Resources

Geology and Soils Resources

The Minimal-Oak-Impact Alternative would result in the development of residential land uses, open space, and roadways. The number of residential units and total footprint acreage that would be developed under the Minimal-Oak-Impact Alternative would be less than that developed under the proposed project. As a result, less construction activity would be required under the Minimal-Oak-Impact Alternative, which would lead to fewer overall construction impacts than under the proposed project. Site-specific investigation would be necessary to address issues such as slope stability, expansive soils, mine hazards, and earthquake safety. However, the overall types of potential impacts would not be different under the Minimal-Oak-Impact Alternative than under the proposed project and the same types of mitigation measures would be necessary to reduce this impact to a less-than-significant level.

Mine Hazards

Impacts related to mine hazards under the Minimal-Oak-Impact Alternative would be similar to the proposed project. The potential for people to fall into these features and be injured and/or trapped exists under the Minimal-Oak-Impact Alternative, as it does under the proposed project. As under the proposed project, mitigation measures to establish a process for closing these features and to establish and implement a reporting process for undocumented mining features would reduce the severity of this impact but not to a less-than-significant level. Therefore, as under the proposed project, this impact would be significant and unavoidable under the Minimal-Oak-Impact Alternative.

Minerals

The impacts on mineral resources under the Minimal-Oak-Impact Alternative would be similar to those of the proposed project but of a lesser magnitude. Construction under the Minimal-Oak-Impact Alternative would take place in the same or in nearby areas with the same or similar MRZs. As with the proposed project, although the extent of construction would be less, there would be a less-than-significant impact on known important mineral resources and no impact on the availability of important mineral resource sites.

Paleontological Resources

The impacts on paleontological resources under the Minimal-Oak-Impact Alternative would be similar to those under the proposed project but of a slightly lesser magnitude. As with the proposed project, this construction could take place in units sensitive for paleontological resources, such as the limestone deposits and Quaternary alluvium, and therefore could result in impacts on paleontological resources. Because, however, the extent of construction is less under the Minimal-Oak-Impact Alternative than under the proposed project, the impact would be of a slightly lesser magnitude. As with the proposed project, implementation of mitigation measures identified for the proposed project would reduce impacts under the Minimal-Oak-Impact Alternative to a less-than-significant level.

Greenhouse Gas Emissions

GHG impacts under the Minimal-Oak-Impact Alternative would be similar to those under the proposed project, but of a lesser magnitude. Similar to criteria air pollutant emissions, construction and operational GHG emissions associated with the Minimal-Oak-Impact Alternative would likely be lower than those estimated for the proposed project because of the reduced level of development. Compliance with VMVSP Sustainability Element policies would reduce construction and operational GHG emissions consistent with the relative reductions estimated for the proposed project.

Although GHGs resulting from buildout of the Minimal-Oak-Impact Alternative may be less than the proposed project, development would generate new vehicle trips and consume fossil fuels, which could conflict with the state's decarbonization and carbon neutrality goal. The requirements listed in Mitigation Measures GHG-1, GHG-2, AQ-2b, and AQ-2c, as proposed for the project in Section 3.6, *Greenhouse Gas Emissions*, or similarly effective measures would still be needed under the Minimal-Oak-Impact Alternative. However, even with mitigation, the Minimal-Oak-Impact Alternative's cumulative contribution of GHG emissions would be significant and unavoidable, and the alternative could conflict with the 2017 Scoping Plan and the state's long-time climate change goals in AB 1279 and the 2022 Scoping Plan.

Hazards

Impacts on hazards and hazardous materials under the Minimal-Oak-Impact Alternative would be similar to those of the proposed project but of a lesser magnitude. Under the Minimal-Oak-Impact Alternative, the construction footprint would decrease from 1,057 acres under the proposed project to 516 acres to avoid oak trees. The Minimal-Oak-Impact Alternative would develop 962 fewer residential units than the proposed project and would not develop any commercial space. As a result, less construction activity would be required which would lead to fewer overall construction impacts associated with hazardous materials use than under the proposed project. As under the proposed project, similar mitigation measures to address NOA (Mitigation Measure AQ-3) and environmental assessments (Mitigation Measures HAZ-2a, HAZ-2b, and HAZ-2c) would be required to reduce construction impacts to a less-than-significant level under this alternative.

Operation-related impacts would also be reduced compared with the proposed project. No business-related waste or hazard risk would result because there would be no commercial development. Residential impacts, such as generation of household hazardous waste, would be expected to be reduced, as there would be 962 fewer residential units and this impact would be less than significant, as under the proposed project.

The County has not identified specific roads as emergency evacuation routes but encourages residents to learn their local roads in preparation for an emergency (Cathey pers. comm.); therefore, development under this alternative would not be expected to cause significant impacts on emergency response or evacuation plans. Because there would be less development and fewer residences under the Minimal-Oak-Impact Alternative, this impact would be similar but of lesser magnitude than under the proposed project.

Although development under this alternative would introduce new fire hazards or fire risk to people and structures in the project area, existing County policies related to fire hazards and fire minimization would be enforced and subdivision plans would need to be approved by the El Dorado Hills Fire Department or El Dorado County Fire Protection District. Because there would be less

development, fewer residences, and fewer residents, the risk of fire to people and structures would be less under the Minimal-Oak-Impact Alternative than under the proposed project.

Hydrology, Water Quality, and Water Resources

The impacts on hydrology, water quality, and water resources under the Minimal-Oak-Impact Alternative would be similar in nature to those of the proposed project but of a lesser magnitude. Under the Minimal-Oak-Impact Alternative, the total acreage of the project footprint would be reduced to 516 of the site's 2,341 total acres and there would be 1,825 acres of open space. In addition, other impacts on water quality, including the discharge of dredged or fill material into waters of the United States (which could affect beneficial uses of the wetlands, such as riparian and wildlife habitat) would be minimized under the Minimal-Oak-Impact Alternative.

Similar to the proposed project, impacts related to hydrology, water quality, and water resources would be minimized and would be less than significant through compliance with the latest NPDES and other water quality requirements (i.e., Construction General Permit, Small MS4 Permit, WDRs for dewatering, other federal and state regulations, County plan standards, and County and other local ordinances). In addition, Mitigation Measures BIO-1a through BIO-1c, BIO-3a, and BIO-3b, as recommended for the proposed project, would be required to reduce potential water quality impacts where wetlands or other waters may be affected by construction. In addition, the construction of 14 bridges could adversely affect water quality.

With regards to post-development impacts, proper measures to maintain water quality after construction would be required as under the proposed project. Source and treatment control measures contained in the State Water Board MS4 Permit Order No. 2013-0001-DWQ, the County SWMP (El Dorado County 2004b) and the County Drainage Manual (El Dorado County 1995), and/or USEPA guidance and other related guidance documents would be implemented. General site housekeeping and design control measures incorporated into the project design can include conserving natural areas, protecting slopes and channels, and minimizing impervious areas. Treatment control measures may include use of vegetated swales and buffers, detention basins, wet ponds, or constructed wetlands, infiltration basins, and other LID technology measures.

Impacts related to placing structures in a 100-year floodplain and altering drainage patterns in a manner that would result in flooding would be similar under the Minimal-Oak-Impact Alternative though of a lesser magnitude because there would be less development and it would be situated to avoid wetlands which would reduce development in low-lying areas and areas that encourage natural floodwater retention, detention, and percolation. These impacts would be less than significant, as under the proposed project. Impacts related to flooding that could result from a dam failure would be the same as the proposed project, because the project location is the same, and may require implementation of mitigation similar to Mitigation Measure GEO-3d. Mitigation Measure GEO-3d or a similar measure would require evaluation of detention basin embankments, depending on project design specifics, to reduce this impact to a less-than-significant level.

Due to the restriction in the amount of acreage allowed for development under the Minimal-Oak-Impact Alternative, impacts related to hydrology and water quality would be of a lesser magnitude. The overall development footprint associated with the Minimal-Oak-Impact Alternative would be less, as would be the construction-related impacts associated with Minimal-Oak-Impact Alternative.

Land Use Planning and Agricultural Resources

The Minimal-Oak-Impact Alternative, like the proposed project, would result in the conversion of currently undeveloped land to urban uses, rearranging the types of planned land uses on the project site. Compared with the proposed project, this alternative would decrease the total number of dwelling units by 962 and decrease the development footprint by 541 acres. However, this alternative would involve similar land uses to those proposed under the proposed project and impacts would be the same as the proposed project.

Similar to the proposed project, this alternative would not result in any significant impacts related to agriculture and would not divide a community. Like the proposed project, the Minimal-Oak-Impact Alternative would likely result in the inclusion of the area in the El Dorado Hills Community Region which would not be consistent with the General Plan Land Use Diagram; however, the impact would be less than significant. No important farmland exists on the project site, so this alternative would also not result in impacts related to agriculture.

Noise and Vibration

The Minimal-Oak-Impact Alternative would construct a smaller development footprint than the proposed project, including a fewer number of dwelling units, a smaller footprint of school land use space, no commercial or office space but slightly more public park acreage. While it is possible the development may be constructed over as many years as the proposed project, there are fewer units and space to develop, and the time needed to actively construct them would likely be less than for the proposed project. It is likely that both construction and operation would have reduced impacts relative to the proposed project. Construction noise would be dispersed differently in the project area than the proposed project due to the differing layouts of land uses between the proposed project and this alternative. Fewer existing residences would be exposed to construction noise under the Minimal-Oak-Impact Alternative because there would be less development near the boundaries of the project area. However, the sensitive land uses that are exposed to construction noise would experience levels of noise comparable to those of the proposed project. Thus, Mitigation Measure NOI-1a would still be required to reduce construction noise impacts, though likely not to a less-than-significant level.

Overall, there would be fewer residents and no office employees and the associated vehicle traffic that would generate operational noise under the Minimal-Oak-Impact Alternative. Traffic noise would occur in slightly different areas than the proposed project. Because the exposure of increased traffic and operational noise generated by the proposed project on new land uses would be significant and unavoidable even with implementation of Mitigation Measure NOI-1b, the exposure of traffic and operational noise generated by the Minimal-Oak-Impact Alternative on new land uses would also be significant and unavoidable with Mitigation Measure NOI-1b implemented. Noise impacts resulting from the Minimal-Oak-Impact Alternative on sensitive land uses would be the same as the proposed project.

Although the Minimal-Oak-Impact Alternative would result in less operational noise than under the proposed project, there could still be a significant increase in noise in the project area on existing land uses, namely at the single residences located adjacent to the roadway at 2080 Marble Valley Road and 4118 Flying C Road. Due to the location of this residence, it is likely that there would be a significant increase in noise even with the lesser level of development under the Minimal-Oak-Impact Alternative. Thus, the Minimal-Oak-Impact Alternative would also result in a substantial

permanent increase in noise. This impact would be significant and unavoidable, the same determination as the proposed project.

As with the proposed project, implementation of the Minimal-Oak-Impact Alternative would not likely require impact equipment that could generate substantial ground vibrations. However, similar to the proposed project, implementation of the Minimal-Oak-Impact Alternative could potentially involve some blasting that would generate vibration, but Mitigation Measure NOI-2 would reduce blasting impacts to a less-than-significant level. Because of the type of land uses (residences, open space, roadways) and the resulting construction activities, vibration impacts would not differ substantially from the proposed project.

Because the project location would be the same as for the proposed project, development under the Minimal-Oak-Impact Alternative would also not be located near any public or private airports. Additionally, as discussed in Section 3.10, *Noise and Vibration*, the site is not located within the CNEL 55 dB contours of the Cameron Airpark public-use airport. Thus, impacts pertaining to aircraft overflight noise would be less than significant and would not differ from impacts of the proposed project.

Population and Housing

The Minimal-Oak-Impact Alternative would induce less population growth than the proposed project. Compared with the proposed project, development of the Minimal-Oak-Impact Alternative would decrease the total number of dwelling units from 3,236 to 2,274. Using projected population factors of average people per unit (3.06 for low density, 2.61 for medium density, and 2.49 for high density), occupancy of the 2,274 new dwelling units associated with this alternative would be expected to increase the county's population by approximately 6,276 people, compared with 9,227 under the proposed project. Therefore, although the Minimal-Oak-Impact Alternative would not result in as much population growth, this impact would be significant and unavoidable, as it is under the proposed project.

The project area currently contains no housing units. Therefore, as with the proposed project, development under the Minimal-Oak-Impact Alternative would not displace any existing housing units or necessitate the construction of replacement housing elsewhere but would instead result in the creation of additional housing units on a largely undeveloped site presently surrounded by existing residential and commercial uses. As the area contains no housing units, the Minimal-Oak-Impact Alternative, like the proposed project, would not displace any people or necessitate the construction of replacement housing elsewhere.

Public Services and Utilities

The impacts related to public services and utilities under the Minimal-Oak-Impact Alternative would be similar to those under the proposed project but of a lesser magnitude and would be less than significant. The Minimal-Oak-Impact Alternative would develop 962 fewer residential units than the proposed project. With fewer dwelling units and, therefore, fewer residents expected under this alternative, there would be less demand on fire and police services, schools, and libraries than those of the proposed project. It would result in 1,539 school-age children rather than 2,191 under the proposed project, which would result in a reduced demand on schools. Only one 22-acre school is included in the Minimal-Oak-Impact Alternative whereas two schools on 35 acres are included in the proposed project. If the school did not have sufficient capacity for the proposed project's school-age

children, the school district would decide which schools the students would attend. As described in Section 3.12, *Public Services and Utilities*, payment of school impact fees, as required by SB 50 and provided for under California Government Code Section 65995 et seq., would serve as full and complete mitigation for the demand of additional students on school facilities. Increased school enrollment would not cause significant environmental effects; rather, it would cause only social effects. Similarly, impacts on libraries are of a social nature and would not have environmental effects.

The Minimal-Oak-Impact Alternative would result in less wastewater impacts than the proposed project. Whereas the proposed project would result in a demand of 0.79 mgd, this alternative would result in 0.51 mgd.[5] The Deer Creek WWTP is permitted for 3.6 mgd average dry weather flow and currently treats an average of 2.64 mgd. The addition of 0.51 mgd of demand from the Minimal-Oak-Impact Alternative would result in a total of 3.15 mgd, which would not exceed the permitted capacity of 3.6 mgd. Whereas the proposed project would have 9,227 residents, this alternative would generate approximately 6,276 residents[6], resulting in less demand on potable water, recycled water, solid waste services, electricity, natural gas, and other energy demands. Impacts on utilities would be less than significant under the Minimal-Oak-Impact Alternative, as under the proposed project. Impacts from the expansion of and connection to infrastructure and offsite improvements would be similar to those under the proposed project, although to a lesser extent because some offsite improvements may not need to be constructed. Mitigation measures similar to those identified for the proposed project would be necessary to mitigate those impacts. Energy- and resource-conserving measures under the Minimal-Oak-Impact Alternative would likely be similar to the energy-saving policies incorporated in the proposed project. Therefore, energy conservation under the Minimal-Oak-Impact Alternative would be similar to the proposed project and the impact would be less than significant. Because there are fewer residential units associated with the Minimal-Oak-Impact Alternative, impacts would be less than the proposed project; construction and operation of this alternative would cause less demand for public services, utilities, and energy.

Recreation

Development of the Minimal-Oak-Impact Alternative would include construction of up to 1,696 single-family and 578 multifamily housing units and would increase the population in an area currently deficient in village and community parkland. Using the County's park-planning household sizes of 3.3 people per single-family residential unit and 2.1 per multifamily unit, the Reduced-Wetland-Impact Alternative would be expected to introduce up to 6,811 new park users into the area, compared with the 9,168 new park users anticipated for the proposed project. New park users under the Minimal-Oak-Impact Alternative represent 74% of the new users associated with the proposed project. This alternative would provide 50 acres of public parkland plus one private neighborhood park, and 22 additional acres as part of the joint-use school facility. School facilities are not considered dedicated parkland and Section 120.12.090 of the El Dorado County Code considers private parkland dedication at rates ranging from 50 to 75% of public parkland. However, the 50 acres of public parkland acreage would meet and exceed the parkland requirement of approximately 35 acres for 6,811 residents. Therefore, the effects of the Minimal-Oak-Impact

[5] 1,696 low- and medium-density residential units * 240 gpd = 407,040 gpd average dry weather flow, or 0.41 mgd. 578 high-density EDUs * 180 gpd = 104,040 ADWF, or 0.10 mgd. 0.10 + 0.41 = 0.51 mgd.

[6] 911 VRL*3.06=2,788; 785 VRM*2.61=2,049; 578 VRH*2.49=1,439: 2,788+2,049+1,439 = 6,276 residents

Alternative on the deterioration of existing neighborhood parks would be less than those associated with the proposed project, and less than significant. No mitigation would be required.

Because the Minimal-Oak-Impact Alternative provides adequate park facilities to serve the added park users, the Minimal-Oak-Impact Alternative, like the proposed project, meets the parkland requirement for its projected population and would not require the construction of new offsite recreational facilities. This would be a less-than-significant impact and no mitigation is required.

Transportation and Circulation

The proposed project would include 3,236 dwelling units, 16 acres of commercial, and 41 acres of office land use. At buildout, the Minimal-Oak-Impact Alternative would result in the development of 2,274 residential dwelling units, one school, several public parks, open space, and roadways. The Minimal-Oak-Impact Alternative would not include commercial retail or office land uses. The Minimal-Oak-Impact Alternative would include a mix of residential densities (VRL, VRM, and VRH), but with a higher share allocated to VRM and VRH (higher density) units compared to the proposed project.

With 962 fewer residences and no commercial retail or office development, the Minimal-Oak-Impact Alternative would generate less VMT than the proposed project. The VMT efficiency of Minimal-Oak-Impact Alternative, measured in terms of VMT per capita, would be worse than the proposed project even with the allocation of residential land use to higher-density units since the alternative lacks commercial retail and office development. Therefore, the Minimal-Oak-Impact Alternative impact would be significant like the proposed project, but with higher VMT per capita, resulting in a greater impact. Like the mitigation identified for the proposed project, modification of the Minimal-Oak-Impact Alternative to create a more efficient land use mix would be required to reduce this impact to less than significant. That mitigation, which could include reallocating areas proposed to be zoned for residential being zoned for commercial office or retail (or adding additional commercial office or retail), would be based on detailed analysis specific to the Minimal-Oak-Impact Alternative.

The trail system proposed under the proposed project would be reduced or eliminated and therefore impacts on bicycle and pedestrian resources would be greater. Demand for transit services and facilities associated with this alternative would be anticipated to be approximately two-thirds of that estimated for the proposed project. Because demand exceeds capacity at existing park-and-ride facilities, however, this could result in a significant impact, requiring mitigation similar to that proposed under Mitigation Measure TRA-1.

Consideration of Screening Criteria

Ability to Meet Project Objectives

The County's primary objective for the proposed project is to create development patterns that make the most efficient and feasible use of existing infrastructure and public services while promoting a sense of community. The Minimal-Oak-Impact Alternative would make efficient and feasible use of existing infrastructure, though not to the same extent that the proposed project would. The inclusion of village parks and the location of residential units would likely help to promote a sense of community though it would lack the commercial center that provides a different

type of gathering space for neighbors. The Minimal-Oak-Impact Alternative would, at least to some extent meet 11 of the 16 additional project objectives.

- Be consistent with MTP/SCS.
- Curtail suburban sprawl.
- Assist in meeting future RHNA needs.
- Broaden the housing stock in El Dorado Hills and Cameron Park.
- Provide a strong community identity and quality built environment.
- Utilize existing infrastructure and public services.
- Improve connectivity of the regional roadway network.
- Encourage future transit opportunities.
- Minimize impacts on oak woodlands.
- Preserve natural habitats and set aside wildlife corridors.
- Protect important cultural resources.

The Minimal-Oak-Impact Alternative would not meet other objectives listed in Section 4.2.1, *Methods and Screening Criteria*. No trail or bike path system would be constructed; therefore, the Minimal-Oak-Impact Alternative would not meet objectives related to encouraging non-motorized transportation and recreational opportunities, or expansion of the regional trail system. No facilities that would promote the El Dorado County agri-tourism industry are included in this alternative.

Impact Avoidance

The Minimal-Oak-Impact Alternative would reduce impacts on oak woodlands, wetlands, and riparian and chaparral habitat, and on special-status species that occupy those habitats. It would also reduce impacts on plant communities, as most of the southern area of the site would be left undeveloped. This alternative would also result in development of 541 fewer acres and construction of 962 fewer dwelling units and therefore less population growth. Because the footprint would be smaller, impacts on hydrology, undiscovered cultural resources, and paleontological resources would be slightly reduced. Because there are fewer residential units, and therefore fewer residents, impacts related to population, such as demand for public services and utilities, would be less. Impacts on biological and cultural resources would be reduced because there would be fewer acres developed but impacts on the historic district could be increased because the preservation and interpretation under the proposed project would not occur under this alternative.

Feasibility

Implementation of the Minimal-Oak-Impact Alternative would result in approximately 30% fewer residential units, and larger proportion of high-density or multifamily units. This number and mix of housing may be more economically difficult to develop (e.g., infrastructure costs per residential unit would be higher than the proposed project).

4.4 Environmentally Superior Alternative

CEQA requires an EIR to examine a range of feasible alternatives to a proposed project. State CEQA Guidelines Section 15126.6(e)(2) requires that an EIR identify which of those alternatives is the environmentally superior alternative. The environmentally superior alternative is typically considered to be the alternative found to have the least environmental impact. If, in the course of identifying the environmentally superior alternative, the No-Project Alternative is found to be the environmentally superior alternative, then Section 15126.6(e)(2) of the State CEQA Guidelines further requires that an EIR identify which among the other alternatives is the environmentally superior alternative. Consequently, although the No-Project Alternative is evaluated and presented for comparison purposes, determination of the environmentally superior alternative in this chapter primarily reflects the differences in impacts among the remaining alternatives. Determination of the environmentally superior alternative uses the impact evaluations of the proposed project and of each alternative in a comparative process. The impacts of each alternative are identified and compared with those of the proposed project. The type and relative magnitude of each alternative's impacts are evaluated, and the alternative found to have the least impact, as compared with the others, is determined to be the environmentally superior alternative.

Table 4-2 provides a comparison of the level of impacts under the alternatives considered in this EIR as compared with the proposed project. In many instances, the potential effects would be similar, meaning that the overall outcome of implementing the proposed project compared with any one of the alternatives would generally result in the same type and magnitude of effects on a specific resource, even though the alternative approach differs in some way from the proposed project.

The No-Project Alternative would have substantially fewer residential units and therefore reduced population and traffic associated impacts, though the lack of services provided in the area would to some extent offset the benefits. Additionally, the acreage developed would be similar to the proposed project, and acreages of both wetlands and oak trees would be reduced; however, impacts on wildlife corridors would be increased because the area south of Deer Creek would be developed and though there would be fewer residences, it is likely that fences would function to cut off access for terrestrial species.

As shown in Table 4-2, the No-Project Alternative was determined to be environmentally superior; however, per CEQA Guidelines if the No-Project Alternative is the environmentally superior alternative then the EIR shall also identify an environmentally superior alternative among the other alternatives. Therefore, the Minimal-Oak-Impact Alternative is the environmentally superior alternative as it would reduce impacts for all resource areas to some extent. The Minimal-Oak-Impact Alternative would meet the main objective of creating development patterns that make the most efficient and feasible use of existing infrastructure and public services while promoting a sense of community as envisioned by the County General Plan. Other objectives that this alternative would attain include meeting future housing needs, broadening the El Dorado Hills and Cameron Park housing stock, improving connectivity, encouraging future transit opportunities, minimizing impacts on oak woodlands, preserving natural habitats and setting aside wildlife corridors, and protecting important cultural resources. The Minimal-Oak-Impact Alternative would result in the development of 541 fewer acres than the proposed project and the least development acreage of all the alternatives examined and therefore would result in reduced impacts on biological, paleontological, and, to some extent, cultural resources. Additionally, it would result in approximately one-third fewer dwelling units than the proposed project (though far more than the No-Project Alternative) and therefore fewer residents, resulting in reduced demands on services and fewer vehicles and therefore reduced air quality, and noise impacts.

Table 4-2. Comparison of Environmental Impacts of Alternatives to the Proposed Project

Resource Topic	Proposed Project	Alternative 1 – No Project		Alternative 2 – Reduced Wetland Impact		Alternative 3 – Reduced Development Footprint		Alternative 4 – Minimal Oak Impact	
Aesthetics									
Light/Glare	SU	SU	(<)	SU	(<)	SU	(<)	SU	(<)
Construction	SU	SU	(<)	SU	(<)	SU	(<)	SU	(<)
Operation	SU	SU	(>)	SU	(<)	SU	(<)	SU	(<)
Air Quality									
Conflict with Plan	SU	SU	(=)	SU	(=)	SU	(=)	SU	(=)
Construction Emissions	LTS w/mit	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(>)	LTS w/mit	(<)
Operation Emissions	SU	SU	(<)	SU	(<)	SU	(>)	SU	(<)
Combined Emissions	SU	SU	(<)	SU	(<)	SU	(>)	SU	(<)
Construction Health	SU	SU	(<)	SU	(<)	SU	(>)	SU	(<)
Operation Health	LTS	LTS	(<)	LTS	(<)	LTS	(>)	LTS	(<)
NOA	LTS w/mit	LTS w/mit	(=)	LTS w/mit	(=)	LTS w/mit	(=)	LTS w/mit	(=)
Odors	LTS	LTS	(=)	LTS	(=)	LTS	(=)	LTS	(=)
Biological Resources									
Oak Canopy/Woodland	LTS w/mit	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)
Sensitive Vegetation Communities	LTS w/mit	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)
Wetlands	LTS w/mit	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)
Special-Status Species	LTS w/mit	LTS w/mit	(>)	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)
Cultural Resources									
Known Archaeological Resources	LTS w/mit	LTS w/mit	(=)	LTS w/mit	(>)	LTS w/mit	(<)	LTS w/mit	(<)
Potential Disturbance of Unknown Archaeological Resources	LTS w/mit	LTS w/mit	(=)	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)
Geology, Soils, Minerals, and Paleontological Resources									
Geology	LTS w/mit	LTS w/mit	(=)	LTS w/mit	(<)	LTS w/mit	(=)	LTS w/mit	(<)
Mine Hazards	SU	SU	(=)	SU	(=)	SU	(=)	SU	(=)
Minerals	LTS	LTS	(=)	LTS	(<)	LTS	(=)	LTS	(=)
Paleontological Resources	LTS w/mit	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)
Greenhouse Gas Emissions									
Generate GHG Emissions	SU	SU	(<)	SU	(<)	SU	(>)	SU	(<)
Conflict with Plan	SU	SU	(=)	SU	(=)	SU	(=)	SU	(=)
Hazards and Hazardous Materials									
Construction	LTS w/mit	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(=)	LTS w/mit	(<)
Operation	LTS	LTS	(<)	LTS	(<)	LTS	(=)	LTS	(<)

Note: shading indicates change in significance level from proposed project.

NI = no impact.
LTS = less than significant impact.
LTS w/mit = less than significant impact with mitigation incorporated.
SU = significant and unavoidable impact.

(<) less than proposed project.
(=) equal to proposed project.
(>) greater than proposed project.

Resource Topic	Proposed Project	Alternative 1 – No Project		Alternative 2 – Reduced Wetland Impact		Alternative 3 – Reduced Development Footprint		Alternative 4 – Minimal Oak Impact	
Hydrology, Water Quality, and Water Resources									
Construction Site Stormwater Runoff	LTS	LTS	(<)	LTS	(<)	LTS	(<)	LTS	(<)
Urban Stormwater Runoff	LTS	LTS	(<)	LTS	(<)	LTS	(<)	LTS	(<)
Drainage and Flood Hazard	LTS w/mit	LTS w/mit	(=)	LTS w/mit	(=)	LTS w/mit	(=)	LTS w/mit	(<)
Water Quality (Wetlands and Other Waters)	LTS w/mit	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)
Land Use Planning and Agricultural Resources									
Divide Community	NI	NI	(=)	NI	(=)	NI	(=)	NI	(=)
Conflict with Land Use Plan	LTS	NI	(<)	LTS	(=)	LTS	(=)	LTS	(=)
Noise and Vibration									
Construction	SU	LTS w/mit	(<)	SU	(=)	SU	(=)	SU	(<)
Ground Vibration	LTS w/mit	LTS w/mit	(=)	LTS w/mit	(=)	LTS w/mit	(=)	LTS w/mit	(=)
Traffic	SU	SU	(=)	SU	(=)	SU	(<)	SU	(<)
Non-Transportation Operation	LTS w/mit	LTS w/mit	(=)	LTS w/mit	(=)	LTS w/mit	(=)	LTS w/mit	(=)
Population and Housing									
Growth	SU	LTS	(<)	SU	(<)	SU	(>)	SU	(<)
Displacement	NI	NI	(=)	NI	(=)	NI	(=)	NI	(=)
Public Services and Utilities									
Public Services Facilities	LTS	LTS	(<)	LTS	(<)	LTS	(>)	LTS	(<)
Wastewater Treatment	LTS	LTS	(<)	LTS	(<)	LTS	(>)	LTS	(<)
Water Supply	LTS	LTS	(<)	LTS	(<)	LTS	(>)	LTS	(<)
Other Utilities Demand	LTS	LTS	(<)	LTS	(<)	LTS	(>)	LTS	(<)
Offsite Infrastructure Construction	LTS w/mit	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)	LTS w/mit	(<)
Energy	LTS	LTS	(>)	LTS	(=)	LTS	(>)	LTS	(<)
Recreation									
Impacts on Existing Parks	LTS	LTS	(=)	LTS	(>)	LTS	(<)	LTS	(<)
Impacts from New Offsite Parks	NI	NI	(=)	NI	(=)	NI	(=)	NI	(=)
Transportation									
VMT Efficiency	LTS w/mit	LTS w/mit	(>)	LTS w/mit	(>)	LTS w/mit	(=)	LTS w/mit	(>)
Pedestrian/bicycle/public transit	LTS w/mit	LTS w/mit	(>)	LTS w/mit	(<)	LTS w/mit	(=)	LTS w/mit	(=)

Note: shading indicates change in significance level from proposed project.

NI = no impact.
LTS = less than significant impact.
LTS w/mit = less than significant impact with mitigation incorporated.
SU = significant and unavoidable impact.

(<) less than proposed project.
(=) equal to proposed project.
(>) greater than proposed project.

4.5 Alternatives Considered but Dismissed from Further Evaluation in this Draft EIR

The following potential alternatives were considered using the process described in Section 4.2, *Alternatives Development*, but were dismissed from evaluation for the reasons stated for each potential alternative.

4.5.1 Alternate Location Alternative

The Alternate Location Alternative would use the same land use and density balance but in a different location. Project objectives for this alternative revolve around providing a walkable community, maximizing available infrastructure, and promoting El Dorado County's wine country. This alternative would require a large contiguous parcel in proximity to US 50 and existing utilities infrastructure (e.g., wastewater, water, electricity) to accommodate the residential and commercial development, as well as the recreational amenities and open space. Other parcels or areas in the vicinity of El Dorado Hills and Cameron Park are either already developed or planned for development. Additionally, Marble Valley Company, LLC does not own other undeveloped parcels in the area, other than Central El Dorado Hills and Serrano project areas. Additionally, development at the proposed site is part of the County's adopted general plan. For these reasons, an alternate location would not be consistent with the County General Plan and there is no alternative site available for development of this project that would result in a substantial reduction of environmental impacts while meeting the project objectives. Therefore, this alternative was removed from consideration.

4.5.2 Jobs-Housing Balance Alternative

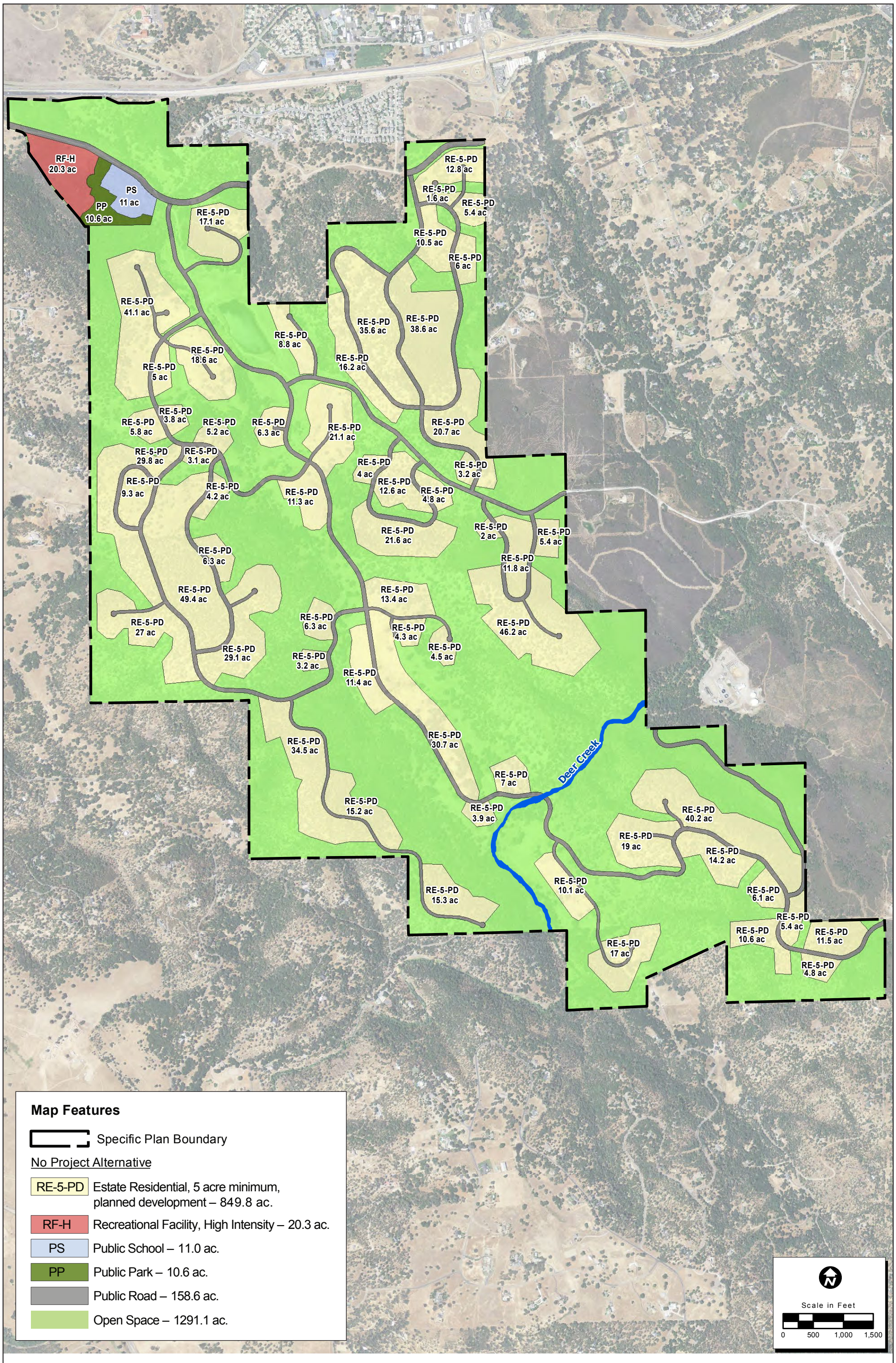
The Jobs-Housing Balance Alternative would consist of increased commercial development to provide more jobs in the immediate area in an effort to reduce traffic impacts by reducing the number of commuters. A balanced jobs-housing ratio is 1.5:1 according to the state General Plan guidelines. According to the adopted 2021-2029 Housing Element, the ratio of jobs to housing in El Dorado Hills is 0.9:1, the ratio in Cameron Park is 0.4:1, and Shingle Springs is 2.7:1 (El Dorado County 2021). It is not reasonable to expect the VMVSP to increase the ratio for either community, or to create 2,000 jobs, approximating an internal 1.5:1 jobs-housing ratio. However, this alternative would increase the commercial component of the project. This approach would reduce impacts related to traffic and air quality if the jobs created were filled by the residents of the Village of Marble Valley. However, there is no way to ensure that the residents would work in the area. It is likely that most people purchasing homes already have jobs and it is also likely that many of the jobs associated with the development would be filled by residents outside the development. Therefore, it is possible that this approach would not only not reduce traffic and air quality impacts, but may increase them, particularly if commercial development included retail enterprises that would attract customers. For these reasons, this alternative was removed from consideration.

4.5.3 Low-Density Residential—RE-10 Alternative

The project site would be zoned entirely for low-density residential development and zoned RE-10 (Estate Residential – 10 acre). This alternative would include buildout of approximately 180 single-family residences (average of 12-acre parcels) on 1,877 acres, as well as 350 acres of open space, an arts center, schools, parks, and streets. Septic systems would be installed, and electrical and telephone services would be above ground. Water would be supplied by individual wells. This alternative would reduce impacts associated with more population, such as traffic and air quality impacts. It would also reduce the impacts associated with offsite improvements. However, as a larger area could be developed, this alternative could block wildlife corridors to a greater extent. This alternative would not be consistent with the County's primary objective to make the most efficient and feasible use of existing infrastructure because it would insert development that does not use water and sewer services into the service area of the infrastructure provider (EID). Additionally, it would be inconsistent with the project applicant's stated objectives to increase housing diversity, to promote agri-tourism, to create a pedestrian-friendly and walkable community, to integrate commercial and retail needs, to preserve the site's natural features and commemorate the site's historic quarry operations. This alternative was removed from consideration because it does not meet the project objectives and would result in greater impacts on sensitive biological resources (wildlife corridors).

4.5.4 Low-Density Residential—RE-5 Alternative

The project site would be developed with residential parcels no less than 5 acres each. The project would include 291 single-family residences on approximately 1,877 acres, as well as 350 acres of open space, an arts center, schools, parks, and roads. Provision of most utilities would be identical to the proposed project, but septic systems would be installed, and electrical and telephone services would be above ground. By reducing the density and therefore the residents, this alternative would reduce impacts associated with increased population, such as traffic and air quality and GHG impacts. Though there would be fewer lots, there would be more area potentially disturbed with grading, clearing of vegetation, and fencing and therefore impacts on biological, resources could be increased. Because the lots are large and would be spread somewhat evenly over the project area, this alternative would have a greater impact on wildlife corridors, as more area could be fenced. This alternative would not be consistent with the County's primary objective to make the most efficient and feasible use of existing infrastructure because it would insert development that does not use water and sewer into the service area of the infrastructure provider (EID). Additionally, it would be inconsistent with the project applicant's stated objectives to increase housing diversity, to promote agri-tourism, to create a pedestrian-friendly and walkable community, and to integrate commercial and retail needs. This alternative was removed from consideration because it does not meet the project objectives and could result in greater impacts on sensitive biological resources (wildlife corridors).



Source: ECORP Consulting,Inc. (2013)

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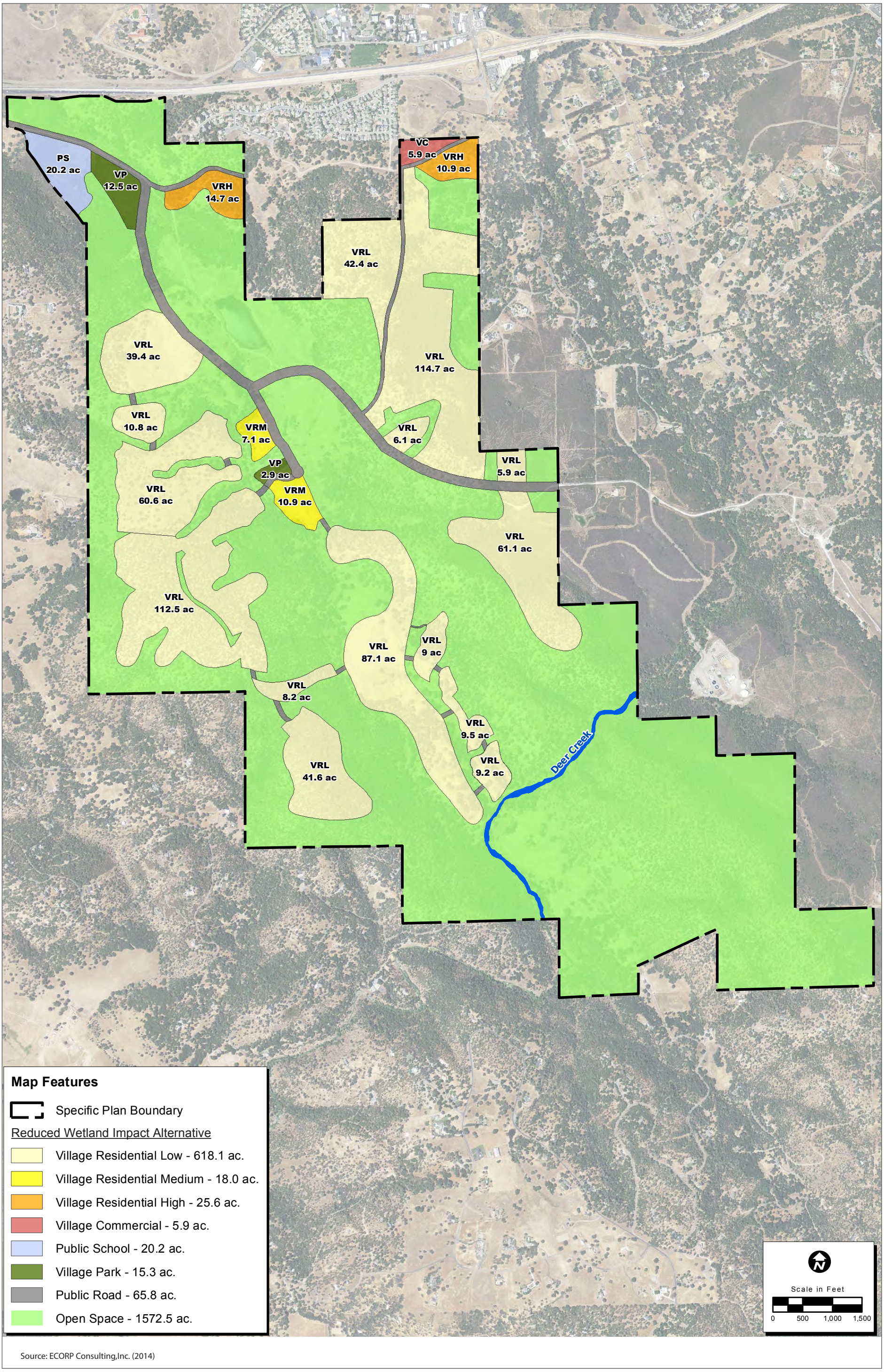
Figure 4-1
Alternative 1
No Project Alternative



Source: ECORP Consulting,Inc. (2014)

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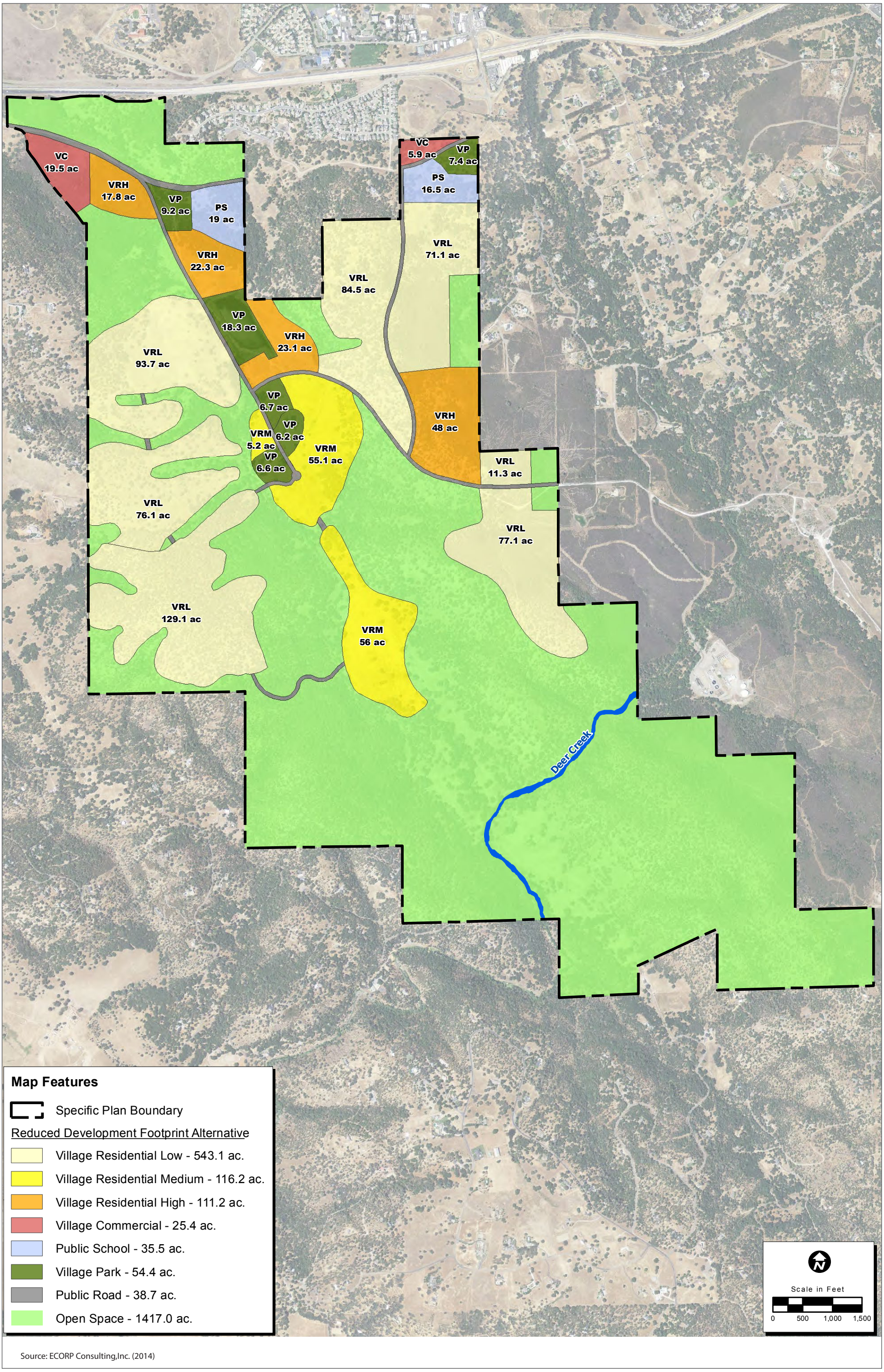
Figure 4-2
Alternative 2
Reduced Wetland Impact



Source: ECORP Consulting,Inc. (2014)

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Figure 4-3
Alternative 3
Reduced Development Footprint

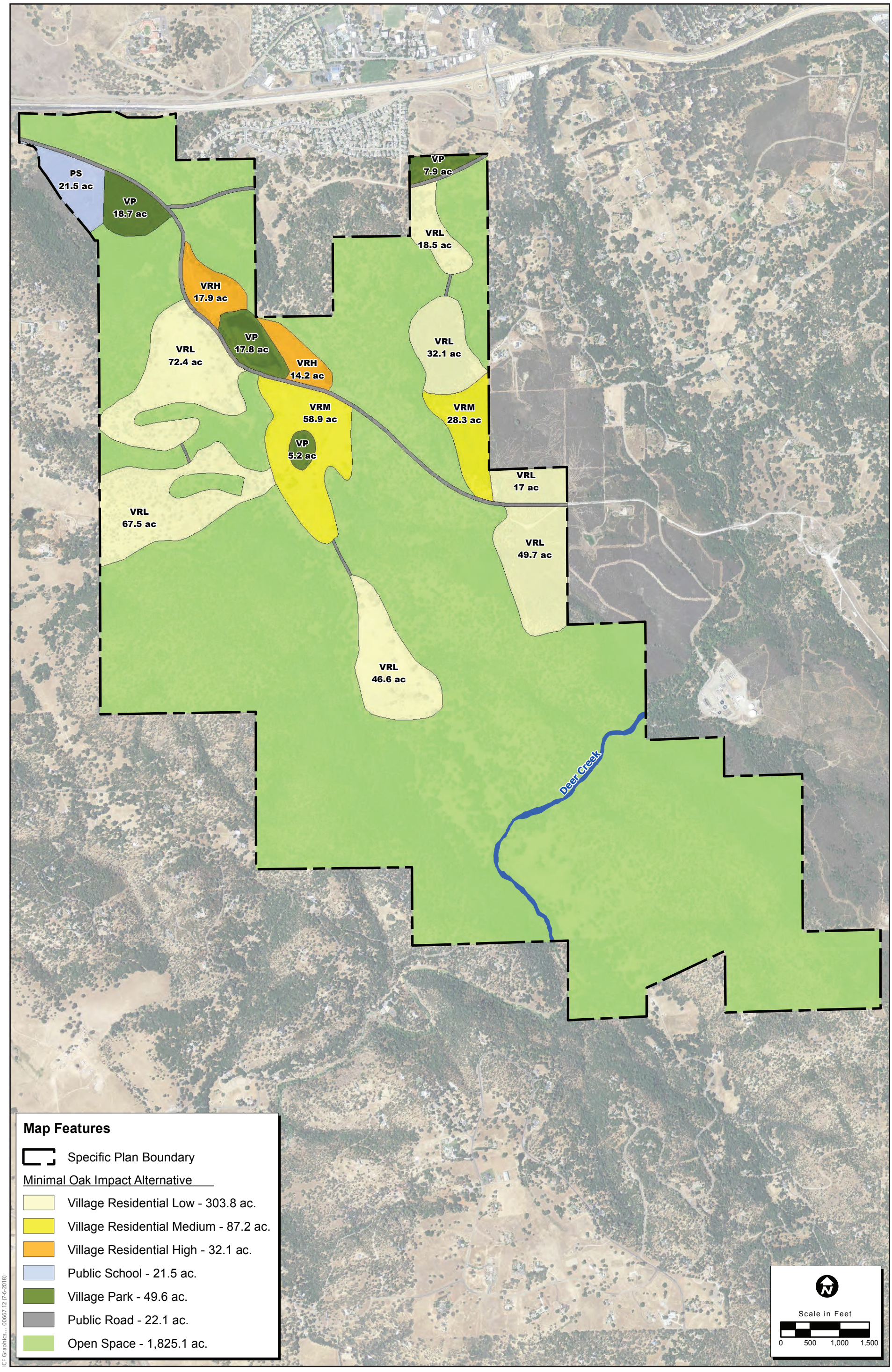

Figure 4-4
Alternative 4
Minimal Oak Impact Alternative

Chapter 5
Other CEQA Considerations

5.1 Overview

This chapter contains the following discussions and analyses required by the California Environmental Quality Act (CEQA).

- Cumulative impacts
- Growth-inducing impacts
- Significant and unavoidable environmental impacts
- Significant irreversible environmental impacts
- Mitigation measures with the potential for environmental effects

In addition, this chapter also evaluates the potential indirect environmental effects of construction and occupancy of secondary dwelling units in the Village of Marble Valley Specific Plan (VMVSP; proposed project). The project applicant is not proposing secondary dwelling units and is not seeking entitlements for the units. Consequently, they are not part of the proposed project description. However, a proposed land use designation in the VMVSP provides for secondary dwelling units. Secondary dwelling units are allowed by right as provided in the County Code of Ordinances and do not in and of themselves require environmental review under CEQA. However, they are a reasonably foreseeable outcome of implementing the VMVSP and therefore require CEQA review as indirect (or secondary) effects of the proposed project.

5.2 Cumulative Impacts

The State CEQA Guidelines define a cumulative impact as two or more individual impacts that, when considered together, are significant or that compound or increase other significant environmental impacts. The incremental impact of a project may be considerable when viewed in the context of other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor, but collectively significant, projects taking place over a period of time (State CEQA Guidelines 15355).

State CEQA Guidelines Section 15130(b) indicates that an adequate discussion of significant cumulative impacts requires consideration of either of the following.

> (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or
>
> (B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan.

This environmental impact report (EIR) uses a combination of both approaches. That is, the cumulative analysis is based on the adopted general plan (the projections approach based on projected population of the planning horizon under the *El Dorado County General Plan* [County General Plan] [El Dorado County 2004]) supplemented by a list of additional projects that are not currently included in the County General Plan. This combined approach is used to determine whether significant cumulative impacts would occur.

In reaching a conclusion for each resource area (i.e., the topics analyzed in Chapter 3, *Impact Analysis*), five factors were considered: (1) the geographic scope of the cumulative impact area for that resource, (2) the timeframe within which project-specific impacts could interact with the impacts of other projects, (3) whether a significant adverse cumulative condition presently exists for that resource to which project impacts could contribute, (4) the significance of the incremental project-specific contribution to cumulative conditions, and (5) whether any cumulative impact would be significant.

For the purpose of this EIR, significant cumulative impacts would occur if impacts related to the implementation of the VMVSP, combined with the environmental impacts of the planning horizon under the County General Plan and additional projects indicated below, would result in an adverse significant effect. For an impact to be considered cumulative, these incremental impacts and potential incremental impacts must be related to the types of impacts caused by the project and evaluated in Chapter 3, *Impact Analysis*.

5.2.1 Cumulative Scenario

The cumulative analysis considers impacts of the proposed VMVSP together with the planning horizon under the County General Plan and other reasonably foreseeable projects producing related impacts, as described below.

General Plan Updated Planning Horizon

The County General Plan, adopted in 2004, presents El Dorado County's (County) comprehensive, long-term vision for physical development and resource conservation. The County General Plan analyzed two scenarios, a 20-year planning horizon (estimated to be 2025 at the time of preparation of the 2004 General Plan) and a maximum theoretical density buildout. The maximum theoretical density permitted under buildout of the County General Plan would result in the development of up to 78,692 new housing units beyond the 44,708 units existing in 1999, for a total of 123,400 dwelling units housing an estimated 317,692 people within the unincorporated west slope area (El Dorado County 2003). The maximum commercial and industrial development permitted at County General Plan maximum theoretical density buildout is estimated to be 6,684 acres, at a floor area ratio of 0.85, accommodating a total of 117,122 jobs (El Dorado County 2003, 2004). Practical constraints, such as slope, waterways, biological resources, and availability of roadways and infrastructure, make it unlikely that maximum theoretical density buildout could be achieved and especially not within the planning horizon of the County General Plan. In addition, the proposed project is anticipated to be built out within the planning horizon and therefore, the planning horizon is used as a basis for this cumulative scenario.

The County's forecasts for the 2004 County General Plan 2025 planning horizon calculated that growth to the planning horizon would be an additional 32,491 new housing units beyond the 44,708 units that existed in 1999, for a total of 77,199 units. Approximately 17,900 new housing units have

been built since 2000, leaving approximately 14,600 remaining housing units to be built in the planning horizon.

In 2013, the County updated the housing and employment growth projections to assist in the preparation of the updated County Travel Demand Model, which was used for the VMVSP traffic analysis (BAE Urban Economics 2013). These projections cover the western slope of El Dorado County (excluding Placerville) and examine growth from 2010 to a planning horizon (now labeled 2035). Growth allocations based on the distribution of new development in the County between 2000 and 2011 and development applications from 2006 through present were used to extrapolate future growth. In 2010, there were 59,668 existing housing units. In 2035, it was projected that there would be 77,077 housing units. The 2013 study projects that by 2015, 62,803 housing units exist, leaving approximately 14,300 housing units to be built in the 2035 planning horizon. The 2035 planning horizon forecasts differ only slightly from the 2025 planning horizon forecasts done in 2002. This is largely a result of the housing crash in the late 2000s, and the resulting drastic reduction in the rate of growth in El Dorado County. Detail on the methodology for the forecasts is presented in the BAE memo, available on the County's website at https://www.edcgov.us/Government/LongRangePlanning/Travel_Demand_Model/Travel_Demand_Model_Phase_I.aspx.

Among the specific projects included in planning horizon for the County General Plan are those considered to be existing commitments—projects for which a tentative map or development agreement existed before approval of the 2004 County General Plan but that were not built out at the time the 2004 County General Plan was adopted. These projects have the potential to contribute 14,565 dwelling units to the County General Plan total (El Dorado County 2003). Since adoption of the County General Plan, several of the approved projects have decreased in size or were partially built out and are now expected to supply an additional 4,357 of the possible 14,300 new dwelling units. These projects include the Bass Lake Hills Specific Plan, Carson Creek Specific Plan, El Dorado Hills Specific Plan, Marble Valley Master Plan, Promontory Specific Plan, and Valley View Specific Plan (Table 5-1).

Table 5-1. El Dorado County Approved Projects, 2004 County General Plan

Project	Residential Uses (dwelling units)			Commercial and Industrial/ Research and Development Uses (acres)	Parkland and Open Space Uses (acres)
	Entitled	Built	Remaining		
Bass Lake Hills Specific Plan	1,458	162	1,296	0	31 – Park 151 – OS
Carson Creek Specific Plan	1,925	1,544	381	99	37 – Park 200 – OS
El Dorado Hills Specific Plan	6,162	4,929[a]	1,233	301	60 – Park 808 – OS
Marble Valley Master Plan[b]	398	0	398	0	54 – Park 1,271 – OS
Promontory Specific Plan	1,100	752[c]	348	7	35 – Park 101 – OS
Valley View Specific Plan	2,840	2,139	701	40	86 – Park 617 – OS
Total	13,883	9,526	4,357	447	303 – Park 3,148 – OS

Source: El Dorado County 2024.
OS = Open Space
[a] As of 2024.
[b] Tentative Map for Marble Valley Master Plan expired.
[c] Includes 16–66 lots that are recorded but not yet built.

Bass Lake Hills Specific Plan

The 1,196-acre Bass Lake Hills Specific Plan area is approximately 3 miles east of the Sacramento/El Dorado county line, north of U.S. Highway (US) 50 between El Dorado Hills and Cameron Park, and abuts the El Dorado Hills Specific Plan (EDHSP) on the east. The Bass Lake Hills Specific Plan was adopted in 1995 and allows development of 1,458 dwelling units with 31 acres of parks and 151 acres of open space (El Dorado County 1995). As of February 2024, only 162 dwelling units had been constructed. Town and Country Village, a hotel and resort development, which is part of the Bass Lake Hills Specific Plan is currently under consideration.

Carson Creek Specific Plan

The Carson Creek Specific Plan, adopted in 1996 and amended in 1999, allows development of an approximately 710-acre area along the Sacramento County line, south of US 50 and adjacent to the El Dorado Hills Business Park. Buildout of the Carson Creek Specific Plan would allow 1,700 dwelling units, with approximately 1,544 constructed as of February 2024, up to 40,000 square feet of commercial uses, up to 449,605 square feet of research and development uses, 780,279 square feet of industrial uses, 37 acres of public parkland, and 200 acres of open space (El Dorado County 1999).

El Dorado Hills Specific Plan

The EDHSP allows development of up to 6,162 dwelling units, 301 acres of commercial uses, 60 acres of parks and public facilities, and 808 acres of open space uses on a 3,646-acre site north of US

50 and south of Green Valley Road, as well as approximately 158 acres of commercial land uses south of US 50 (El Dorado County Community Development Department 1988). Approximately 4,929 dwelling units have been constructed as of February 2024.

Marble Valley Master Plan

The Marble Valley Master Plan development, a 2,341-acre area south of US 50 between the Bass Lake Road and Cambridge Road interchanges, was approved by the County Board of Supervisors in 1998 for 398 dwelling units, 54 acres of parks and public facilities, and 1,271 acres of open space (El Dorado County 2003). However, the tentative map has expired, and this project was not constructed, and this proposed project, VMVSP, is proposed for this location.

Promontory Specific Plan

The Promontory Specific Plan allows development of an approximately 1,000-acre area, south of Folsom Reservoir and north of US 50, with up to 1,100 dwelling units, 7 acres of commercial and office uses, 35 acres of parks and public facilities, and 101 acres of public open space (El Dorado County 2003). As of March 2021, approximately 753 dwelling units have been constructed or lots have been recorded.

Valley View Specific Plan

The Valley View Specific Plan area covers 2,837 acres south of US 50 in the El Dorado Hills area. The Specific Plan allows development of up to 2,840 dwelling units, 40 acres of commercial uses, including mixed-use development, 86 acres of multi-use open space (parks and public facilities), and two schools, and the plan designates 617 acres for passive open space and buffer areas (El Dorado County 2003). As of February 2024, approximately 2,139 dwelling units have been constructed.

Other Projects

Other projects not specifically addressed in the County General Plan planning horizon assumptions include the Lime Rock Valley Specific Plan (LRVSP), Saratoga Estates residential development (formerly Rancho Dorado), and Tilden Park Project. In addition, the El Dorado Town Center Apartments, a four-story 214-unit apartment complex, approved by the County in 2018, and has been built out and is now occupied, was originally planned as a hotel project and was included as such in the planning horizon assumptions described above in the County General Plan. However, the change in use from hotel to residential results in higher density and required a general plan amendment. The locations of these proposed projects are shown in Figure 5-1. Residential and commercial development and parks and open space lands associated with these projects are described below and in Table 5-2.

Table 5-2. Other Projects

Project	Residential Uses		Commercial and Industrial/ Research and Development Uses (acres)	Parkland and Open Space Uses (acres)
	Dwelling Units	Acres		
El Dorado Hills Town Center Apartments	214	4.6	0	0
Lime Rock Valley Specific Plan	800	358	0	8 – Park 333 – OS
Saratoga Estates	317	70.98	0	5.42 – Park 37.04 – OS
Tilden Park	14	2.97	8.2	0 – Park 1.64 – OS
Montana de El Dorado	-	-	3.3	-
Subtotal	1,345	436.5	11.5	13.42 – Park 371.68 – OS
Combined Park/OS Total	–	–	–	385.1

Sources: El Dorado County 2020, 2021, 2012a, 2012b, 2013a, 2015, 2020, 2021; G3 Enterprises 2020.
OS = Open Space

Targeted General Plan Amendment/Zoning Ordinance Update

The Board of Supervisors adopted the TGPA/ZOU in December 2015. The TGPA/ZOU does not include any site-specific development proposals, although it does include adoption of guidelines for mixed-use development. Rather, it is limited to amendments to County General Plan policies and a comprehensive revision of the zoning ordinance. Policies pertinent to the proposed project include policies to increase the maximum density for the residential portion of mixed-use projects in Community Regions from 16 dwelling units per acre (du/ac) to 20 du/ac, to amend the Multifamily Residential (MFR) designation to encourage a full range of housing types, and to encourage infill projects.

El Dorado Hills Town Center Apartments Project

The Town Center Apartments project is a 214-unit apartment complex located at the northwest corner of Town Center Boulevard and Vine Street within the Town Center East Planned Development in El Dorado Hills. The site is within Village T of the EDHSP and was originally planned as a hotel, and as such is included in the County General Plan planning horizon. The project required an amendment to the County General Plan to increase residential density from 24 du/ac to 55 du/ac, amendments to the EDHSP, rezone, and revisions to the approved Town Center East Development Plan. The County approved the project in 2018. It is now fully built out and occupied.

Lime Rock Valley Specific Plan

The proposed LRVSP would allow development of up to 800 residential units on approximately 360 acres and an 8-acre neighborhood park with recreational amenities and would designate about 333 acres of public and private open space (El Dorado County 2013b). The project site is south of US 50, southwest of the Cambridge Road interchange, along Flying C Road. A portion of the site adjoins the proposed VMVSP project area. It is adjacent to the existing Cameron Estates subdivision on the north and the Royal Equestrian subdivision on the south. Preparation of an EIR is under way.

Saratoga Estates (Rancho Dorado) Residential Development

The approved Saratoga Estates (formerly Rancho Dorado) residential project, currently under construction, includes development of 317 residential units, 5.42 acres of public parkland, 37.04 acres of open space, and 8.4 acres of public roads in the El Dorado Hills area (El Dorado County 2015). The site is north of US 50 and 0.5 mile west of the intersection of US 50 and El Dorado Hills Boulevard. The first phase of the development has been built out and the second phase is underway.

Tilden Park Subdivision

The proposed Tilden Park subdivision consists of a proposed residential and commercial development on a 12.01-acre site north of Wild Chaparral Drive and 500 feet west of Crosswood Drive in Shingle Springs just north of US 50. The Tilden Park subdivision proposes development of three residential parcels, and a total of 38,550 square feet of commercial development within three commercial lots that would include retail, grocery, restaurant and office uses as well as an 80-unit hotel (El Dorado County 2012b).

Montano De El Dorado Phase I and II Master Plan

The proposed Montano De El Dorado Phase I and II Master Plan, approximately 16.8 acres, would expand the existing Montano de El Dorado retail center (Phase I) to include additional retail space, an office building, hotel, and a small amphitheater. Phase II would consist of a total of 10 buildings for a total floor area of approximately 75,400 square feet and 143,900 square feet of commercial and office uses. The project would also include the provision of outdoor special events within existing Phase I and within the proposed amphitheater and parking lots within Phase II.

Folsom South of US 50

One other project considered in the cumulative analysis assumes buildout of the grazing land south of US 50 and north of White Rock Road that was annexed to the city of Folsom in 2012 and is slated for suburban development.

5.2.2 Analysis of Potential Cumulative Impacts

Aesthetics

The El Dorado National Forest serves as a natural resource area that is generally protected from, and therefore limits, the eastward expansion of mixed-use development that is occurring and is likely to occur in the western portion of the county. Therefore, the cumulative context for aesthetics is western El Dorado County, which comprises the central region of the county slated for development; the forested areas to the east would remain largely untouched. The projects occurring in the western county include those identified in the planning horizon of the County General Plan and other projects (El Dorado Town Center Apartments, LRVSP, Saratoga Estates residential development, and Tilden Park subdivision), which all combine to affect visual resources in the western county. Cumulative impacts for aesthetics would occur where a project, when combined with cumulative projects, would contribute to the substantial degradation or alteration of the existing visual character of the vicinity and regional context, associated scenic vista views, and views from scenic highways. Such views can be altered by extensive vegetation removal and landform alteration and the introduction of incompatible anthropogenic features, all of which act to transform

the visual landscape of the vicinity and the region as a whole. In addition, new sources of light can create light pollution and ambient glow that can affect nighttime views, for example, by reducing the amount of visible dark sky and stars and introducing nuisance light spill.

Development of the VMVSP would result in the impacts on visual resources identified in Section 3.1, *Aesthetics*, and would contribute to cumulative visual impacts in the area. These cumulative impacts consist of temporary visual changes as a result of construction activities, changes to scenic resources along important public scenic viewpoints along US 50, changes in visual character and quality at the project site, and changes in light and glare at the project site and vicinity introduced from new lighting sources.

The land use changes associated with the cumulative scenario, including those anticipated within the planning horizon of the County General Plan and other projects (El Dorado Town Center Apartments, LRVSP, Saratoga Estates residential development, and Tilden Park subdivision) have the potential to affect aesthetic and visual resources in several ways. These impacts would result from construction activities; development of roadways, parking areas, and buildings; alteration of the area's visual character, and the introduction of new light sources that would change the visual resources in the area.

While construction activities associated with cumulative projects are likely to be temporary, they would require the removal of mature vegetation and, likely, native oak trees in areas that are largely undeveloped. Construction of many of the cumulative projects would occur near sensitive visual receptors surrounding project sites and could be seen from US 50 and from vantages north of US 50. Although the proposed project and other projects are required to be designed in a manner that would retain large portions of oak woodlands to comply with County ordinances, the quality of available views would be affected by construction activities on undeveloped land, removal of mature oak trees, and grading that would result in negative visual impacts.

This area of El Dorado County has rolling terrain and affords high-quality scenic vistas, and the cumulative projects, including the proposed VMVSP, would be visible on hillsides and in vista views. The proposed project would also affect views from important public scenic viewpoints along US 50 (particularly eastbound US 50) because, although there would be open space area to buffer views of development, development in the interior of the site would be visible, as depicted in Figure 3.1-4 in Chapter 3, *Impact Analysis*.

The cumulative projects would result in an overall increase in light and glare. Like the proposed project, most of the cumulative projects are in unlit open space and the surrounding area is minimally lit. Therefore, lighting associated with these developments would substantially increase the amount of glare and nighttime lighting and would result in a cumulative impact related to ambient light glow and light pollution in the area. The proposed project would increase the amount of glare and nighttime lighting and would result in a considerable contribution to this cumulative impact.

The proposed project would contribute to the transformation of undeveloped, natural open space into mixed-use, suburban developments and associated infrastructure and would alter the existing visual character and quality of the site. The project design retains much of the project site in open space, uses design measures to reduce impacts on onsite natural resources that also serve as a visual amenity, and implementation of mitigation measures would reduce the visual prominence of the proposed project, making it blend within its existing visual environment. However, even with these measures, the proposed project would permanently convert the site from scenic natural open space

to one that is well-lighted and developed with buildings, infrastructure, and utilities. This conversion would reduce the visual quality of views associated with the site and the project vicinity. Therefore, the proposed project's contribution would be cumulatively considerable. This impact would be significant and unavoidable.

Air Quality

The County does not currently attain the national ambient air quality standards (NAAQS) or California ambient air quality standards (CAAQS) for ozone, the NAAQS for fine particulate matter (PM2.5), or the CAAQS for coarse particulate matter (PM10). Certain individuals residing in areas that do not meet the ozone or particulate matter ambient air quality standards, including El Dorado County, could be exposed to pollutant concentrations that cause or aggregative acute and/or chronic health conditions (e.g., asthmas, lost workdays, premature mortality). El Dorado County Air Quality Management District (EDCAQMD) has developed project-level thresholds that are derived from region-specific modeling that demonstrates the air basin can cumulatively accommodate project emissions below the threshold levels without affecting attainment of the health-protective NAAQS or CAAQS, as required by the local air quality plans.

As discussed in Section 3.2, *Air Quality*, the VMVSP Sustainability Element includes several policies that would contribute to criteria pollutant reductions during construction and operation. However, construction, operation, and combined construction and partial operation of new buildings would result in emissions in excess of EDCAQMD's significance thresholds (see Section 3.2, Impacts AQ-2b and 2c). Accordingly, build-out of the VMVSP would contribute to the existing regional cumulative air quality impacts before mitigation. Mitigation Measures AQ-2a through AQ-2f, GHG-1, and TRA-2 would reduce construction emissions to below EDCAQMD's thresholds, but operational and combined construction and operations emissions would still be cumulatively considerable even after implementation of all feasible mitigation.

New residents and adjacent sensitive receptors could be exposed to significant health risks from toxic air contaminants (TAC) during buildout of the CEDSP. VMVSP Policy 9.59 and Mitigation Measures AQ-2b, AQ-2c, and GHG-1 would reduce health risks to new receptors and help control TAC emission during construction. However, there may be instances where project-specific conditions preclude the reduction of health risks below EDCAQMD thresholds, indicating that the proposed project's contribution to existing ambient TAC health risks would be cumulatively considerable during construction. Operational sources of TAC would be minor and limited to new commercial uses developed under the project. VMVSP Policy 9.59 would also reduce cumulative exposure of new residents to ambient source of DPM. Accordingly, the project's contribution to operational TAC impacts would be less than cumulatively considerable, and this cumulative impact would be less than significant.

New and existing residents may also be exposed to naturally occurring asbestos (NOA) during construction, which might occur during the same period as other projects in the county. Possible cumulative NOA impacts as a result of these combined activities would be addressed by the standard EDCAQMD measures that apply to construction projects (e.g., Rule 223-2), in addition to project-level mitigation strategies identified for each project, including Mitigation Measure AQ-3. Accordingly, the project's contribution to NOA impacts would be less than cumulatively considerable, and this cumulative impact would be less than significant.

Vehicle trips from build-out of the VMVSP, in combination with existing and future traffic volumes, would not result in local cumulative impacts with respect to CO hot spots. CO hot spots are typically observed at heavily congested roadway intersections where a substantial number of gasoline-powered vehicles idle for prolonged periods throughout the day; however, modeling conducted at intersections with the highest traffic volumes and worst congestion shows that CO concentrations at these intersections would not be in excess of the CAAQS and NAAQS (see Section 3.2, *Air Quality*, Impact AQ-3c). Therefore, the cumulative impact would be less than significant.

Buildout of the VMVSP would not result in new or worsened odors that would affect a substantial number of people. Odors from diesel exhaust, architectural coatings, and cooking would be similar to those generated by the surrounding environment, which includes adjacent residential and commercial land uses, as well as traffic on US 50. Implementation of the project would not exacerbate existing odors associated with wastewater treatment at the Deer Creek WWTP. Accordingly, the project's contribution to odor impacts would be less than cumulatively considerable, and this cumulative impact would be less than significant.

Biological Resources

The Eldorado National Forest generally limits the eastward expansion of mixed-use development that is occurring and is likely to occur in the western portion of the County. Because the National Forest to the east would remain largely undeveloped, the cumulative context for biological resources would include only western El Dorado County in areas slated for development. The projects occurring in the western County include those identified in the County General Plan buildout and other projects (El Dorado Town Center Apartments, LRVSP, Saratoga Estates residential development, and Tilden Park subdivision). In combination, these projects will affect sensitive biological resources within the western county. Cumulative impacts for biological resources would occur where a project, when combined with cumulative projects, would contribute to a substantial loss of a sensitive biological resource, including sensitive natural communities, waters of the United States, and special-status species. Substantial loss can occur due to removing vegetation, filling drainages and wetlands, removing special-status plants, and take of special-status wildlife.

Implementation of the proposed project would result in direct, significant impacts on oak woodlands, riparian woodland, chaparral, annual grassland, and waters of the United States and in potential impacts on special-status plants and animals and their habitats. Simultaneous construction of other development projects in the vicinity of the project site could also result in significant impacts on oak woodland and the common wildlife that use this habitat. At the project level, impacts of other projects could be mitigated to a less-than-significant level by implementing mitigation measures similar to the proposed project. Impacts on riparian woodland, waters of the United States, and special-status plants would not be cumulatively considerable. However, the long-term loss of oak woodland, chaparral, and annual grassland habitats for special-status wildlife species would be cumulatively considerable.

It is estimated that by the year 2035, approximately 6,442 acres of oak woodland would be lost from build out under the General Plan (Biological Resources Policy Update and Oak Woodland Resources Management Plan Draft EIR Table 6-6, El Dorado County 2017a). Considering past, present, and future development in this region and the expected loss of more than 6,442 acres of oak woodlands because of projects in the county, there would be cumulative impacts on oak woodland, and the proposed project could result in a considerable contribution to cumulative impacts on oak

woodlands in the region. Based on criteria in the *Oak Resources Management Plan* (El Dorado County 2017b), the proposed project would remove 689.4 acres of oak woodland but would avoid 63.5% of oak woodland within the open space/avoided areas (approximately 1,198 acres) and would incorporate measures to retain additional oak woodland within the development footprint. The project, and all future projects, would also be required to replace individual native oak trees based on an inch-to-inch replacement standard, and Heritage Tree replacement based on a 3:1 ratio standard. As a result, project compliance with CEQA and the County General Plan would reduce the project's contribution to cumulative effects on oak woodlands and the associated wildlife species. However, the planted trees would require many years to attain maturity and to function similarly to the existing oak woodland. Because of the large extent of oak woodland that would be removed and the long-term impact because of the time for planted trees to mature, the project would result in a considerable contribution to this cumulative impact, and the cumulative impact on oak woodland would be significant and unavoidable.

The proposed project would also result in the removal of up to 4.809 acres of riparian woodland, which provides habitat for nesting birds, tree-roosting bats, and other native wildlife species; however, avoidance, minimization, and compensatory mitigation for this impact would reduce the project impact to a less-than-significant level. Many of the past, present, and future development projects would also result in loss of riparian habitat, resulting in a cumulative impact. However, because the project would affect a relatively small acreage of riparian habitat and mitigation would fully compensate for the loss, the project would not make a considerable contribution to this cumulative impact.

The proposed project would also result in the removal of chaparral and grassland habitat for special-status species, including Blainville's horned lizard, and other native wildlife species despite mitigation measures that would reduce the direct impact. Many of the cumulative projects would result in impacts on the same type of habitat, resulting in a cumulative impact. Because the project would affect considerable acreage and would contribute to potential Blainville's horned lizard mortality from the introduction of domestic animals to the area, the project's contribution to this cumulative impact would be cumulatively considerable. This impact would be significant and unavoidable.

Implementation of the proposed project would further restrict wildlife movement between fragmented patches of suitable habitat in El Dorado County. The cumulative projects in the area would also restrict wildlife movement in the same way, resulting in a cumulative impact. The project area is large and although open space is planned for the southern portion of the project area, a large area would be developed. Therefore, the project's contribution to this cumulative impact would be cumulatively considerable, despite implementation of mitigation measures. This cumulative impact on wildlife movement corridors would be significant and unavoidable.

The project would result in removal of vegetation and grading of portions of the site, thereby creating the potential to contribute to the cumulative loss of sensitive biological resources in the region. Therefore, combined with other past, present, and probable future projects and programs in the region, construction associated with the project could result in a cumulative impact on oak woodland, riparian woodland, waters of the United States, and special-status species and their habitats. Although implementation of the mitigation measures identified in this EIR to protect and compensate for loss of these sensitive biological resources would ensure that the project's contribution to the cumulative impact would not be considerable for some sensitive biological

resources, the large extent and long-term effects on oak woodland, Blainville's horned lizard, and wildlife movement corridors would remain cumulatively considerable.

Cultural Resources

The area considered for cumulative impacts on cultural resources is based on past cultural boundaries and can vary depending on the period. Generally, for Native American resources, the area examined for cumulative impacts can be defined as the ethnographic area of the Native American groups most likely associated with potential resources. For this project, the ethnographic area consists of the drainages of the lower Feather, Yuba, Bear, and American Rivers, between the Sacramento River and the crest of the Sierra Nevada range. For historic resources, the cultural area could be somewhat narrower, comprising the foothills of the Sierra Nevada, extending to the city of Sacramento.

Implementation of the project would potentially result in direct impacts on two cultural resources districts (Marble Valley Archaeological District [MVAD] and Marble Valley Historic Limestone Mining District) and three known archaeological resources that are historical resources. In addition, there is the potential for currently unknown cultural resources to be adversely affected by the project. These impacts, however, would be avoided or minimized through project design and implementation of mitigation measures requiring preparation of further studies that would result in data collection and reduce these project-level impacts to a less-than-significant level. Although direct impacts on the contributing elements of the archaeological district would be avoided, development of the area around them would result in impacts to the setting, feeling, and association of the resource.

Construction of other development projects in the vicinity of the project could potentially result in significant impacts on archaeological resources that meet the criteria for historical resources and on human remains should they be present within the project site or the vicinity of the project site. Based on the landscape of the cumulative projects and their undeveloped nature, it is likely that resources similar to the MVAD would be located within the boundaries of these projects. Although each project would seek to identify and evaluate cultural resources and implement mitigation measures designed to reduce project-level effects to a less-than-significant level, a cumulative impact would still result. Although direct impacts would be minimized, it is likely that similar indirect effects on the integrity of the resources would result through impacts on setting, feeling, and association. Therefore, a cumulative impact on prehistoric cultural resources exists in this area of the foothills.

Despite the implementation of regulations required by state law and protection measures for cultural resources in the County General Plan and Zoning Ordinance, there would be a cumulative impact on cultural resources because of the size and scope of the cumulative projects, the largely undisturbed nature of their locations, and the likelihood of resources similar to MVAD and impacts on them. Although the contributing elements would be preserved, the area between them that provide the setting, feeling, and association for the California Register of Historic Resources and National Register of Historic Places–eligible district would be affected. Even with the implementation of mitigation measures to reduce the VMVSP's direct impacts to a less-than-significant level, the project would result in a cumulatively considerable contribution to a cumulative impact on cultural resources, and the cumulative impact would be significant and unavoidable.

Geology, Soils, Minerals, and Paleontological Resources

Geology and Soils

The proposed project has a variety of site-specific geological and soil concerns. These include seismicity, soil erosion, expansive soils, and potentially fracturing bedrock to create appropriate conditions for construction and foundations. All of these individual impacts can be reduced to a less-than-significant level by project-specific geotechnical investigation, seismic design standards promulgated by the County building codes and ordinances, and mitigation measures. For cumulative projects, as in the proposed project, the geology, mine hazard and soil impacts are specific to the geographic location of the physical resource and can be mitigated depending on those site-specific conditions. Because these impacts are specific to their geographic locations, they typically do not combine to create a cumulative impact. Past, present, and future development impacts would not accumulate with the site-specific impacts of the proposed project.

For individual projects, site-specific soil erosion would be reduced to a less-than-significant level by development and implementation of a stormwater pollution prevention plan (SWPPP) during construction, adherence to the applicable El Dorado County Grading Ordinance, Subdivision Ordinance, Design and Improvement Standards Manual, and Drainage Manual requirements, adherence to the recommendations to minimize erosion, runoff, and sedimentation contained in the required site-specific geotechnical report, and the National Pollutant Discharge Elimination System (NPDES) Municipal Small Separate Storm Sewer System (Small MS4) Permit for post-construction runoff. See *Hydrology, Water Quality, and Water Resources* below for additional information. The cumulative impact would be less than significant.

Minerals

The area considered for cumulative impacts on mineral resources is the immediate project area. Implementation of the proposed project would not result in the loss of availability of important mineral resource sites designated in a land use plan. Implementation of the proposed project could potentially affect known important mineral resources of value to the region or residents of the state, although at a less-than-significant level. Effects of future development on mineral resources that are currently being extracted are unlikely because these sites are identified in the County General Plan and have established buffer zones. New mineral resources might be found in mineral resource zones (MRZ) with MRZ-3 and MRZ-4 designations where new and unanticipated mineral development could be proposed. New mineral resource development would undergo environmental and public review, which might prevent or substantially reduce their development. Consequently, there is the potential for a cumulative impact relative to the availability of important mineral resources. However, the potential for the proposed project to impede access to important mineral resources would be minimal as described in Section 3.5, *Geology, Soils, Minerals, and Paleontological Resources*. Therefore, the proposed project would not result in a considerable contribution to a cumulative impact. The cumulative impact would be less than significant.

Paleontological Resources

The area considered for cumulative impacts on paleontological resources is the immediate project area. Implementation of the proposed project could contribute to regional impacts on paleontological resources. Construction would take place in geologic units sensitive for paleontological resources, such as the limestone deposits and Quaternary alluvium, which are the

units of highest sensitivity in the project area. More than 3,000 records of vertebrate fossils are known from limestone caves in El Dorado County, and three records of vertebrate fossils are known from Quaternary units in El Dorado County (University of California Museum of Paleontology 2013). Although the cave fossils were not discovered in connection with construction, the discovery of fossils in the Quaternary units likely occurred during construction activities and likely indicates that past development has encountered paleontological resources. Excavation for future development can be reasonably expected to damage or destroy important paleontological resources. The greater the extent of excavation, the greater the potential impact on paleontological resources.

The project would result in grading and excavation of portions of the site, thereby creating the potential to contribute to the cumulative damage or destruction of important paleontological resources in the region, if drainages are altered or modified in a manner that would involve substantial disturbance or if caves are encountered. Therefore, combined with other past, present, and probable future projects and programs in the region, construction associated with the project could result in a cumulative impact on paleontological resources. However, implementation of the mitigation measures to protect paleontological resources identified in this EIR would ensure that the project's contribution to any cumulative impact would not be considerable. The cumulative impact would be less than significant.

Greenhouse Gas Emissions

Climate change is a global problem, and GHGs are global pollutants, unlike criteria air pollutants (such as ozone precursors, which are primarily pollutants of regional and local concern). Given their long atmospheric lifetimes, GHGs emitted by numerous sources worldwide accumulate in the atmosphere. No single emitter of GHGs is large enough to trigger global climate change on its own. Rather, climate change is the result of the individual contributions of past, present, and future sources. Therefore, GHG impacts presented in Section 3.6, *Greenhouse Gas Emissions*, are inherently cumulative.

As discussed in Section 3.6 although the VMVSP has a diverse suite of strategies that target area and energy source emissions, many of the measures are voluntary, and there is no guarantee that the action would be incorporated into the project design of all future development. Development under the VMVSP would also generate new vehicle trips, which could conflict with the state's goal to reduce regional per-capita VMT. Construction would result in annual GHG emissions from equipment and vehicles.

Mitigation Measures GHG-1, GHG-2, TRA-2, AQ-2b, and AQ-2c are required to reduce GHG emissions generated during construction and operation of the VMVSP. The purpose of these measures is to require specific project GHG emission reductions consistent with California GHG-reduction targets required in SB 32 for 2030, and to support long-term reductions consistent with the need to eventually reach carbon neutrality statewide pursuant to AB 1279. However, because of the long-term buildout of the project, the availability, affordability, and enforceability of specific GHG reduction strategies (including GHG credits) in the future is unknown. Thus, this EIR conservatively finds that the contribution of GHG emissions associated with the project to cumulative GHG emissions would not be reduced to a less-than-significant impact and could substantially contribute to a significant cumulative impact. This impact would be significant and unavoidable.

Hazards and Hazardous Materials

The area considered for cumulative impacts on hazards and hazardous materials is the immediate project area. Construction of development projects requires use of heavy construction equipment (e.g., excavators, backhoes, grading machines, asphalt machines), the operation and maintenance of which would involve the use and handling of hazardous materials, including diesel fuel, gasoline, lubricants, and solvents. Simultaneous construction of the proposed project and other development projects in the vicinity could potentially result in significant hazards to the public through the routine transport, use, or disposal of hazardous materials, or the release of hazardous materials into the environment. However, compliance with best management practices (BMP), and federal, state, and county regulations regarding hazardous materials would minimize the potential for an accidental release of hazardous materials during construction or operation of the proposed project and other anticipated projects. As discussed in Section 3.7.2, *Environmental Impacts*, the project would have a less-than-significant impact, or less-than-significant impact with mitigation for potential impacts from hazards and hazardous materials. Other cumulative projects would also be subject to the same BMPs, and federal, state, and County regulations regarding hazardous materials; therefore, with the implementation of standard safety measures, no cumulative impact would result.

The El Dorado Hills area is at a moderate to high risk for wildland fire hazards. The proposed project adjoins the proposed LRVSP to the east, and the existing Valley View development to the west, creating a large area surrounded by undeveloped ridgelines. The proposed project and the cumulative projects would introduce new fire hazards or risk to people and structures in the project area. Existing regulations would be in place to minimize fire hazards. To comply with the County's General Plan and Fire Hazard ordinances, development projects are required to take steps to minimize fire risk. These steps include maintaining defensible space and meeting state and local fire code requirements, as well as ensuring adequate water supply and preparing a wildfire safety plan. Project development would generally be limited to slopes less than 30%, and winds are generally mild; therefore, the project would not exacerbate wildfire risks. Because the proposed project, along with all other development projects, would be required to comply with County General Plan Goals 5.7 and 6.2 (which require that projects address protection of life and property through minimization of fire hazards and risks in wildland and developed areas), the El Dorado County Fire Hazard Ordinance, the Vegetation Management and Defensible Space Ordinance (Adopted April 30, 2019), no cumulative impact would result and therefore, there is no cumulative impact to which the project could contribute.

Hydrology, Water Quality, and Water Resources

The cumulative context for hydrology, water quality, and water resources effects (both construction and long-term effects) is the greater Cosumnes and American River watersheds for drainage, flooding, and water quality effects and the South American and Cosumnes River subbasins for groundwater. Most of the approved specific plans and other projects drain to creeks that are tributary to the Cosumnes River. The Promontory Specific Plan is drained by creeks that are tributary to the American River.

Hydrology

Cumulative development would alter drainage patterns through the conversion of undeveloped land to developed uses. This would result in an increase in impervious surfaces, which would change the rate and volume of stormwater runoff across the project site, as well as contribute flows to local

creeks and streams that drain the various locations. Increased water levels in local creeks and streams resulting from stormwater runoff have the potential to cause flooding. In locations where a 100-year flood hazard risk exists, flooding could be exacerbated. The County's Subdivision Ordinance requires drainage plans be submitted prior to the approval of tentative maps. The drainage analysis must include an analysis of upstream, onsite, and downstream facilities, and offsite drainage facilities. Tentative maps must include details on the location and size of proposed drainage structures. The County's Drainage Manual provides standards for design of drainage improvements. As a performance standard, measures must be implemented to provide for no net increase in peak stormwater discharge relative to current conditions to ensure that 100-year flooding and its potential impacts are maintained at or below current levels and that people and structures are not exposed to additional flood risk. The County also regulates development within the 100-year floodplain under its Flood Damage Prevention Ordinance to ensure development does not increase flood risk or expose new uses to flood hazards. All cumulative projects would be required to comply with these requirements and standards.

The proposed project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems because the project includes detention or retention facilities onsite to attenuate peak stormwater runoff to a level that does not affect downstream facilities. All of the flood attenuation will be done at the most downstream road crossing over Marble Creek. The crossing is needed for development, and the temporary storage upstream of the road embankment is readily available. This crossing provides adequate attenuation for stormwater runoff from all of the VMVSP development to ensure it would not contribute to downstream conditions along Deer Creek, which is subject to flooding. If the LRVSP is developed, the onsite system at VMVSP would also provide sufficient attenuation for LRVSP flows, in combination with VMVSP flows. Cumulative hydrology impacts would be less than significant, and the project's contribution would not be cumulatively considerable.

Water Quality

Construction activities in the Marble Creek and Deer Creek watersheds could cumulatively increase sediment loading, thereby negatively affecting water quality if measures are not implemented to control the amount of sediment potentially carried to waterways. New development activities in this watershed, including the proposed project, would involve soil disturbance through activities such as vegetation removal, grading, and excavation. These disturbances would expose the native soil to wind- and water-generated erosion, most likely at accelerated rates. Consequently, surface runoff could transport increased sediment loads. Sediment from erosion can have short- and long-term water quality effects. These effects could include increased turbidity that could result in adverse impacts on fish and wildlife habitat, reduced efficacy of diversion structures, impaired recreation and aesthetic values, and increased downstream flood hazards due to a decrease in channel capacity. Erosive conditions created during grading activities can persist well into the post-construction timeframe. The amount and rate of erosion is variable and depends on factors such as soil characteristics (e.g., susceptibility to erosion), the time of year of construction activities, the intensity and duration of precipitation, the amount of vegetative cover, and other variables. Other potential sources of water quality impairment during construction activities would be the accidental release of petroleum-based fluids used in heavy equipment and machinery, and construction materials that contain hazardous materials or heavy metals.

Post-construction cumulative water quality effects could be expected from continued development in the Marble Creek and Deer Creek watershed. These developments could cumulatively increase

urban contaminant loading, which would adversely affect water quality. Cumulative development in the Marble Creek and Deer Creek watershed, including the proposed project, would result in an increased amount of impervious surfaces that would increase the rate and amount of runoff and which, in turn, would adversely affect existing water quality. The primary sources of pollution would include runoff from roadways and parking lots, runoff from landscaped areas, industrial activities, non-stormwater connections to local drainage systems, accidental spills, and illegal dumping.

All project applicants under existing approved plans and other projects would be required to apply for coverage and comply with the various federal, state, and local permit requirements described in the *Regulatory Setting* section of Section 3.8, *Hydrology, Water Quality, and Water Resources*. These include a *General NPDES Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-006-DWQ)* (Construction General Permit), which requires the development and implementation of a SWPPP. The applicant would be required to prepare and retain a SWPPP at each construction site, describing the characteristics of the site, erosion and sediment control strategies, means of waste disposal, implementation of approved local plans and permit requirements, control of post-construction sediment and erosion control measures and maintenance responsibilities, and non-stormwater management controls. In addition, other federal and state permit requirements (including Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems General Permit No. CAS000004 [Order 2013-001-DWQ] [Small MS4 Permit]) regulate water quality impacts. Other cumulative projects would be "Regulated Projects" as defined in Section E.12 of the order and would be required to comply with the standards provided in the order. Before approving any tentative map, the County (as permittee) will be responsible for ensuring the site design of cumulative projects includes measures required under Section E.12.a (Site Design Measures), E.12.d (Source Control Measures), E.12.e (Low Impact Development Design Standards), and E.12.f (Hydromodification Measures). Other sections of E.12 address the County's responsibilities for documenting compliance with the MS4 Permit. Finally, local ordinances (including the County Grading, Erosion, and Sediment Control Ordinance [Grading Ordinance]) require minimization of impacts from site modification activities. The County's authority to enforce the requirements of the Small MS4 Permit is established in the Stormwater Quality Control Ordinance No. 5022, adopted in May 2015.

The VMVSP contains several policies that require measures be implemented during construction and operation to minimize the potential for adverse water quality impacts, as described in Section 3.8, *Hydrology, Water Quality, and Water Resources*, Impacts WQ-1 and WQ-3iii. Implementation of these policies, along with the County's requirements described above, would reduce the proposed project's contribution to potential water quality impacts and the project's incremental contribution to cumulative water quality impacts would not be cumulatively considerable. Cumulative water quality impacts would be less than significant.

Water Resources

Water supply for the cumulative projects would be supplied by the El Dorado Irrigation District (EID), which currently does not use groundwater as a supply source. There would be no depletion of groundwater supplies or interference with groundwater recharge because the proposed project area is underlain by bedrock and groundwater recharge potential would be limited. In addition, the proposed project would not utilize groundwater resources. There would be no cumulative impact on groundwater resources. For the analysis of cumulative water supply effects associated with surface water supplies, see *Public Services and Utilities*.

Land Use Planning and Agricultural Resources

The area considered for cumulative impacts on land use planning and agricultural resources is western El Dorado County. Build-out of the VMVSP would result in the development of urban and suburban uses on a presently undeveloped site, largely surrounded by undeveloped land and rural residential land uses. The project site is currently zoned for low-density residential development, but the area is currently undeveloped. As described in Section 3.9, *Land Use Planning and Agricultural Resources*, because the project site is not now within a Community Region, the proposed project would be inconsistent with the General Plan goals of focusing development within Community Regions. However, General Plan Policy 2.1.1.6 provides that the boundaries of existing Community Regions may be modified through the General Plan amendment process, and the proposed project includes a General Plan amendment to expand the boundaries of the El Dorado Hills Community Region to include the project site. Therefore, the project's incremental contribution to cumulative General Plan land use inconsistency impacts associated with the development of lands outside Community Regions would not be cumulatively considerable.

The project site is not subject to any habitat conservation plan or natural community conservation plan; therefore, the proposed project would not contribute to cumulative conflicts with applicable habitat conservation plans or natural community conservation plans.

The project site does not contain any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance and as discussed in Section 3.9, *Land Use Planning and Agricultural Resources,* the project would not result in conversion of offsite farmlands to nonagricultural uses. For these reasons, the proposed project would not contribute to cumulative impacts related to agriculture.

No forest land or timberland exists on the project site or vicinity. The proposed project would not contribute to the cumulative loss or conversion of forest land to non-forest uses. Overall, the project's contribution to cumulative land use and agricultural resources impacts would not be cumulatively considerable.

Noise and Vibration

Construction noise and vibration would be localized and, because of the physical nature of how noise dissipates from its source, would primarily affect the land uses in the immediate vicinity of the construction equipment. Thus, no cumulative impact from project-related construction noise is anticipated.

Table 5-3 summarizes traffic noise modeling results under cumulative conditions with and without the project and shows the incremental increase in traffic noise associated with the project. In almost all cases, traffic noise exceeds the County's land use compatibility standards for residential uses (day-night sound level [L_{dn}] 60 decibels [dB] for low density and L_{dn} 65 for high density). As such, significant cumulative traffic noise impacts could occur along these roadways where there are adjacent proposed new residential uses, because the existing noise levels already exceed the compatibility standards and the project would result in additional new sensitive land uses being exposed to excessive noise. Mitigation Measure NOI-1b would reduce the amount of cumulative noise exposure for new sensitive land uses within the project site to a less-than-significant level. Therefore, the proposed project would not result in a cumulatively considerable contribution of noise on new sensitive land uses constructed as part of the project.

In some locations the project is predicted to reduce traffic noise levels. In other locations the project is predicted to increase traffic noise by up to 4.3 dB. An increase of 4.3 dB is expected on Marble Valley Road, east of Marble Ridge Road, where there is a single existing residence adjacent to the roadway. The next highest increase in noise would be 0.8 dB. An increase of 3 dB is generally considered to be the threshold of a perceptible increase in noise, while an increase of 5 dB is considered clearly noticeable. An increase of 4.3 dB therefore would be perceptible but not to all people. However, as discussed in Section 3.10, *Noise and Vibration*, County Policy 6.5.1.12 sets the noise increments that would be considered significant. Because the cumulative noise at Marble Valley Road, east of Marble Ridge Road, without the project would be above 65 dB, the significant noise increment for this location would be 1.5 dB. The increase of 4.3 dB would exceed 1.5 dB and, therefore, would be considered a significant increase. Thus, the project's incremental contribution to significant cumulative noise impacts would be cumulatively considerable.

Table 5-3. Cumulative Traffic Noise on Roadway Segments in the Project Area Vicinity

Roadway	Segment Location	Cumulative L_{dn} (dBA) at 50 Feet from Roadway Centerline	Cumulative + Project L_{dn} (dBA) at 50 Feet from Roadway Centerline	Change in Traffic Noise due to Specific Plan Generated Traffic (dBA)
Bass Lake Road	Green Valley Road to Bridlewood Drive	65.4	65.4	0.0
	Bridlewood Drive to Serrano Parkway	67.6	67.7	0.1
	Serrano Parkway to Hollow Oak Drive	70.8	70.6	-0.2
	Hollow Oak Drive to Country Club Drive	73.0	72.9	-0.1
	Country Club Drive to US 50	73.4	73.3	-0.1
Cambridge Road	Green Valley Road to Oxford Road	63.7	63.8	0.1
	Oxford Road to Knollwood Drive	65.5	65.7	0.2
	Knollwood Drive to Country Club Drive	65.8	66.0	0.2
	Country Club Drive to US 50	68.2	69.0	0.8
Cameron Park Drive	Green Valley Road to Alhambra Drive	68.3	68.3	0.0
	Alhambra Drive to Oxford Road	70.6	70.7	0.1
	Oxford Road to Hacienda Drive	71.7	71.7	0.0
	Hacienda Drive to US 50	72.5	72.5	0.0
Country Club Drive	Bass Lake to Merry Chase Drive	67.4	66.9	-0.5
	Merry Chase Drive to Knollwood	64.2	63.8	-0.4
	Knollwood to Cambridge Road	63.7	63.3	-0.4
	Cambridge Road to Royal Drive	60.1	60.1	0.0
	Royal Drive to Cameron Park Drive	60.9	60.9	0.0
Durock Road	US 50 to Business Drive	67.0	67.3	0.3
	Business Drive to S. Shingle Road	65.1	65.3	0.2
Marble Valley Road	East of Marble Ridge Road	69.2	73.5	4.3
US 50	West of Latrobe/El Dorado Hills	83.7	83.8	0.1
	Between El Dorado Hills and Silva Valley	83.2	83.4	0.2
	Between Silva Valley and Bass Lake	83.4	83.5	0.1
	Between Bass lake and Cambridge Road	82.9	82.9	0.0
	East of Cambridge Road	83.2	83.4	0.2

Source: ICF International and Federal Highway Administration Traffic Noise Model 2.5 Lookup Tables.

Population and Housing

Implementation of the VMVSP would result in development of up to 3,236 residential units, housing approximately 9,227 residents. As described under *General Plan Updated Planning Horizon* in Section 5.2.1, *Cumulative Scenario*, development within the planning horizon of the County General Plan is expected to result in an unincorporated county population of 317,692 people. Using the existing household size of 2.59 persons, the other projects would be expected to increase the county's population by up to 9,441 additional residents, resulting in a cumulative total population, without the proposed project, of 327,133 in unincorporated El Dorado County. Replacing the population associated with the expired 398-unit Marble Valley development agreement—housing an estimated 1,218 people (3.06 people per household as described in the County General Plan EIR)—with the proposed project's 3,236 units (9,902 people) would result in a total project-plus-cumulative population of approximately 337,035. The proposed project would result in an incremental contribution to cumulative population growth in El Dorado County. However, population growth in and of itself does not constitute a physical environmental impact. As described in this chapter, household and population increases would make substantial contributions to cumulative physical environmental impacts on other resources, including increased light and glare; conversion of open space resources; criteria pollutant emissions in excess of EDCAQMD's thresholds; loss of oak woodland, riparian woodland, and chaparral and grassland habitat; impacts on Blainville's horned lizard; restriction of wildlife movement corridors; loss, disturbance, or interference with prehistoric archaeological resources; and decreased effectiveness of the transportation system.

The project area currently contains no housing units. Therefore, development of the project site as proposed would not contribute to the cumulative displacement of existing housing units and people or necessitate the construction of replacement housing elsewhere.

Public Services and Utilities

Fire and Police Protection, Schools, and Libraries

The area considered for cumulative impacts for public services and utilities is the service area for these providers. Buildout of the proposed project would result in the construction of up to 3,236 housing units, including both single-family and multifamily units. The project would not result in substantial adverse physical impacts associated with new governmental facilities or a need for new governmental facilities, including potential impacts on fire and police protection, schools, and libraries.

The proposed project in conjunction with the cumulative projects would increase demand for fire and sheriff services. Given the size of the projects, it is possible that new facilities would at some point in the future need to be constructed. However, it is not possible at this time to determine where or when such a facility would be constructed or how large it would be. The construction of a typical fire or sheriff facility would result in temporary air quality and noise impacts during construction, potential impacts on biological, cultural, and paleontological resources depending upon the location, and minimal traffic and access impacts during operation. Consequently, the proposed project would contribute to this cumulative impact, but it is not possible to determine the extent of the project's contribution. Additionally, construction of any new facilities would be subject to independent CEQA review. Although a cumulative impact likely exists, the degree to which the

proposed project would contribute is speculative and any associated physical impacts would be captured and analyzed in a separate CEQA review process.

The proposed project is expected to result in 3,236 households, which could generate approximately 2,181 school-age children, as described in Section 3.12, *Public Services and Utilities*. Although other anticipated projects would also result in an increase in population within the school districts, which would likely include school-age children, all development incurs taxes to compensate for increased population and expansion of school facilities. The El Dorado Union High School District and the Buckeye Union School District collect taxes via the El Dorado Schools Financing Authority Community Facilities District, which provides funds for capital facilities to serve students generated from the new development (SchoolWorks 2018). It is possible that the proposed project in conjunction with cumulative projects could require the construction of a new school. It is not possible at this time to determine when or where a new facility would be needed or how large it would be. Generally, impacts associated with a typical school include construction-related air quality and noise impacts and operational traffic and access impacts. The construction and operation of schools is the responsibility of the school district. Although the proposed project could contribute to a cumulative impact related to schools, it is not possible to determine the extent to which the project would contribute to the cumulative impact. Additionally, construction of any new facilities would be subject to independent CEQA review. Although a cumulative impact likely exists, the degree to which the proposed project would contribute is speculative and any associated cumulative physical impacts would be captured and analyzed in a separate CEQA review process.

The cumulative impact area for libraries includes the communities of El Dorado Hills and Cameron Park, as library use is generally local. As described in Section 3.12, *Public Services and Utilities*, the typical standard threshold used for planning purposes is a minimum of 0.5 square foot of library space per capita (El Dorado County 2003; Amos pers. comm.). Within El Dorado County, the library square footage per capita of 0.35 falls below the planning standard of 0.50. However, within the project vicinity of El Dorado Hills, the library square footage per capita of the El Dorado Hills and Cameron Park libraries average 0.50, which meets the planning standard. The proposed project would decrease the standard library planning ratio in the area from a current ratio of 0.50 square foot per capita to 0.37 square foot per capita, which would fall below the ratio standard ratio. The addition of more than 9,000 residents to the existing 18,370 people served by the Cameron Park Library would decrease the library's current service ratio from 0.68 to a deficient 0.46 square foot per capita, though still exceeding the countywide average of 0.35. Even if half of the residents used the Cameron Park Library and half used the El Dorado Hills Library, the square footage would be 0.55 and 0.30 square foot per capita, respectively; the El Dorado Hills library would be below the service ratio. With cumulative projects, including the EDHSP, the ratio would be reduced further. However, the reduction of library square footage does not constitute an environmental impact. The standard ratio is not a legal requirement or in the County General Plan, so there is no requirement for the proposed project to meet this standard. As described above for schools and additional students, increased population and potential library patrons would be a social impact (*Goleta Union School District v. Regents of U.C.* 1995). Because the proposed project does not include construction of a new library, there is no physical impact. The project area is located close to the El Dorado Hills Library, a relatively new facility. The proposed project and other development projects within El Dorado Hills and Cameron Park would not likely result in the physical degradation of library facilities, and therefore no cumulative impact is anticipated.

Water Supply

As shown in Table 3.12-13, in Section 3.12, *Public Services and Utilities*, the proposed project is expected to require 2,177 acre-feet of water per year (AFY). The proposed project, combined with existing and proposed development in the EID service area, would result in a total projected demand for 67,295 acre-feet of water in 2035. Excluding recycled supplies, EID's secured water rights and entitlements available for the proposed project total 67,190 acre-feet, which would be insufficient to serve the future demand of the proposed project and all planned future projects. However, in addition to the secured water rights and entitlements, EID has planned water assets. These consist of two additional water supplies for use within its service area to make available for the proposed project: (1) water under the El Dorado–Sacramento Municipal Utility District (SMUD) Cooperation Agreement, in cooperation with the El Dorado Water and Power Agency, and (2) a Central Valley Project water entitlement derived from the El Dorado County Water Agency (EDCWA) Fazio water supply. Upon approval by the State Water Resources Control Board, the El Dorado–SMUD Cooperation Agreement would provide EID with 30,000 AFY of water through 2025 and 40,000 AFY thereafter. The EDCWA Fazio water could provide EID with an additional 7,500 AFY of water from Folsom Reservoir; however, with EID's existing water rights, there is no near-term plan to use the Fazio water (Appendix H, *Water Supply Assessment*:4-8). At some point in the future EID may enter into an Agreement with EDCWA to use up to 7,500 AFY of that water. These planned water assets, although partially secured, are not yet fully available for EID's use. In normal years, the water supplies under these planned assets total 37,500 AFY. In dry years, the water supplies under these planned assets total 10,625 AFY (Appendix H, *Water Supply Assessment*:4-15). EID's water supplies associated with the entire secured and planned water assets total 110,290 acre-feet per year. See the *Water Supply, Conservation, and Wastewater Service* section of Section 3.12, *Public Services and Utilities*, for additional details about EID's existing and planned water supplies. Therefore, considering the planned water assets, the water supply assessment (WSA) (Appendix H, *Water Supply Assessment*) concludes that EID should have sufficient water available to meet the needs of the proposed project and all other demands in its service area through 2035 and that no new or expanded entitlements would be needed. Therefore, the project's contribution would not be cumulatively considerable.

Wastewater

EID would provide wastewater service for the project site and therefore, the cumulative analysis focuses on proposed development within the EID service area, which corresponds to the central portion of west slope El Dorado County served by the Deer Creek WWTP. EID projects that the Deer Creek WWTP will approach permitted capacity of 3.6 million gallons per day (mgd) in 2022 under the low growth scenario and in 2032 under the high growth scenario, based on County General Plan planning horizon (2025), estimates of areas for future known densities, and estimate of areas for future unknown densities (El Dorado Irrigation District 2013a). EID has determined a capacity of 5.0 mgd for the Deer Creek WWTP will be necessary to accommodate future flows and currently plan to have the expanded facility operational by 2029 (El Dorado Irrigation District 2013b:151).

The expected future flows into the Deer Creek WWTP include zoning for the existing project area, which totals 0.29 mgd, as described in Section 3.12, *Public Services and Utilities*, Impact PSU-2. After subtracting that, adding in the 0.79 mgd expected under the VMVSP, and the projected wastewater that would be generated from the other projects listed in Table 5-2 that would also be treated at the Deer Creek WWTP, total wastewater generation would total 5.94 mgd (Table 5-4). This would exceed the planned and permitted capacity of 5.0 mgd. As an industry standard practice, EID

monitors growth and plans to meet future demands generated by authorized development. If the VMVSP is approved by the County Board of Supervisors, the next revisions to the EID *Wastewater Facilities Master Plan* will reflect updated future demand calculations, and general plan amendments will be reviewed and used as a basis for analysis of future needs to identify what improvements would be required to accommodate additional flows and the timing for when such improvements would be necessary. EID's current estimate for plant expansion to 5.0 mgd by 2029 is within the facility planning assumptions evaluated in the certified Deer Creek WWTP Expansion Project EIR, which assumed expansion up to 10.0 mgd. Although the proposed project would contribute incrementally to the need for expansion, it would not result in changes to the construction and operational assumptions and associated environmental impacts beyond those identified in the Deer Creek WWTP Expansion EIR. In addition, mitigation measures identified in the Deer Creek WWTP Expansion Project EIR to reduce or avoid potential impacts of expansion would be implemented by EID. The project's contribution to the demand for wastewater facilities would not be the sole reason for WWTP expansion and would be less than cumulatively considerable.

Table 5-4. Future Wastewater Generation for Deer Creek WWTP

Land Use	Wastewater for Deer Creek WWTP (mgd)
Existing ADWF	2.64
Future unplanned density ADWF	2.25
Future planned density ADWF (including 0.09 for Marble Valley 395 EDUs)	0.11
Expected total for 2025	5
Proposed VMVSP (3,236 EDUs, 87 acres Industrial, 57 acres Commercial, as described in Table 3.12-12)	0.79
Expected total with VMVSP	5.79
Other projects from Table 5-2	0.45
Total expected wastewater in 2025	5.94

Source: El Dorado Irrigation District 2013b:93.
ADWF = average daily wastewater flow
EDU = equivalent dwelling unit
gpd = gallons per day
mgd = million gallons per day
WWTP = wastewater treatment plant

Solid Waste

The area examined for cumulative conditions for solid waste is El Dorado County. Construction of cumulative projects and the proposed project would result in solid waste generation. The County's existing Construction and Demolition Debris Diversion Ordinance requires project applicants and their construction contractors to reuse or recycle a minimum of 50% of the construction and demolition debris, and Policy 9.29 of the VMVSP requires project applicants and their construction contractors to reuse or recycle a minimum of 65% of their construction and demolition debris.

As described in Impact PSU-6 in Section 3.12, *Public Services and Utilities*, the proposed project could generate a total of 64,037 tons of solid waste per year (or approximately 175 tons per day), which would be diverted to the Diamond Springs Material Transfer Facility in El Dorado County, with the remaining waste that could not be diverted sent to either Lockwood Landfill or Potrero Landfill. The Diamond Springs material recovery facility can process 400 tons of waste per day, and currently

processes approximately 70 tons per day (Ross pers. comm.). Therefore, the additional 193 tons expected from proposed and expected projects would still be well below capacity for this facility. The Potrero Hills Landfill can accept 4,330 tons per day. In 2012, it processed an average of 1,096 tons per day (Potrero Hills Landfill 2013). The additional 193 tons expected from the proposed project and other projects would still be well below that capacity. The Lockwood Landfill processes about 5,000 tons of waste per day (Nevada Division of Environmental Protection 2013). It is permitted for a capacity of approximately 265 million cubic yards, or between 371 and 530 million tons (Eckert pers. comm.). As of May 2014, it had approximately 268 million cubic yards remaining, or between 375 and 536 million tons (Eckert pers. comm.). Therefore, the additional 193 tons per day would, would not exceed the landfill's capacity. Additionally, these estimates are conservative because they do not include recycling waste that would not be diverted, and it is unlikely that all waste from these projects would go to only one landfill. In summary, solid waste generated from the proposed project would be less than cumulatively considerable, and when combined with other anticipated projects, would not result in a cumulative impact.

Electricity/Natural Gas and Energy Conservation

Since energy legislation adopted by California and local governments is intended to conserve statewide and regional energy consumption, projects that conflict with applicable plans and policies would contribute to a cumulative energy impact. Accordingly, for the purposes of this analysis, the proposed project would result in a significant cumulative impact if it conflicts with applicable state or local energy standards; as such, the project-level and cumulative impact determinations are identical. As discussed in Section 3.12, *Public Services and Utilities*, the proposed project would incorporate energy-saving measures required by state and local energy policies, including the California Green Building Standards Code and Title 24, enacted since the 1970s to improve energy efficiency and reduce waste. Policies outlined in the VMVSP would also further reduce energy consumption beyond state recommendations. Therefore, the proposed project would assist the region in meeting energy reduction targets established in statewide legislation. Because the proposed project would not conflict with applicable state or local energy standards, it would not result in a cumulative contribution to a significant cumulative impact.

Recreation

The area examined for purposes of analyzing cumulative impacts on parks and recreational facilities consists of the area within the El Dorado Hills Community Services District (CSD) and the adjacent Cameron Park CSD. As described in Section 3.13, *Recreation*, the El Dorado Hills CSD provides parks and recreation facilities and services to residents of the El Dorado Hills area, including the VMVSP, and a small section of the Cameron Park CSD's southwestern boundary borders the project site's northern boundary.

The El Dorado County General Plan EIR states that projected residential development in conformance with the County General Plan would increase demand for parks and recreation facilities, constituting a significant impact on the deterioration of such facilities. Mitigation included in the County General Plan EIR and adopted and incorporated into the 2004 County General Plan, consists of Policy 9.2.2.2 and Policy 9.2.2.5, which ensure funding mechanisms for the development, operation, and maintenance of park facilities. Implementation of these policies reduces the stated impact to a less-than-significant level and requires, in addition to Quimby Act obligations, that new developments fund park and recreation improvements and acquisition of parklands to meet minimum neighborhood, community, and regional park standards.

Buildout of the other projects that comprise the remainder of the cumulative development conditions would add 4,026 housing units to those anticipated under the County General Plan, as well as approximately 40 acres of parkland (Table 5-2). Compliance with County General Plan Policies 9.2.2.2 and 9.2.2.5, as well as Quimby Act requirements as implemented by County Code Section 16.12.090, would be required of these projects; this compliance would ensure that the individual projects meet minimum park standards and result in less-than-significant impacts on the physical deterioration of parks and recreational facilities.

Implementation of the proposed project would result in the construction of up to 3,236 housing units, including 1,963 single-family and 1,209 multifamily units, as well as 50 residential units in the Village Commercial district and 14 units in Agri-Tourism. Using the County's park planning ratios of 3.3 park users per single-family unit and 2.1 park users per multifamily unit, project implementation would increase the park-user population by approximately 9,168 in an area currently deficient in village and community parkland acreage and trigger Quimby Act, County General Plan, and El Dorado Hills and Cameron Park CSD requirements as described in Section 3.13, *Recreation*. However, the VMVSP includes development of parkland in excess of those requirements, as well as additional open space, a pedestrian trail network, a network of Class I bike paths and, if LRVSP is approved, connection to the El Dorado Trail through the LRVSP project area. Because the proposed project would establish open space and active recreational opportunities that exceed the parkland dedication requirements of the Quimby Act, the County General Plan, and the El Dorado Hills and Cameron Park CSDs, implementation of the VMVSP would not be expected to contribute to any cumulative deterioration of existing park facilities.

The proposed project would provide new parkland within the VMVSP that would accommodate existing and project-related residents in the El Dorado Hills and Cameron Park CSDs and would not require the construction of additional parks and recreations facilities. Therefore, the project would not contribute to cumulative impacts related to the construction of new park facilities.

Transportation

Under cumulative conditions, the proposed project could contribute to transportation impacts.

Vehicle Miles Traveled

Under cumulative conditions in 2040, without the proposed project, residential VMT is projected to be 17.1 per capita and commercial VMT is projected to be 12.0 per employee (Tables 5-5 and 5-6). With the project, residential VMT is projected to be 14.6 per capita, which is more than 14.5 or 85% of 17.1. Therefore, the proposed project would exceed thresholds for residential VMT efficiency under cumulative conditions. Commercial VMT is projected to be 6.9 per employee, which is less than 10.2 or 85% of 12.0. The proposed project would not exceed VMT thresholds for commercial VMT efficiency under cumulative conditions. VMT efficiency impacts are considered to be a combination of the residential and commercial components. Therefore, the proposed project would contribute to a cumulative impact. However, implementation of Mitigation Measure TRA-1 to shift some land use to commercial retail identified in this EIR would ensure that the project's contribution to any cumulative impact would not be cumulatively considerable.

Table 5-5. Village of Marble Valley Specific Plan's VMT, Residential Component (Cumulative)

Scenario	Analysis Geography	VMT	Total Population	VMT per Capita
2040 Baseline	Unincorporated El Dorado County	3,102,953	181,914	17.1
2040 Baseline Plus Project	Project Area	139,252	9,537	14.6
VMT Threshold Exceeded?				**Yes**

Source: Fehr & Peers 2021.

Table 5-6. Village of Marble Valley Specific Plan's VMT, Commercial Office Component (Cumulative)

Scenario	Analysis Geography	VMT	Total Employment	VMT per Employee
2040 Baseline	Unincorporated El Dorado County	675,594	56,413	12.0
2040 Baseline Plus Project	Project Area	11,775	1,704	6.9
VMT Threshold Exceeded?				**No**

Source: Fehr & Peers 2021.

Mitigation Measure TRA-2: Shift 25,000 square feet of commercial office land use to commercial retail land use

Pedestrian and Bicycle Circulation

Implementation of the proposed project, along with other nearby projects, will increase demand for pedestrian and bicycle facilities. Bicycle network improvements are planned within the study area. Figure 3.14-4 in Chapter 3, *Impact Analysis*, identifies planned bikeways presented in the El Dorado County Active Transportation Plan and the 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy. In addition to these improvements in the area, the proposed project includes a number of additional bicycle and pedestrian facilities, as shown in Figure 2-8 in Chapter 2, *Project Description*, including a Class I multi-use path on Marble Valley Parkway, Marble Lake Boulevard, and Lime Rock Valley Road, and a network of gravel trails and unpaved hiking trails. The proposed Class I path along Lime Rock Valley Road would connect through the proposed LRVSP area to the El Dorado Trail (if the County approves the LRVSP). Additionally, sidewalks may be provided on one or both sides of local residential streets.

The provision of these facilities would support County General Plan Goal TC-4 and policies related to providing safe routes to school (specifically, Policies TC-4a and TC-4i) by providing new bicycle lanes or multi-use paths or trails along Marble Valley Road, Marble Lake Boulevard, Lime Rock Valley Road, and other areas within the VMVSP area, which will provide bicycle and/or pedestrian access from residential areas to the proposed elementary or middle schools on the north side of the project area.

These improvements, along with improvements associated with future cumulative conditions, would connect and integrate with existing and planned facilities adjacent to the project, and there would be no cumulative impact related to conflicts with adopted policies, plans, or programs regarding bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. Therefore, the project could not contribute to a cumulative impact.

Transit

The project would provide a 100- to 120-space park-and-ride lot. To accommodate possible future public transit service, transit stops, and bus shelters may be provided in the project area on Marble Valley Parkway and Marble Lake Boulevard near the intersection of Lime Rock Valley Road.

As described in Section 3.14.1, *Existing Conditions*, demand exceeds capacity at the El Dorado Hills park-and-ride lot and existing capacity available at the Cambridge Road park-and-ride lot would likely be exceeded after accounting for additional development associated with cumulative conditions. Therefore, this would be a significant cumulative impact. About one annual commute trip is generated per El Dorado Hills resident, assuming a population of 42,100 (U.S. Census Bureau 2010) in El Dorado Hills. Assuming a household population of 2.6 persons, the project's 3,236 dwelling units could result in demand for about 8,400 annual commute trips, or about 32 commute trips per weekday. Because trips are counted as one-way and because at least 100 parking spaces would be provided for park-and-ride use, the proposed project would not be anticipated to have an effect on existing park-and-ride capacity. If this capacity is provided prior to the half-way point of development of the project, its impact related to transit would not be cumulatively considerable. If, however, additional park-and-ride capacity of 16 or more parking stalls were not provided prior to project development, this would result in a considerable contribution to a significant cumulative impact. Implementation of Mitigation Measure TRA-1, which requires park-and-ride facilities, would reduce the proposed project's contribution to this impact such that it would be less than cumulative considerable.

Mitigation Measure TRA-1: Provide alternative park-and-ride facilities

Emergency Access

The proposed project would provide two main points of access from the US 50/Bass Lake Road and US 50/Cambridge Road interchanges, and an emergency vehicle access point to the west toward the Valley View Specific Plan area. A third access point to the east toward Deer Creek Road would become an extension Lime Rock Valley Road upon implementation of the LRVSP. All roads would comply with the 2019 California Fire Code, California Code of Regulations, Title 24, Part 9, Chapter 5, Section 503 and Title 14, California Code of Regulations, Division 1.5, Chapter 7, Subchapter 2, Article 2, and Emergency Access, Section 1273.01 of the Fire Safe Regulations and County Design and Improvement Standard. The proposed project would also improve emergency connections to the existing controlled emergency vehicle access points, where feasible and as required by emergency responders. Additionally, emergency access to and through the project area would be maintained during construction activities associated with the project. Therefore, there would not be a significant cumulative impact associated with emergency access.

5.3 Growth-Inducing Impacts

Section 21100(b)(5) of CEQA requires an EIR to discuss how a project, if implemented, may induce growth and disclose the impacts of that induced growth (see also State CEQA Guidelines 15126). CEQA requires the EIR to discuss specifically "the ways in which the Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment" (State CEQA Guidelines 15126.2(d)). The State CEQA Guidelines do not provide specific criteria for evaluating growth inducement and state that growth in any area is not

"necessarily beneficial, detrimental, or of little significance to the environment" (State CEQA Guidelines 15126.2(d)). CEQA does not require separate mitigation for growth inducement as it is assumed that these impacts are already captured in the analysis of environmental impacts (see Chapter 3, *Impact Analysis*). Furthermore, Section 15126.2(d) of the State CEQA Guidelines requires that an EIR "discuss the ways" a project could be growth inducing and to "discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment."

According to the State CEQA Guidelines, a project would have potential to induce growth if it would result in either of the following.

- Remove obstacles to population growth (e.g., through the expansion of public services into an area that does not currently receive these services), or through the provision of new access to an area, or a change in a restrictive zoning or County General Plan land use designation.
- Result in economic expansion and population growth through employment opportunities and/or construction of new housing.

In general, a project could be considered growth inducing if it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be demonstrated that the potential growth significantly affects the environment in some other way. However, the State CEQA Guidelines do not require a prediction or speculation of where, when, and in what form such growth would occur (State CEQA Guidelines 15145).

5.3.1 Remove Obstacles to Growth or Provide New Access

The proposed project includes an amendment of the County General Plan and would connect the project area to existing public services, including wastewater and water service, through offsite improvements. New roadways and connections to existing roadways would be constructed to accommodate the proposed project. These infrastructure improvements, combined with the project's County General Plan amendment and rezoning, would remove an existing obstacle to growth at the project site and would allow the conversion of more acreage to urban use than is currently allowed. The proposed project is currently surrounded by rural, low-density residential development. The proposed project's infrastructure and connections to services and facilities would generally be proportionate to the level necessary to accommodate the project and, therefore, would not in themselves increase development potential of properties outside of the project site that were not planned for development in the project description or the County General Plan. However, some offsite improvements, such as the water and wastewater connections that would exceed capacity necessary for the project or roadways that would be "overbuilt," would provide additional capacity. These facilities would be constructed to accommodate future needs assessed by EID based on the County General Plan and estimates of future known and unknown densities, or the County and would accommodate cumulative conditions anticipated at the County General Plan planning horizon but would not be a catalyst for new growth.

The proposed project also includes an amendment to the El Dorado Hills Community Region to include the plan area. This results in an island area between the proposed VMVSP and Valley View that is completely surrounded by the El Dorado Hills Community Region. There is no requirement by the County that this island area be incorporated into the community region. This area is currently developed and consists of large lots supplied with onsite utilities (septic systems and wells) and these residences are not anticipated to require services. Therefore, it is unlikely that expansion of

the El Dorado Hills Community Region to include the VMVSP would result in the island area being forced to be included in the El Dorado Hills Community Region. Therefore, the project would not induce further growth in the already developed island area.

5.3.2 Economic, Population, and Housing Growth

The proposed project would directly affect the population and housing growth in the project area by increasing the number of housing units by 3,236, representing an additional 9,000+ people. The existing adopted plans designate the project area as open space and low-density residential (5-acre lots). Current entitlements and land use designations for the project site would allow development of up to 398 low-density residential units that would house an estimated population of 1,218. The proposed project would require, among other things, an amendment to the County General Plan, rezoning, and rescission of the existing Marble Valley Master Plan and tentative maps; however, the proposed VMVSP land use would remain consistent with the residential land use plan for the area. El Dorado County's population is anticipated to increase by more than 20,000 from 2010 to 2020, and by more than 50,000 from 2010 to 2030; these projections indicate a trend of continuing growth in unincorporated El Dorado County. The additional housing units and population associated with the proposed project would directly contribute to population growth in El Dorado County.

5.4 Significant and Unavoidable Impacts

Public Resources Code Section 21067 and State CEQA Guidelines Sections 15126(b) and 15126.2(b) require that an EIR describe any significant impacts, including those that can be mitigated but not reduced to a less-than-significant level. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should also be described.

A significant and unavoidable impact is one that would cause a substantial adverse effect on the environment and for which no mitigation is available to reduce the impact to a less-than-significant level. Most of the impacts of the VMVSP would be less than significant or would be mitigated to a less-than-significant level. The impacts below are those that would remain significant and unavoidable after mitigation.

Aesthetics

- Impact AES-1: Temporary visual impacts caused by construction activities
- Impact AES-2: Have a substantial adverse effect on a scenic vista
- Impact AES-3: Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings along a scenic highway
- Impact AES-4: 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, conflict with applicable zoning and other regulations governing scenic quality
- Impact AES-5: Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area

Air Quality

- Impact AQ-1: Conflict with or obstruct implementation of the applicable air quality plan
- Impact AQ-2b: Result in a cumulatively considerable net increase of any criteria pollutant during operation for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard
- Impact AQ-2c: Result in a cumulatively considerable net increase of any criteria pollutant during combined construction and operation for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard
- Impact AQ-3a: Expose sensitive receptors to substantial toxic air contaminant concentrations and health risks from equipment and vehicle exhaust
- Impact AQ-3c: Expose sensitive receptors to substantial criteria pollutant concentrations

Geology, Soils, Minerals, and Paleontological Resources

- Impact GEO-7: Be located on a subterranean mine that has a shaft, vent, or adit open to the surface

Greenhouse Gases

- Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment
- Impact GHG-2: Conflict with applicable plan, policy or regulation adopted for the purpose of reducing emissions of greenhouse gases

Noise and Vibration

- Impact NOI-1a: 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 County General Plan or noise ordinance as a result of construction activities
- Impact NOI-1b: 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 County General Plan or noise ordinance from project-generated traffic within the VMVSP project area
- Impact NOI-4: Result in noise impacts due to activities associated with project offsite improvements

Population and Housing

- Impact POP-1: Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)

In addition to the significant and unavoidable direct impacts listed above, the project also would result in considerable contributions to significant and unavoidable cumulative impacts in the following resource areas, as described in Section 5.2.2*, Analysis of Potential Cumulative Impacts.*

- Aesthetics
- Air Quality

- Biological Resources
- Cultural Resources
- Greenhouse Gas Emissions
- Noise and Vibration
- Population

5.5 Significant Irreversible Environmental Changes

Section 15126.2 (c) of the State CEQA Guidelines requires that an EIR address any significant irreversible changes that would result from a proposed project and provides the following direction for the discussion of irreversible changes.

> 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 ensure that current consumption is justified.

The State CEQA Guidelines describe three distinct categories of significant irreversible changes, specifically changes in land use that would commit future generations to specific uses; irreversible changes from environmental actions; and consumption of nonrenewable resources.

The construction of residential development and associated amenities would result in the development of undeveloped land, which is a long-term commitment. Although more than half of the project area would remain in open space, 797 acres of currently undeveloped land would be developed in low-, medium- and high-density residential uses, another 87 acres in parks and public facilities, 57 acres in commercial uses, and 61 acres in roads and landscaped lots. Therefore, a total of 1,057 acres of previously undeveloped land would be developed. Because of the large commitment of capital and infrastructure necessary for site development, it is improbable that the site, once developed, would revert to its current, primarily undeveloped, open space use in the future.

Irreversible environmental changes would result from the actions associated with the conversion of a largely undeveloped site to suburban uses. Implementation of the proposed project would include construction of structures, roads, and other infrastructure, which would be composed of a variety of nonrenewable (e.g., metal, gravel, concrete), or slowly renewable resources (wood) and would be fueled using primarily nonrenewable fossil fuel sources. In addition, consumption of resources would continue in association with the land uses allowed under the VMVSP. Residential, park, public facilities, and commercial uses would use energy and public utilities. However, the proposed Sustainability Element of the VMVSP outlines and requires the execution of a number of sustainable development strategies. These strategies include recycling and reuse of construction materials, exceeding energy efficiency standards for building, encouraging alternate means of transportation through design, and incorporating energy and water conservation techniques. Implementation of these strategies would minimize the proposed project's consumption of nonrenewable resources.

5.6 Mitigation Measures with the Potential for Environmental Effects under CEQA

Section 15126.4(a)(1)(D) of the State CEQA Guidelines provides that, "[i]f a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measure shall be discussed but, in less detail, than the significant effects of the project as proposed." For each impact considered significant in this EIR, mitigation measures have been designed that would reduce the severity of the impact. However, some of these mitigation measures have the potential to result in significant impacts. In general, these measures require construction activities and/or ground disturbance. The following sections provide an impact analysis of those mitigation measures.

5.6.1 Geology, Soils, and Paleontological Resources Mitigation Measures

Mitigation Measure GEO-1: Incorporate mitigation measures identified in geotechnical reports and use standard engineering practices to mitigate for non-engineered fill slope instability around the North Quarry

Under this measure, it may be necessary to remove fills and replace them with engineered fills, which could result in environmental impacts.

Mitigation Measure GEO-3c: Ensure stability of South Quarry pit (Monolith Event Center)

Under this measure, it may be necessary to stabilize the sides of the quarry (Marble Lake), which could result in environmental impacts.

Potential Environmental Effects of Geology, Soils, and Paleontological Resources Mitigation Measures

Removal and replacement of fills would include activities such as excavation, grading, and recontouring, which could cause environmental effects through ground disturbance, noise, air emissions, and traffic disruptions. The ground-disturbing activities would be concentrated in the vicinity of the North and South Quarry pits. These ground-disturbing activities, depending on their location and magnitude, could create short-term or long-term adverse effects related to species habitats; cultural resources; geology, soils, and paleontological resources; or developed and undeveloped land uses. Disturbances would be minimized by implementing Mitigation Measures BIO-1a, BIO-1b, BIO-1c, BIO-1d, BIO-2, BIO-3a, BIO-3b, BIO-7, BIO-8, BIO-10a, BIO-10b, BIO-11a, BIO-11b, CUL-1b, CUL-1d, CUL-3, GEO-3a, GEO-3b, GEO-3c, GEO-3d, GEO-10a, GEO-10b, and GEO-10c.

Increased noise would result from excavation, grading, and recontouring, which would have the potential to expose sensitive receptors and noise-sensitive land uses to excessive noise. However, construction-related noise impacts would be minimized and reduced through implementation of Mitigation Measure NOI-1a and by adopting practices to reduce effects on noise-sensitive land uses.

Increased criteria pollutants and GHGs would result from the operation of excavation equipment, as well as from use of trucks hauling materials. Mitigation Measures AQ-2b, AQ-2c, AQ-2d, AQ-2e, and GHG-1 would be available to address emissions associated with implementing these improvements.

Traffic may also be disrupted as a result of construction traffic. As described in Impact TRA-4 in Section 3.14, *Transportation and Circulation*, Mitigation Measure TRA-4 would be available to reduce the severity of this impact. Overall, impacts associated with implementation of these mitigation measures would be less than significant.

5.6.2 Hazards and Hazardous Materials Mitigation Measures

Mitigation Measure HAZ-2c: Conduct additional sampling and analysis of soils containing Total Petroleum Hydrocarbons

Under this measure, it may be necessary to remediate contaminated soils, which could result in environmental impacts.

Potential Environmental Effects of Hazards and Hazardous Materials Mitigation Measures

Remediation activities would include activities such as excavation, grading, and recontouring, which could cause environmental effects through ground disturbance, noise, air emissions, and traffic disruptions. Ground-disturbing activities, depending on their location and magnitude, could create short-term or long-term adverse effects related to species habitats; cultural resources; geology, soils, and paleontological resources; or developed and undeveloped land uses. Disturbances would be minimized by implementing Mitigation Measures BIO-1a, BIO-1b, BIO-1c, BIO-1d, BIO-2, BIO-3a, BIO-3b, BIO-7, BIO-8, BIO-10a, BIO-10b, BIO-11a, BIO-11b, CUL-1b, CUL-1d, CUL-3, GEO-3a, GEO-3b, GEO-3c, GEO-3d, GEO-10a, GEO-10b, and GEO-10c.

Increased noise would result from excavation, grading, and recontouring, which would have the potential to expose sensitive receptors and noise-sensitive land uses to excessive noise. However, construction-related noise impacts would be minimized and reduced through implementation of Mitigation Measure NOI-1a and by adopting practices to reduce effects on noise-sensitive land uses.

Increased criteria pollutants and GHGs would result from the operation of excavation equipment, as well as from use of trucks hauling materials. Mitigation Measures AQ-2b, AQ-2c, AQ-2d, AQ-2e, and GHG-1 would be available to address emissions associated with implementing these improvements.

Traffic may also be disrupted as a result of construction traffic. As described in Impact TRA-4 in Section 3.14, *Transportation and Circulation*, Mitigation Measure TRA-4 would be available to reduce the severity of this impact. Overall, impacts associated with implementation of these mitigation measures would be less than significant.

5.6.3 Transportation Mitigation Measures

Mitigation Measure TRA-1: Provide alternative park-and-ride facilities

Under this measure, it may be necessary to provide for or contribute to the provision of 16 additional parking stalls at an existing park-and-ride facility.

Mitigation Measure TRA-2: Shift 25,000 Square Feet of Commercial Office Land Use to Commercial Retail Land Use

Under this measure, the county will require the applicant to change their development plans to include shifting 25,000 square feet of commercial office land use to commercial retail land use.

Potential Environmental Effects of Transportation Mitigation Measures

Activities associated with these mitigation measures, such as grading or installing new or reconstructed surface treatments, could cause environmental effects through ground disturbance, noise, air emissions, and traffic disruptions. Ground disturbances would result from activities such as grading and reconstruction. These ground-disturbing activities, depending on their location and magnitude, could adversely affect species habitats both in the short and long terms. Disturbances would be minimized by implementing Mitigation Measures BIO-1a, BIO-1b, BIO-1c, BIO-1d, BIO-7, BIO-8, BIO-10a, BIO-11a, BIO-1, BIO-12, BIO-13, BIO-14.

Increased noise would result from grading and reconstruction, which would have the potential to expose sensitive receptors and noise-sensitive land uses to excessive noise. However, construction-related noise impacts would be minimized and reduced through implementation of Mitigation Measure NOI-1a and by adopting practices to reduce effects on noise-sensitive land uses.

Increased criteria pollutants and GHGs would result from the operation of excavation equipment at the existing park-and-ride facility, as well as from use of trucks hauling materials. Mitigation MeasuresAQ-2b, AQ-2c, AQ-2d, AQ-2e, and GHG-1 would be available to address emissions associated with implementing these improvements. The redesignation of 25,000 square feet among land use types (commercial office to commercial retail) may have some slight changes in non-mobile source emissions levels (e.g., energy consumption), but the overall magnitude or intensity would not be significant because the total square footage of non-residential land use would remain the same. The proposed mitigation would reduce VMT, resulting in a commensurate reduction in operational GHG and criteria pollutant emissions from mobile sources. Traffic volumes may experience an increase of up to 20 and 68 vehicles during the AM and PM peak hours, respectively, with the largest increase occurring at the project site. Intersections further from the project site would experience less increase. However, the increase in peak hour trip generation would not result in congested conditions and consequently, would not result in a new (or more severe) localized carbon monoxide impact.

Traffic may also be disrupted as a result of the proposed park-and-ride facility caused by associated roadwork. As described in Impact TRA-1 in Section 3.14, *Transportation and Circulation*, Mitigation Measure TRA-1 would be available to reduce the severity of this impact. Overall, impacts associated with implementation of these mitigation measures would be less than significant.

5.7 Potential Indirect Effects Associated with Secondary Dwelling Units

5.7.1 Background

The VMVSP Land Use Diagram identifies 10 land use designations that are consistent with the El Dorado County General Plan. Three residential designations that provide for 3,172 units (single-family and multi-family combined) accommodate a variety of housing types and each residential designation establishes an average density. The residential component of the VMVSP includes three land use designations to achieve the vision of housing diversity. The VMVSP supports the development of small and large conventional-style detached units, and higher-density attached and detached product types to appeal to the aging population and changing demographics. Of the three residential land use designations, the Village Residential - Low (VRL) land use designation creates neighborhoods composed of individually owned, single-family detached homes. Under the proposed VMVSP, up to 1,963 dwelling units could be constructed in this designation. The VRL designation allows one single-family dwelling and one secondary dwelling unit per legal lot. The VMVSP does not propose secondary dwelling units nor is the applicant requesting entitlements for secondary units.

General Plan Housing Element Policy HO-1.24 encourages second dwelling units to provide housing that is affordable to very low-, low- and moderate-income households. The current Housing Element (2021–2029) has established, among other objectives to meet regional housing needs, a goal of 584 second dwelling units (Housing Element Measure HO-9). County Code of Ordinances Chapter 130.31, Affordable Housing Density Bonus, further establishes specific requirements to implement Housing Element provisions. Section 130.40.300, Secondary Dwellings, states that the County implements California Government Code Section 65852.150 et seq. regarding secondary dwellings. If the VMVSP is approved, it is therefore reasonably foreseeable that secondary dwelling units would likely be constructed within the VMVSP. There is no County requirement, however, that the income level restrictions be applied to the secondary dwelling units.

The County Code of Ordinances Section 130.24.030 sets forth the development standards for secondary dwelling units on a lot with a single-family dwelling. These standards identify maximum floor areas for secondary dwellings relative to the size of the primary dwelling, setbacks, height limits, lot coverage, and other requirements of the zone in which it is located. The secondary dwelling may be attached to the primary dwelling or detached. Typically, the secondary dwelling units range from a studio to one or two bedrooms (much like an apartment).

5.7.2 Secondary Dwelling Unit Development Potential in VMVSP

Not all of the 1,963 lots within the VRL designation in the VMVSP would have a secondary dwelling unit. Secondary dwelling units would only be permitted on certain size lots, and the amount of land remaining to develop a secondary dwelling unit would depend on the primary house size. This information is not available at this stage of the planning process. However, the historical number of secondary dwelling permits issued by the County relative to all single-family building permits issued, including the applicant's Serrano development, is an indicator of the potential number of units. During the period 2008-2014, the County issued 70 secondary dwelling unit permits countywide. There were no permits issued for parcels within the Serrano development. Compared

to the total number of single-family residential permits countywide during the same time period (1,411), the number of secondary dwelling units represents approximately 5% of residential permits on a countywide basis.

The VMVSP proposes a total of 1,963 units within the VRL land use designations. Based on an assumption that 5% could have secondary dwelling units on the same lot, this would be approximately 98 units.

5.7.3 Regulatory Considerations Pertaining to CEQA Review

State law (Government Code 65852.150) requires local agencies to provide a ministerial approval option for secondary dwelling units. Through its adoption of Section 130.40.300 of the County Code of Ordinances, the County has established that secondary dwelling units may be approved as a ministerial action. Section 130.40.300.B of the code states that in all zones that permit single-family residential development, the construction of a new structure for the purpose of creating a secondary dwelling is allowed by right in most situations. That is, the issuance of a building permit for a secondary dwelling is a ministerial, not discretionary action. Public Resources Code Section 21080 and State CEQA Guidelines Section 15268(a) establishes that ministerial projects are exempt from the requirements of CEQA.

As noted above, the project applicant is not requesting any entitlements for secondary dwelling units. However, it is reasonably foreseeable that secondary dwelling units could be constructed within the VMVSP because it provides a land use designation that would allow such use. Consequently, this is considered an indirect (or secondary) effect of the proposed project, which does require evaluation under CEQA (State CEQA Guidelines 15126.2(a)).

5.7.4 Potential Environmental Effects of Construction and Occupancy of Secondary Dwelling Units

Secondary dwelling units may only be constructed on single-family residential lots in the VRL designation. Potential impacts that are associated with ground disturbance such as biological resources, cultural resources, geology/soils, construction site runoff, and hazardous materials use in equipment would be as described for the proposed project because they would occur within the same disturbance footprint as the single-family dwelling. If a proposed unit were to result in the need for oak tree or oak woodland removal, it would be subject to General Plan Policy 7.4.4.4 Option A or ORMP requirements, whichever is in effect at the time, which are described in Impact BIO-1 in Section 3.3, *Biological Resources*. The construction of secondary dwelling units would not result in new impacts or increase the severity of the impacts identified for the proposed project. If a secondary dwelling unit were to involve more than 250 cubic yards of soil disturbance, a grading permit would be required (also a ministerial action). The design of the unit must also comply with the County's post-construction stormwater runoff requirements to reduce urban pollutants in stormwater runoff.

Construction equipment would be a source of air emissions and GHGs. Only a few pieces of equipment would be needed to construct a second unit, and minimal emissions would be generated. Secondary dwelling units would not all be constructed at once. Historically in the County, the frequency that secondary dwelling units are constructed is limited to a few units per year, at most. Nevertheless, for the purposes of analysis, criteria pollutant and GHG emissions were estimated assuming all 98 units would be constructed at the same time during the first three years of VMVSP

construction, followed immediately by full occupancy. Because actual construction and operation would occur over several decades, the emissions analysis represents a worst-case assessment of potential air quality impacts.

The results of the emissions modeling are summarized in Tables 5-7 through 5-10. The analysis accounts for emissions benefits achieved from mandatory VMVSP policies, as discussed in Sections 3.2, *Air Quality*, and 3.6, *Greenhouse Gas Emissions*. CalEEMod defaults were assumed for construction and operational inputs, with the exception of the following:

- Each unit would be a maximum of 800 square feet (pursuant to VMVSP, the secondary units cannot exceed 30% of the square footage of the primary dwelling).
- The secondary dwelling units would result in a demand for approximately 17.6 AFY of potable water (discussed further below).

Table 5-7. Estimated Maximum Criteria Pollutant Emissions from Construction of Secondary Units (pounds per day) [a]

				PM10			PM2.5		
Year	ROG	NO_X	CO	Dust	Exhaust	Total	Dust	Exhaust	Total
Year 1	3	32	31	20	1	21	10	1	11
Year 2	1	10	15	<1	<1	1	<1	<1	<1
Year 3	71	10	15	<1	<1	1	<1	<1	<1
Threshold	82	82	–	BMPs	–	–	BMPs	–	–

Table 5-8. Estimated GHG Emissions from Construction of Secondary Units (metric tons per year)

Year	CO_2e [a]
Year 1	466
Year 2	368
Year 3	91

Source: Ascent 2024

[a] Modeling does not account for implementation of Mitigation Measure GHG-1, as discussed in Section 3.6, *Greenhouse Gases*. Accordingly, the results are conservative and actual emissions would be less than presented in this table.

Table 5-9. Estimated Criteria Pollutant Emissions from Operation of Secondary Units (pounds per day) [a]

Location	ROG	NO_X	CO	PM10	PM2.5
Area Sources	5	2	28	3	3
Energy Sources	<1	1	<1	<1	<1
Mobile Sources	4	2	18	3	1
Total combined emissions	9	5	47	6	4
EDCAQMD threshold	82	82	CAAQS	CAAQS	CAAQS

Source: Ascent 2024.

[a] Emissions account for reductions achieved by mandatory VMVSP Policies 9.50 and 9.51. Modeling does not account for implementation of Mitigation Measures AQ-2f or GHG-2, as discussed in Section 3.2, *Air Quality*. Accordingly, the results are conservative and actual emissions would be less than presented in this table.

Table 5-10. Estimated GHG Emissions from Operation of Secondary Units (metric tons per year)

Source	CO_2	CH_4	N_2O	HFC	CO_2e
Area sources	90	<1	<1	-	92
Energy use	182	<1	<1	-	182
Mobile	577	<1	<1	1	588
Waste generation	5	1	<1	-	19
Water consumption	2	<1	<1	-	7
Refrigerants	-	-	-	<1	0.1
Total combined emissions [a]	856	1	<1	1	889

Source: Ascent 2024.
CO_2 = carbon dioxide.
CH_4 = methane.
CO_2e = carbon dioxide equivalents.
GHG = greenhouse gas.
N_2O = nitrous oxide.
HFC = hydrofluorocarbons
[a] Values may not add due to rounding. Modeling includes emissions benefits achieved by mandatory VMVSP Policies 99.16, 9.36, 9.42, 9.45, 9.50, and 9.51. Modeling does not account for implementation of Mitigation Measure GHG-2, as discussed in Section 3.6, *Greenhouse Gases*. Accordingly, the results are conservative and actual emissions would be less than presented in this table

As shown in Tables 5-7 and 5-8, construction of the secondary units would not individually exceed EDCAQMD thresholds. Implementation of Mitigation Measures AQ-2a through AQ-2f, GHG-1, or GHG-2 would further reduce construction related emissions. However, if secondary dwellings were constructed at the same time as part of the project, the emissions may result in a significant contribution to the overall emissions of a particular construction year, depending on emissions levels (see Table 3.2-5 in Section 3.2, *Air Quality*, and Table 3.6-4 in Section 3.6, *Greenhouse Gas Emissions*). Noise from construction equipment would be periodic and limited to a few pieces of equipment. An individual homeowner constructing a secondary dwelling unit would be required to comply with the County's requirements pertaining to hours of operation (Table 3.10-7 in Section 3.10, *Noise and Vibration*).

In addition to meeting the County's development standards pertaining to height, size, and setbacks (Section 130.40.300(C)), secondary dwelling units constructed in the VMVSP would also be subject to the VMVSP Homeowner's Association design review process, which would address aesthetics impacts. The provision of necessary ingress/access, setbacks, and defensible space would also be reviewed by the County as part of the building permit approval process to ensure fire safety, particularly if a unit were to be constructed near open space. Applicable fire safety fees would be required prior to building permit issuance. Other restrictions may be established by the developer for specific lots, similar to the Serrano development.

Secondary dwelling units would consume energy and generate vehicle trips and VMT. Assuming a CalEEMod default trip rate, the 98 units would generate a maximum of 912 daily trips (Saturday). When added to the trips generated by the entire VMVSP project, this would not be enough additional trips, or VMT, to result in any new or more severe impacts because the incremental increase would represent approximately 2.4% of all trips. VMT efficiency, measured in VMT per capita would not change because secondary dwellings would be in the same location. At the time of preparation of

this Draft EIR, an applicant for a building permit for a secondary dwelling unit would be required to pay the applicable multi-family TIF fee in effect at the time of building permit issuance. However, the proposed update to the TIF program included an off-set program for secondary dwelling units. The CIP and TIF Program Final EIR was certified on December 6, 2016, and went into effect on February 13, 2017, as amended in 2018 and 2019.

The additional trips and energy consumption would generate criteria air pollutant and GHG emissions. As shown in Tables 5-9 and 5-10, operation of the 98 secondary units would not generate criteria pollutants in excess of EDCAQMD thresholds. However, these emissions would be additive with the proposed project's emissions. This Draft EIR has estimated VMVSP air pollutant emissions and has determined they would be significant and unavoidable. Emissions from secondary dwelling units would contribute to this impact. Mitigation Measures AQ-2e and GHG-2 through GHG-6 would be required to reduce criteria pollutant emissions. While minor, GHG emissions from the secondary units would contribute to the larger VMVSP impact before mitigation. Mitigation Measures GHG-1 through GHG-10 would be required to reduce and offset emissions, as applicable.

Secondary dwelling units would also create a demand for potable water. For a second unit, water demand would be almost entirely indoor demand. As stated in the WSA prepared for the VMVSP (Appendix H, *Water Supply Assessment*:2-4), based on EID meter data for the past several years, the annual indoor water use for a typical single-family residence is approximately 0.18 acre-feet per dwelling unit (af/du). The value is less for apartments (or in this case a secondary dwelling unit) as a result of less people living in each unit. The WSA does not state a specific indoor demand for apartments. The approximately 98 secondary dwelling units conservatively would result in a demand for approximately 17.6 AFY of potable water. When added to the VMVSP's water demand (1,927 AFY), the incremental additional demand (less than 0.1%) would have minimal effect on the overall water supply availability for the project, which the WSA has determined is sufficient. The secondary dwelling units would also generate wastewater. Because nearly all of the demand for water would be for indoor use, then a similar amount of wastewater would be generated on a per unit basis (approximately 160 gallons per day, or 0.00016 mgd). On an individual unit basis this would have no measurable effect on Deer Creek Wastewater Treatment Plant capacity. When the additional units are combined with VMVSP project flows (0.79 mgd), the total would only increase to 0.80 mgd. These flows when combined with existing flows treated the plant would still be within the 3.6-mgd plant capacity (see Impact PSU-3 in Section 3.12, *Public Services and Utilities*). Prior to issuance of a building permit, applicants for secondary dwelling units would be required to provide proof of service from EID and pay appropriate EID connection fees.

Occupancy of secondary dwelling units would be expected to result in school-age children who would attend local schools. The County requires payment of school impact fees at the time of issuance of building permit.

In summary, the construction and occupancy of secondary dwelling units would result in indirect environmental effects that would contribute to the impacts identified in this Draft EIR. However, the contribution would be minimal relative to the proposed project's impacts and would not result in new significant impacts or result in a substantial increase in the severity of an identified impact.

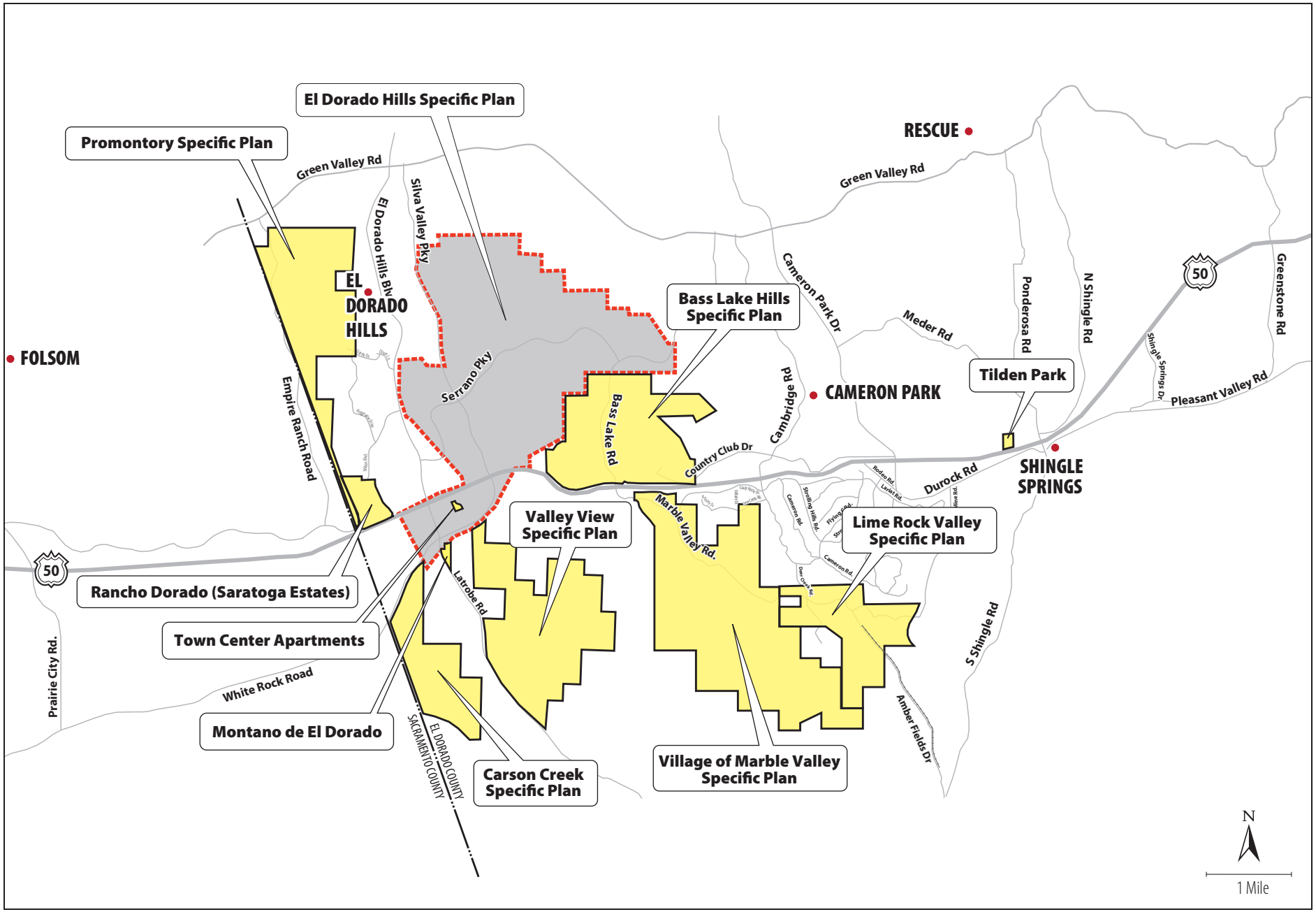

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Figure 5-1
Locations of Cumulative Projects

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Chapter 7
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