Draft Subsequent Environmental Impact Report for the

Southern Sphere of Influence Planning and Annexation Project

State Clearinghouse No. 2013052057

Prepared for

GRASS VALLEY
A PLACE TO LIVE AND THRIVE

City of Grass Valley
Community Development
Department

July 2021

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City of Grass Valley
Community Development Department
125 East Main Street
Grass Valley, CA 95945

Contact:

Thomas Last
Community Development Director

Prepared by:

ASCENT

Ascent Environmental, Inc.
455 Capitol Mall, Suite 300
Sacramento, CA 95814

Contact:

Pat Angell

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LIST OF ABBREVIATIONS

°C	degrees Celsius
°F	Fahrenheit
2014 SOI	Southern Sphere of Influence Planning and Annexation Project
2015 Guidance	*Guidance Manual for Preparation of Health Risk Assessments*
2017 Scoping Plan	*California's 2017 Climate Change Scoping Plan*
AB	Assembly Bill
AFV	alternative fuel vehicle
AFY	acre-feet per year
BAAQMD	Bay Area Air Quality Management District
BMP	best management practice
CAA	Clean Air Act
CAAQS	California ambient air quality standards
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Projection
Cal/OSHA	California Occupational Safety and Health Administration
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCAA	California Clean Air Act
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFC	California Fire Code
City	City of Grass Valley
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CRHR	California Register of Historical Resources
CWA	Clean Water Act
dB	decibels
diesel PM	particulate matter exhaust from diesel engines
DOT	U.S. Department of Transportation

draft SEIR	draft subsequent environmental impact report
DSCP	dust suppression control plan
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
EOP	Emergency Operations Plan
EPA	U.S. Environmental Protection Agency
EPAct	Energy Policy Act of 1992
EPCRA	Emergency Planning and Community Right-to-Know Act of 1986
GHG	greenhouse gas
GWP	global warming potential
HAP	hazardous air pollutant
HBE	Hansen Brothers Enterprises
HRA	health risk assessment
HVAC	heating, ventilation, and air conditioning
Hz	hertz
IEPR	Integrated Energy Policy Report
in/sec	inches per second
IPCC	Intergovernmental Panel on Climate Change
LAFCo	Local Agency Formation Commission
lb/day	pounds per day
L_{dn}	Day-Night Level
L_{eq}	Equivalent Continuous Sound Level
LHMP	2017 Local Hazard Mitigation Plan
L_{max}	Maximum Sound Level
LOP	limited operating period
LOS	level of service
MCAB	Mountain Counties Air Basin
MCL	maximum contaminant level
mgd	million gallons per day
mpg	miles per gallon
MS4	Municipal Separate Storm Sewer System
$MTCO_2e$	metric tons of carbon dioxide equivalent
$MTCO_2e/SP$	metric tons of carbon dioxide equivalent per service population
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission

NCIC	North Central Information Center
NCTC	Nevada County Transportation Commission
NID	Nevada Irrigation District
NO_2	nitrogen dioxide
NOP	notice of preparation
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NSAQMD	Northern Sierra Air Quality Management District
NWPR	U.S. Department of the Army Navigable Waters Protection Rule: Definition of "Waters of the United States"
OEHHA	Office of Environmental Health Hazard Assessment
OPR	Governor's Office of Planning and Research
PG&E	Pacific Gas and Electric
PM	particulate matter
PM_{10}	respirable particulate matter with an aerodynamic diameter of 10 microns or less
$PM_{2.5}$	fine particulate matter with an aerodynamic diameter of 2.5 or less
PPV	peak particle velocity
PRC	Public Resources Code
RAW	removal action workplan
RPS	Renewable Portfolio Standard
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAFE Rule	Safer Affordable Fuel-Efficient Vehicles Rule
SAFE	Safer Affordable Fuel-Efficient
SARA Title III	Superfund Amendments and Reauthorization Act of 1986
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SDWA	Safe Drinking Water Act
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO_2	sulfur dioxide
SOI	sphere of influence
SPCC	Spill Prevention, Control, and Countermeasure
SPL	sound pressure level
sq. ft.	square feet
SR	State Route
SRA	State Responsibility Areas
SRRE	source reduction and recycling element
SVA	Standard Voluntary Agreement

SWPPP	stormwater pollution prevention plan
SWRCB-DDW	State Water Resources Control Board Division of Drinking Water
TAC	toxic air contaminants
TDM	transportation demand management
Technical Advisory	*Technical Advisory on Evaluating Transportation Impacts in CEQA*
UAIC	United Auburn Indian Community of the Auburn Rancheria
UCMP	University of California Museum of Paleontology
USC	U.S. Code
USFWS	U.S. Fish and Wildlife Service
UWMP	Urban Water Management Plan
UWMPA	Urban Water Management Planning Act
VCA	Voluntary Cleanup Agreement
VMT	vehicle miles traveled
WSA	water supply assessment
WUI	wildland urban interface
WWTP	wastewater treatment plant
ZEV	zero-emission vehicle

EXECUTIVE SUMMARY

The California Environmental Quality Act (CEQA) requires the preparation of an environmental impact report (EIR) when there is substantial evidence that a project could have a significant effect on the environment. The purpose of an EIR is to provide decision-makers, public agencies, and the general public with an objective and informational document that fully discloses the potential environmental effects.

The City of Grass Valley (hereinafter City) completed an extensive General Plan and pre-zoning planning process for the 420-acre Southern Sphere of Influence Planning and Annexation Project, including certification of an EIR in 2014. As previously analyzed, the project consisted of a General Plan amendment to change land use designations, pre-zoning of the project area, and partial annexation. The City is now proposing amendments to the Southern Sphere of Influence Planning and Annexation Project, which would change the boundary of the southern sphere of influence (SOI), revise land use designations through a General Plan amendment, revise the pre-zoning, and annex the southern SOI into the city.

Due to the proposed modifications to the Adopted Southern SOI Project, the City has determined that preparation of a subsequent EIR (SEIR) is appropriate, per the requirements of State CEQA Guidelines Section 15162. This SEIR provides programmatic analysis of the potential environmental effects associated with future development that could result from implementation of the Southern SOI Amendment and project-level analysis of a 10-acre residential development west of State Route (SR) 49 within the SOI.

This Executive Summary is provided in accordance with the State CEQA Guidelines Section 15123. It contains an overview of the proposed project analyzed in this draft SEIR, plan alternatives, environmental impacts and mitigation, areas of known controversy, and issues to be resolved during environmental review.

ES.1 SUMMARY DESCRIPTION OF THE SOUTHERN SPHERE OF INFLUENCE PLANNING AND ANNEXATION PROJECT

ES.1.1 Geographic Extent of the Project Area

The project is located along SR 49, immediately south of the existing City of Grass Valley limits and within the City of Grass Valley Planning Area in the central/western portion of Nevada County. The project spans both the east and west sides of SR 49, beginning in the vicinity of McKnight Road and extending south along SR 49 and La Barr Meadows Road to the western boundary of Empire Mine State Park. The project area also includes 32 acres within the current City limits. In total, the project area would be approximately 400 acres and include 55 Nevada County Assessor's Parcel Numbers.

ES.1.2 Overview of the Proposed Changes to the Southern Sphere of Influence Planning and Annexation Project

As described in further detail in Chapter 2, "Project Description," the City is seeking to amend the Southern Sphere of Influence Planning and Annexation Project to include: 1) an amendment to the General Plan land use designations on 237 of the 400 acres; 2) a prezone of 237 of the 400 acres to various zone districts consistent with the proposed General Plan amendments; 3) an amendment to add 31 acres to the City's SOI; and 4) the annexation of approximately 400 acres. The proposed General Plan land use designations and zoning changes would decrease the total residential development potential by up to 18 residential dwelling units and increase the total development potential of nonresidential uses by approximately 367,000 square feet. Though the project eliminates most of the commercial land use designations, it does increase the amount of land designated for industrial uses. The project also includes General Plan land use redesignation and rezoning of approximately 17 acres of land area within the current City limits.

ES.1.3 Project-Level Analysis of Residential Development Area

This SEIR also evaluates the potential effects of residential development on approximately 10 acres west of SR 49. In furtherance of the goals and policies of the 2019 Housing Element, the City identified this area for streamlined analysis based on: the breadth of existing environmental evaluation, proximity to existing and approved development, access to infrastructure, and anticipated environmental concerns. The area is anticipated to be developed with 60 duplex lots and approximately 68 multifamily units.

ES.1.4 Project Objectives

The project modifications are intended to achieve the following:

- Amend the Southern SOI to reflect land ownership and provide logical boundaries for the City.
- Revise the General Plan land use designations and zoning in the Southern SOI to better reflect land ownership and envisioned future uses.
- Provide for a range in types and prices of housing.
- Allow the City to be responsive to market demand for housing by establishing an area that has been fully evaluated for development.
- Refine the industrial uses envisioned for the area east of SR 49 and to ensure there is adequately zoned land to accommodate future industrial land uses in western Nevada County.
- Create opportunities for development that maintains and improves the local environment and quality of life in the City.
- Annex land to improve the City's efforts to obtain grants for infrastructure to support residential homes and for job creation.
- Facilitate the State's efforts to provide more housing and to expedite housing projects.

ES.2 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

A notice of preparation (NOP) of a draft EIR was circulated to the public on August 28, 2020, in accordance with the State CEQA Guidelines. A public scoping meeting was held on September 23, 2020. The purpose of the NOP and the scoping meeting was to provide notification that an EIR for was being prepared for the project and to solicit input on the scope and content of the environmental document. The NOP and responses to the NOP are included in Appendix A of this draft SEIR. No areas of controversy were identified through this process.

Issues to be resolved include choosing among alternatives to the Southern SOI Amendment and deciding whether and how to mitigate the significant environmental impacts of the Southern SOI Amendment. Additionally, if it adopts the Southern SOI Amendment, the City must decide whether specific social, economic, or other benefits of the project outweigh its significant unavoidable environmental impacts; if so, the City must adopt a Statement of Overriding Considerations.

ES.3 PROJECT ALTERNATIVES SUMMARY

CEQA Guidelines Section 15126.6 require that an EIR describe a range of reasonable alternatives to the project, which could feasibly attain the basic objectives of the project and reduce the degree of environmental impact. In addition to the three project alternatives evaluated in the 2014 SOI EIR, Chapter 4, "Alternatives," provides an analysis of the following alternative scenarios:

- Alternative 1 – No Project Alternative
- Alternative 2 – Increased Open Space East of SR 49

- Alternative 3 – Increased Residential and Supporting Commercial

As described further in Chapter 4, "Alternatives," the Increased Open Space East of SR 49 Alternative would be environmentally superior action alternative. By designating 31.5 acres of land between the existing northeast SOI boundary and Empire Mine State Park for open space, this alternative would limit the potential for ground disturbance in the area, which could reduce potential impact to biological, cultural, and hydrologic resources. If managed effectively, this alternative could also serve as a critical fire break between the open space to the east and future industrial development. Further, this alternative could result in greater compatibility between land uses in the city and the State Park. Finally, because the Increased Open Space East of SR 49 Alternative would reduce the potential for industrial land uses in the project area, there would be a reduction in VMT and associated impacts.

ES.4 ENVIRONMENTAL IMPACTS AND REVIEW PROCESS

This draft SEIR has been prepared pursuant to the CEQA (Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Section 15000, et seq.) to evaluate the physical environmental effects of the proposed amendments to the Southern Sphere of Influence Planning and Annexation Project. The City of Grass Valley is the lead agency. The existing conditions against which potential environmental impacts are evaluated are based on the environmental and regulatory setting information published in the 2014 SOI EIR. Where changes to the environmental or regulatory setting (e.g., new information, regulatory changes) are relevant to understanding potential impacts, additional background information is provided in the draft SEIR resource section. The reader is referred to the 2014 SOI EIR for all other setting information.

Table ES-1 provides a summary of potential environmental impacts, their level of significance without mitigation measures, any additional mitigation measures proposed, and the levels of significance following the implementation of new or revised mitigation measures. In approving a project, the lead or responsible agency must find, based on substantial evidence, that either: (a) the project has been changed to avoid or substantially reduce the magnitude of the impact; (b) changes to the project are within another agency's jurisdiction and such changes have or should be adopted; or (c) specific economic, social, or other considerations make the mitigation measures or project alternatives infeasible (State CEQA Guidelines Section 15091). Per Public Resources Code Section 21061.1, feasible means capable of being accomplished in a successful manner within a reasonable period of time, taking into account, economic, environmental, legal, social, and technological factors. If an agency approves a project with unavoidable significant environmental effects, it must prepare a written Statement of Overriding Considerations that sets forth the specific social, economic, or other reasons supporting the agency's decision and explains why the project's benefits outweigh the significant environmental effects (State CEQA Guidelines Section 15093).

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Adopted Mitigation Measures	New Mitigation Measures	Significance after Mitigation	2014 SOI EIR Significance after Mitigation
	NI = No impact LTS = Less than significant PS = Potentially significant		S = Significant SU = Significant and unavoidable		
Air Quality					
Impact 3.1-1: Violate Air Quality Standard or Contribute Substantially to an Air Quality Violation: Short-Term Construction Emissions	S	**Adopted MM 3.2.1a:** Future development projects within the Southern Sphere of Influence Planning and Annexation project area shall submit to the NSAQMD for approval an Off-Road Construction Equipment Emission Reduction Plan prior to groundbreaking demonstrating that all off-road equipment (portable and mobile) meets or is cleaner than Tier 2 engine emission specifications unless prior written approval for any exceptions is obtained from the NSAQMD. Note that all off-road equipment must meet all applicable state and federal requirements. Construction contracts shall stipulate the following: ▶ Emissions from on-site construction equipment shall comply with NSAQMD Regulation II, Rule 202, Visible Emissions. ▶ The primary contractor shall be responsible to ensure that all construction equipment is properly tuned and maintained. ▶ Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes when not in use (as required by California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points. ▶ All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.	**Mitigation Measure 3.1-1a: Modified 2014 SOI MM 3.2.1a** Future development projects within the Southern Sphere of Influence Planning and Annexation project area shall submit to the NSAQMD for approval an Off-Road Construction Equipment Emission Reduction Plan prior to groundbreaking demonstrating that all off-road equipment (portable and mobile) meets or is cleaner than Tier ~~2~~ 4 engine emission specifications unless prior written approval for any exceptions is obtained from the NSAQMD. Note that all off-road equipment must meet all applicable state and federal requirements. Construction contracts shall stipulate the following: ▶ Emissions from on-site construction equipment shall comply with NSAQMD Regulation II, Rule 202, Visible Emissions. ▶ The primary contractor shall be responsible to ensure that all construction equipment is properly tuned and maintained. ▶ Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes when not in use (as required by California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points. ▶ All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.	SU	SU

Impacts	Significance before Mitigation	Adopted Mitigation Measures	New Mitigation Measures	Significance after Mitigation	2014 SOI EIR Significance after Mitigation
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		▶ Existing power sources (e.g., power poles) or clean fuel generators shall be utilized rather than temporary power generators where feasible. **Adopted MM 3.2.1b:** All architectural coating activities associated with construction of future development projects within the Southern Sphere of Influence Planning and Annexation project area shall be required to use interior and exterior coatings that contain less than 250 grams of volatile organic compounds (VOC/ROG) per liter of coating. **Adopted MM 3.2.1c:** Grid power shall be used (as opposed to diesel generators) for construction site power needs where feasible during construction. **Adopted MM 3.2.1d:** Deliveries of construction materials shall be scheduled to direct traffic flow to avoid the peak hours of 7 to 9 AM and 4 to 6 PM.	▶ Existing power sources (e.g., power poles) or clean fuel generators shall be utilized rather than temporary power generators where feasible. **Mitigation Measure 3.1-1b: Modified 2014 SOI MM 3.2.1b** All architectural coating activities associated with construction of future development projects within the Southern Sphere of Influence Planning and Annexation project area shall be required to use interior and exterior coatings that contain less than ~~250~~ 100 grams of volatile organic compounds (VOC/ROG) per liter of coating.		
Impact 3.1-2: Violate Air Quality Standard or Contribute Substantially to an Air Quality Violation: Long-Term Operational Emissions	S	**Adopted MM 3.4.1:** Subsequent development projects within the Southern Sphere of Influence Planning and Annexation project area shall submit to the City of Grass Valley and receive approval for a GHG Emissions Reduction Plan prior to issuance of building permits for the development project in question. The GHG Emissions Reduction Plan shall demonstrate adherence to the following measures or alternative measures equaling the same or greater emission reduction values. ▶ Indoor water conservation measures shall be incorporated, such as use of low-flow toilets, showers, and faucets (kitchen and bathroom), in each residential unit. ▶ The proposed project shall be designed to exceed state energy efficiency standards by 15 percent (to Tier 1 Title 24 Standards) as directed by Appendix A5 of the 2010 California Green Building Standards (CBSC 2011). This	**Mitigation Measure 3.1-2: Modified 2014 SOI MM 3.4.1** Subsequent development projects within the Southern Sphere of Influence Planning and Annexation project area shall submit to the City of Grass Valley and receive approval for a GHG Emissions Reduction Plan prior to issuance of building permits for the development project in question. The GHG Emissions Reduction Plan shall demonstrate adherence to the following measures or alternative measures ~~equaling the same or greater emission reduction values~~ to reduce GHG emissions. ▶ Prior to the issuance of building permits for residential and commercial development the project developer or its designee shall submit a Zero Net Energy Confirmation Report (ZNE Report) prepared by a qualified building energy efficiency and design consultant to the City for review and approval. For residential and commercial development within the project area, the ZNE Report shall demonstrate that the	SU	SU

Impacts	Significance before Mitigation	Adopted Mitigation Measures	New Mitigation Measures	Significance after Mitigation	2014 SOI EIR Significance after Mitigation
NI = No impact		LTS = Less than significant PS = Potentially significant	S = Significant SU = Significant and unavoidable		
		measure helps to reduce emissions associated with energy consumption. ▶ Low-water-use landscaping (i.e., drought-tolerant plants and drip irrigation) shall be installed. At least 75 percent of all landscaping plants shall be drought-tolerant as determined by a licensed landscape architect or contractor. ▶ The installation of wood-burning fireplaces shall be prohibited in all new residential units.	most recent version of the California Energy Code has been applied. Residential and commercial development shall be designed and shall be constructed to achieve ZNE, as defined by CEC in its 2015 Integrated Energy Policy Report, or otherwise achieve an equivalent level of energy efficiency, renewable energy generation, or GHG emissions savings. If the ZNE Report determines that attainment of ZNE is not feasible, it shall substantiate this conclusion and will identify the maximum building energy efficiency that is attainable. ▶ All buildings shall include rooftop solar photovoltaic systems to supply electricity to the buildings. Alternatively, solar photovoltaic systems can be installed on canopies that also shade parking areas. The project applicant shall provide pre-wired solar for residential garage/parking structures as a design feature. ▶ Any household appliances included in the original sale of the residential units shall be electric and certified Energy Star-certified (including clothes washers, dish washers, fans, and refrigerators, but not including tankless water heaters). ▶ Indoor water conservation measures shall be incorporated, such as use of low-flow toilets, showers, and faucets (kitchen and bathroom), in each residential unit. ▶ All buildings shall be designed to include cool roofs consistent with requirements established by Tier 2 of the CALGreen Code. ▶ The proposed project shall be designed to exceed ~~state energy efficiency standards~~ the California Energy Code in effect at the time of construction by 15 percent ~~(to Tier 1 Title 24 Standards) as directed by Appendix A5 of the 2010 California Green Building Standards (CBSC~~		

Impacts	Significance before Mitigation	Adopted Mitigation Measures	New Mitigation Measures	Significance after Mitigation	2014 SOI EIR Significance after Mitigation
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			~~2011). This measure helps to reduce emissions associated with energy consumption~~. ▶ Low-water-use landscaping (i.e., drought-tolerant plants and drip irrigation) shall be installed. At least 75 percent of all landscaping plants shall be drought-tolerant as determined by a licensed landscape architect or contractor. ▶ The installation of wood-burning fireplaces shall be prohibited in all new residential units. ▶ The project applicant shall provide a minimum of one single-port electric vehicle charging station at each new single-family housing unit that achieves similar or better functionality as a Level 2 charging station (referring to the voltage that the electric vehicle charger uses). The project applicant shall also provide Level 2 electric vehicle charging stations at a minimum of 10 percent of parking spaces that serve multi-family residential buildings. ▶ Parking lots serving non-residential buildings shall have at least 12.5 percent of parking spaces served by electric vehicle charging stations that achieves similar or better functionality as a Level 2 charging station.		
Impact 3.1-3: Expose Sensitive Receptors to Substantial Carbon Monoxide Pollutant Concentrations	LTS	—	—	LTS	LTS
Impact 3.1-4: Expose Sensitive Receptors to Toxic Air Contaminant Pollutant Concentrations that Exceed the NSAQMD Health Risk Public Notification Thresholds	PS	—	**Mitigation Measure 3.1-4: Incorporation of Design Features at Truck Loading/Unloading Areas to Reduce Health-Risk Exposure at Sensitive Receptors** As part subsequent development project submittals to the City, project applicants shall design developments so that truck loading/unloading facilities and sensitive receptors	LTS	LTS

Impacts	Significance before Mitigation	Adopted Mitigation Measures	New Mitigation Measures	Significance after Mitigation	2014 SOI EIR Significance after Mitigation
NI = No impact	LTS = Less than significant	PS = Potentially significant	S = Significant SU = Significant and unavoidable		
			are not located within 1,000 feet of each other. For the purpose of this mitigation measure, a truck loading/unloading facility is defined as any truck distribution yard, truck loading dock, or truck loading or unloading area that accommodates (i) more than 100 trucks per day, (ii) more than 40 trucks with operating transport refrigeration units per day (TRU), or (iii) where TRU units operations exceed 300 hours per week. Sensitive receptors include residential land uses, campus dormitories and student housing, residential care facilities, hospitals, schools, parks, playgrounds, or daycare facilities. A truck loading/unloading facility and a sensitive receptor can be located within 1,000 feet of each other only if a project proponent prepares a qualified, site-specific HRA showing that the associated level of cancer risk at the sensitive receptors would not exceed 10 in 1 million. The HRA shall be conducted in accordance with guidance from NSAQMD and shall be approved by the City. If the HRA determines that a nearby sensitive receptor would be exposed to an incremental increase in cancer risk greater than 20 in 1 million then design measures shall be incorporated to reduce the level of risk exposure to less than 10 in 1 million. Design measures may include, but are not limited to, the following: ▶ Require that all truck loading/unloading facilities be equipped with one 110/208-volt power outlet for every two-truck loading/unloading docks. A minimum 2-foot-by-3-foot sign shall be clearly visible at each loading dock that indicates, "Diesel engine idling limited to a maximum of 5 minutes." The sign shall include instructions for diesel trucks idling for more than 5 minutes to connect to the 110/208-volt power to run any auxiliary equipment. This measure is consistent with measure VT-1 in the California Air Pollution Control		

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			Officers Association (CAPCOA) guide *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA 2010:300–303). ▶ Use electric-powered "yard trucks" or forklifts to move truck trailers around a truck yard or truck loading/unloading facility. ▶ Use buildings or walls to shield commercial activity from nearby residences or other sensitive land uses. ▶ Plant and maintain a vegetative buffer between the truck loading/unloading facility and nearby sensitive residences, schools, and daycare facilities.		
Impact 3.1-5: Expose Sensitive Receptors to Odorous Emissions	LTS	—	—	LTS	LTS
Biological Resources					
Impact 3.2-1: Result in a Substantial Adverse Effect on Special-Status Plant Species	LTS	**Adopted MM 3.3.1:** The project applicant for each future development project proposed within the project area shall retain a qualified biologist to perform focused surveys to determine the presence/absence of special-status plant species with potential to occur in and adjacent to (within 100 feet, where appropriate) the proposed impact area, including construction access routes. These surveys shall be conducted in accordance with the *Guidelines for Assessing Effects of Proposed Developments on Rare Plants and Plant Communities* (Nelson 1994). These guidelines require that rare plant surveys be conducted at the proper time of year when rare or endangered species are both evident and identifiable. Field surveys shall be scheduled to coincide with known flowering periods and/or during appropriate developmental periods that are necessary to identify the plant species of concern.	—	LTS	LTS

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		If any state- or federally listed CNPS List 1 or CNPS List 2 plant species are found in or adjacent to (within 100 feet) the proposed impact area during the surveys, these plant species shall be avoided to the extent possible and the following mitigation measures shall be implemented: 1. In some cases involving state-listed plants, it may be necessary to obtain an incidental take permit under Fish and Game Code Section 2081. The applicant shall consult with the CDFW to determine whether a 2081 permit is required, and obtain all required authorizations prior to initiation of ground-breaking activities. 2. Before the approval of grading plans or any ground-breaking activity within the study area, the applicant shall submit a mitigation plan concurrently to the CDFW and the USFWS for review and comment. The plan shall include mitigation measures for the population(s) to be directly affected. Possible mitigation for impacts to special-status plant species can include implementation of a program to transplant, salvage, cultivate, or re-establish the species at suitable sites (if feasible), through the purchase of credits from an approved mitigation bank, or through an in-lieu fee program, if available. The actual level of mitigation may vary depending on the sensitivity of the species, its prevalence in the area, and the current state of knowledge about overall population trends and threats to its survival. The final mitigation strategy for directly impacted plant species shall be determined by the CDFW and the USFWS through the mitigation plan approval process. 3. Any special-status plant species that are identified adjacent to the study area, but not proposed to be disturbed by the project, shall be protected by barrier fencing to ensure that construction activities and			

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		material stockpiles do not impact any special-status plant species. These avoidance areas shall be identified on project plans.			
Impact 3.2-2: Result in a Substantial Adverse Effect on Coast Horned Lizard	LTS	**Adopted MM 3.3.2:** Project applicants for each future development project proposed within the project area shall retain qualified biologists to determine if suitable habitat for this species occurs within 250 feet of the proposed impact area, including construction access routes, as part of submittals of tentative maps and /or improvement plans. If suitable habitat exists, development agreements will require preconstruction surveys to be performed by a qualified biologist in a manner to maximize detection of coast horned lizards (i.e., during warm weather, walking slowly) prior to any grading activity. If any coast horned lizards are discovered within the work areas, they shall be actively moved or passively encouraged to leave the work area. Workers shall drive slowly when driving overland, within suitable habitat areas, to allow any lizards to move out of the way of the vehicles.	—	LTS	LTS
Impact 3.2-3: Result in Loss of Populations or Essential Habitat for California Black Rail, Other Special-Status Birds, and Raptors	LTS	**Adopted MM 3.3.3a:** If clearing and/or construction activities for future development projects within the project area will occur during the migratory bird nesting season (April 15–August 15), reconstruction surveys to identify active migratory bird nests shall be conducted by a qualified biologist within 14 days of construction initiation. Focused surveys must be performed by a qualified biologist for the purposes of determining presence/absence of active nest sites within the proposed impact area, including construction access routes and a 200-foot buffer (if feasible). If active nest sites are identified within 200 feet of project activities, the applicant shall impose a limited operating period (LOP) for all active nest sites prior to commencement of any project construction activities to avoid construction or	—	LTS	LTS

Impacts	Significance before Mitigation	Adopted Mitigation Measures	New Mitigation Measures	Significance after Mitigation	2014 SOI EIR Significance after Mitigation
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		access-related disturbances to migratory bird nesting activities. An LOP constitutes a period during which project-related activities (i.e., vegetation removal, earth moving, and construction) will not occur, and will be imposed within 100 feet of any active nest sites until the nest is deemed inactive. Activities permitted within and the size (i.e., 100 feet) of LOPs may be adjusted through consultation with the CDFW and/or the City. **Adopted MM 3.3.3b:** If clearing and/or construction activities for future development projects will occur during the raptor nesting season (January 15–August 15), preconstruction surveys to identify active raptor nests shall be conducted by a qualified biologist within 14 days of construction initiation. Focused surveys must be performed by a qualified biologist for the purposes of determining presence/absence of active nest sites within the proposed impact area, including construction access routes and a 500-foot buffer (if feasible). If active nest sites are identified within 500 feet of project activities, the applicant shall impose an LOP for all active nest sites prior to commencement of any project construction activities to avoid construction or access-related disturbances to nesting raptors. An LOP constitutes a period during which project-related activities (i.e., vegetation removal, earth moving, and construction) will not occur, and will be imposed within 250 feet of any active nest sites until the nest is deemed inactive. Activities permitted within and the size (i.e., 250 feet) of LOPs may be adjusted through consultation with the CDFW and/or the City.			
Impact 3.2-4: Result in Disturbance, Degradation, or Removal of Riparian Habitat or Other Sensitive Natural Communities	LTS	**Adopted MM 3.3.4:** The project applicant for each future development project proposed within the project area shall ensure that the there is no net loss of riparian vegetation. Mitigation can include on-site restoration or purchase of mitigation credits at a USACE-approved mitigation bank. Mitigation as required in regulatory permits issued through	—	LTS	LTS

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		the CDFW, the USACE, or the RWQCB may be applied to satisfy this measure. Evidence of compliance with this mitigation measure shall be provided to the appropriate agencies prior to construction and grading activities for future development in the project area.			
Impact 3.2-5: Result in Loss, Disturbance, or Degradation of Jurisdictional Waters of the United States, and Waters of the State, Including Wetlands	PS	**Adopted MM 3.3.5:** The City shall ensure that the project will result in no net loss of federally protected waters through impact avoidance, impact minimization, and/or compensatory mitigation, as determined in CWA Section 404 and 401 permits and/or 1602 Streambed Alteration Agreement. Evidence of compliance with this mitigation measure shall be provided prior to construction and grading activities for the proposed project.	**Mitigation Measure 3.2-5: No Net Loss of Waters of the State** If aquatic resources will be affected that are disclaimed by USACE (i.e., are not within federal jurisdiction), the City shall require the project applicants to submit a delineation of these aquatic resources to the Central Valley Regional Water Quality Control Board (RWQCB) along with an application for Waste Discharge Requirements. The delineation and application will conform to the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*. If project activities will result in permanent loss of waters of the state that cannot be practicably avoided, the project applicant will provide compensatory mitigation resulting in no net loss of the overall abundance, diversity, and condition of aquatic resources in the affected watershed (or another watershed if permitted by RWQCB). Compensatory mitigation may be provided through restoration, enhancement, establishment, preservation, or a combination thereof and may include purchase of mitigation credits as approved by the City and RWQCB. Compensation for wetland or stream losses will be at a minimum one-to-one mitigation ratio (i.e., 1 acre of compensatory mitigation for 1 acre of wetland or waters loss) but will be determined on a project-by-project basis in accordance with State Supplemental Dredge or Fill Guidelines, Section 230.93(f).	LTS	LTS

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Climate Change and Greenhouse Gas Emissions					
Impact 3.3-1: Generate Greenhouse Gas Emissions That May Have a Significant Impact on the Environment	S	**Adopted MM 3.4.1:** Subsequent development projects within the Southern Sphere of Influence Planning and Annexation project area shall submit to the City of Grass Valley and receive approval for a GHG Emissions Reduction Plan prior to issuance of building permits for the development project in question. The GHG Emissions Reduction Plan shall demonstrate adherence to the following measures or alternative measures equaling the same or greater emission reduction values. ▶ Indoor water conservation measures shall be incorporated, such as use of low-flow toilets, showers, and faucets (kitchen and bathroom), in each residential unit. ▶ The proposed project shall be designed to exceed state energy efficiency standards~~.~~ by 15 percent (to Tier 1 Title 24 Standards) as directed by Appendix A5 of the 2010 California Green Building Standards (CBSC 2011). This measure helps to reduce emissions associated with energy consumption. ▶ Low-water-use landscaping (i.e., drought-tolerant plants and drip irrigation) shall be installed. At least 75 percent of all landscaping plants shall be drought-tolerant as determined by a licensed landscape architect or contractor. ▶ The installation of wood-burning fireplaces shall be prohibited in all new residential units.	**Mitigation Measure 3.3-1: Modified 2014 SOI MM 3.4.1:** Subsequent development projects within the Southern Sphere of Influence Planning and Annexation project area shall submit to the City of Grass Valley and receive approval for a GHG Emissions Reduction Plan prior to issuance of building permits for the development project in question. The GHG Emissions Reduction Plan shall demonstrate adherence to the following measures or alternative measures ~~equaling the same or greater emission reduction values~~ to reduce GHG emissions. ▶ Prior to the issuance of building permits for residential and commercial development the project developer or its designee shall submit a Zero Net Energy Confirmation Report (ZNE Report) prepared by a qualified building energy efficiency and design consultant to the City for review and approval. For residential and commercial development within the project area, the ZNE Report shall demonstrate that the most recent version of the California Energy Code has been applied. Residential and commercial development shall be designed and shall be constructed to achieve ZNE, as defined by CEC in its 2015 Integrated Energy Policy Report, or otherwise achieve an equivalent level of energy efficiency, renewable energy generation, or GHG emissions savings. If the ZNE Report determines that attainment of ZNE is not feasible, it shall substantiate this conclusion and will identify the maximum building energy efficiency that is attainable. ▶ All buildings shall include rooftop solar photovoltaic systems to supply electricity to the buildings. Alternatively, solar photovoltaic systems can be installed	SU	SU

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			on canopies that also shade parking areas. The project applicant shall provide pre-wired solar for residential garage/parking structures as a design feature. ▶ Any household appliances included in the original sale of the residential units shall be electric and certified Energy Star-certified (including clothes washers, dish washers, fans, and refrigerators, but not including tankless water heaters). ▶ Indoor water conservation measures shall be incorporated, such as use of low-flow toilets, showers, and faucets (kitchen and bathroom), in each residential unit. ▶ All buildings shall be designed to include cool roofs consistent with requirements established by Tier 2 of the CALGreen Code. ▶ The proposed project shall be designed to exceed ~~state energy efficiency standards~~ the California Energy Code in effect at the time of construction by 15 percent ~~(to Tier 1 Title 24 Standards) as directed by Appendix A5 of the 2010 California Green Building Standards (CBSC 2011). This measure helps to reduce emissions associated with energy consumption~~. ▶ Low-water-use landscaping (i.e., drought-tolerant plants and drip irrigation) shall be installed. At least 75 percent of all landscaping plants shall be drought-tolerant as determined by a licensed landscape architect or contractor. ▶ The installation of wood-burning fireplaces shall be prohibited in all new residential units. ▶ The project applicant shall provide a minimum of one single-port electric vehicle charging station at each new single-family housing unit that achieves similar or better functionality as a Level 2 charging station (referring to		

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			the voltage that the electric vehicle charger uses). The project applicant shall also provide Level 2 electric vehicle charging stations at a minimum of 10 percent of parking spaces that serve multi-family residential buildings. ▶ Parking lots serving non-residential buildings shall have at least 12.5 percent of parking spaces served by electric vehicle charging stations that achieves similar or better functionality as a Level 2 charging station. **Mitigation Measure 3.3-2: Implement On-Site Greenhouse Gas Reduction Measures to Reduce Construction Emissions** Subsequent development within the project area shall implement all feasible measures to reduce construction-related GHG emissions associated with the Southern SOI Amendment, including, but not limited to, the construction-related measures listed below. A mitigation measure may be deemed infeasible if the project applicant provides rationale, based on substantial evidence, to the City that substantiates why the measure is infeasible. The GHG reductions achieved by the implementation of measures listed below shall be estimated by a qualified third-party selected by the City. All GHG reduction estimates shall be supported by substantial evidence. Mitigation measures should be implemented even if it is reasonable that their implementation would result in a GHG reduction but a reliable quantification of the reduction cannot be substantiated. ▶ The project applicant shall require its contractors to enforce idling of on- and off-road diesel equipment for no more than 5 minutes while on site. ▶ The project applicant shall implement waste, disposal, and recycling strategies in accordance with Sections 4.408 and 5.408 of the 2016 California Green Building		

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			Standards Code (CALGreen Code), or in accordance with any update to these requirements in future iterations of the CALGreen Code in place at the time of project construction. ▶ Project construction shall achieve or exceed the enhanced Tier 2 targets for recycling or reusing construction waste of 75 percent for residential land uses as contained in Sections A4.408 and A5.408 of the CALGreen Code. ▶ All diesel-powered, off-road construction equipment shall meet EPA's Tier 4 emissions standards as defined in 40 Code of Federal Regulation (CFR) 1039 and comply with the exhaust emission test procedures and provisions of 40 CFR Parts 1065 and 1068. This measure can also be achieved by using battery-electric off-road equipment as it becomes available. ▶ The project applicant shall implement a program that incentivizes construction workers to carpool, use public transit, or EVs to commute to and from the project site. **Mitigation Measure 3.3-3: Purchase Real, Quantifiable, Permanent, Verifiable, Enforceable, and Additional Carbon Offsets** If, following the application of all feasible on-site GHG reduction measures listed under Mitigation Measures 3.3-1 and 3.3-2, the Southern SOI Amendment would continue to generate GHG emissions exceeding 2.74 $MTCO_2e$/year/SP, the project applicant for subsequent development in the project area shall offset the remaining GHG emissions to meet 2.74 $MTCO_2e$/year/SP in 2040 by funding activities that directly reduce or sequester GHG emissions or by purchasing and retiring carbon credits. To the degree that a project relies on GHG mitigation measures, the City of Grass Valley, NSAQMD, and CARB		

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			recommend that lead agencies prioritize on-site design features, such as those listed under Mitigation Measures 3.3-1 and 3.3-2, and direct investments in GHG reductions within the vicinity of the project site to provide potential air quality and economic co-benefits locally. While emissions of GHGs and their contribution to climate change is a global problem, emissions of air pollutants, which have an adverse localized effect, are often emitted from similar activities that generate GHG emissions (i.e., mobile, energy, and area sources). For example, direct investment in a local building retrofit program could pay for cool roofs, solar panels, solar water heaters, smart meters, energy efficient lighting, energy efficient appliances, energy efficient windows, insulation, and water conservation measures for subsequent development within the geographic area of the Southern SOI Amendment. Other examples of local direct investments include financing installation of regional electric vehicle charging stations, paying for electrification of public school buses, and investing in local urban forests. These investments would not only achieve GHG reductions, but would also directly improve regional and local ambient air quality. However, to adequately mitigate GHG emissions to 2.74 $MTCO_2e$/year/SP, it is critical that any such investments in actions to reduce GHG emissions meet the criteria of being real, quantifiable, permanent, verifiable, enforceable, and additional, consistent with the standards set forth in Health and Safety Code section 38562, subdivisions (d)(1) and (d)(2). Such credits shall be based on protocols approved by the California Air Resources Board (CARB), consistent with Section 95972 of Title 17 of the California Code of Regulations. Project applicants shall not use offset projects originating outside of California, except to the extent that the quality of the offsets, and their sufficiency under the standards set forth herein, can		

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			be verified by the City of Grass Valley, NSAQMD, or CARB. Such credits must be purchased through one of the following: (i) a CARB-approved registry, such as the Climate Action Reserve, the American Carbon Registry, and the Verified Carbon Standard; (ii) any registry approved by CARB to act as a registry under the California Cap and Trade program; or (iii) through the California Air Pollution Control Officers Association's GHG Rx and NSAQMD. Prior to issuing building permits for subsequent development projects in the Southern SOI Amendment area, the City shall confirm that the project applicant or its designee has fully offset the project's remaining (i.e., post implementation of GHG reduction measures pursuant to Mitigation Measure 3.3-1 and 3.3-2) GHG emissions by relying upon one of the following compliance options, or a combination thereof: ▶ demonstrate that the project applicant has directly undertaken or funded activities that reduce or sequester GHG emissions that are estimated to result in GHG reduction credits (if such programs are available), and retire such GHG reduction credits in a quantity equal to the project's remaining GHG emissions; ▶ provide a guarantee that it shall retire carbon credits issued in connection with direct investments (if such programs exist at the time of building permit issuance) in a quantity equal to the subsequent project's GHG emissions; ▶ undertake or fund direct investments (if such programs exist at the time of building permit issuance) and retire the associated carbon credits in a quantity equal to the subsequent project's remaining GHG emissions; or ▶ if it is impracticable to fully offset GHG emissions through direct investments or quantifiable and verifiable		

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			programs do not exist, the project applicant or its designee may purchase and retire carbon credits that have been issued by a recognized and reputable, accredited carbon registry in a quantity equal to the subsequent project's remaining GHG Emissions.		
Cultural and Paleontological Resources					
Impact 3.4-1: Cause a Substantial Adverse Change in the Significance of a Historical Resource	LTS	**Adopted MM 3.5.1b:** When a proposal affects a previously undeveloped parcel in an area identified as having high or moderate cultural sensitivity in the General Plan, a cultural resource study shall be prepared as part of the CEQA analysis. If the proposal affects an area addressed in previous cultural studies, the City shall review the report(s) to confirm whether conditions documented in the previously prepared study have changed and if the recommendations (if any) required by the study are still applicable and appropriate for the future proposed project. If the City determines that conditions have changed from the previous study, the City will require that an appropriate updated to the analysis or a new analysis be prepared.	—	LTS	LTS
Impact 3.4-2: Cause a Substantial Adverse Change in the Significance of Unique Archaeological Resources	LTS	**Adopted MM 3.5.1b:** When a proposal affects a previously undeveloped parcel in an area identified as having high or moderate cultural sensitivity in the General Plan, a cultural resource study shall be prepared as part of the CEQA analysis. If the proposal affects an area addressed in previous cultural studies, the City shall review the report(s) to confirm whether conditions documented in the previously prepared study have changed and if the recommendations (if any) required by the study are still applicable and appropriate for the future proposed project. If the City determines that conditions have changed from the previous study, the City will require that an appropriate updated to the analysis or a new analysis be prepared.	—	LTS	LTS

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NI = No impact		LTS = Less than significant PS = Potentially significant	S = Significant SU = Significant and unavoidable		
		Adopted MM 3.5.1c: If, during the course of construction of future projects within the project area, cultural resources (i.e., prehistoric sites, historic sites, and isolated artifacts and features) are discovered, work shall be halted immediately within 50 feet of the discovery, and the City of Grass Valley Community Development Department shall be notified. A qualified archaeologist (that meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology) shall be retained to determine the significance of the discovery. Based on the significance of the discovery, the professional archaeologist shall present options to the City and project applicant for protecting the resources. The City and the project applicant shall consider mitigation recommendations presented by a qualified archaeologist (as described) for any unanticipated discoveries. The City and the project applicant shall consult and agree upon implementation of a measure or measures that the City and the project applicant deem feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. The project applicant shall be required to implement any mitigation necessary for the protection of cultural resources.			
Impact 3.4-3: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource	LTS	**Adopted MM 3.5.1d:** The Native American community will be notified of any unanticipated and accidental discoveries of prehistoric or historic Native American cultural resources and will monitor activities associated with determining the significance of any discoveries as agreed to by the City of Grass Valley in consultation with the Native American community.	—	LTS	LTS

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	NI = No impact	LTS = Less than significant PS = Potentially significant	S = Significant SU = Significant and unavoidable		
Impact 3.4-4: Disturb Human Remains	PS	**Adopted MM 3.5.1e:** If human remains are discovered, all work shall be halted immediately within 50 feet of the discovery, the City of Grass Valley Community Development Department shall be notified, and the Nevada County Coroner must be notified, according to Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.	—	LTS	LTS
Hazards and Hazardous Materials					
Impact 3.5-1: Create a Significant Hazard through the Routine Transport, Use, Disposal, or Release of Hazardous Materials	LTS	—	—	LTS	LTS
Impact 3.5-2: Conflict with Known Hazardous Materials Sites	LTS	**Adopted MM 3.7.2a:** Prior to issuance of any grading plans or improvement permits for construction of roads, structures, or infrastructure on the Bear River Mill Site portion of the project area (APNs 22-160-04, -05, -06, -07, -09, -12, and -33), a certification of cleanup shall be obtained. **Adopted MM 3.7.2b:** Prior to issuance of any grading permit or improvement permits for construction of roads, structures, or infrastructure on the La Barr Meadows Road property portion of the project area (APNs 09-620-10 and -12, 22-150-23 and -30, and 29-290-09), a certification of cleanup shall be obtained. **Adopted MM 3.7.2c:** All recommendations contained in the Phase I Environmental Site Assessment prepared for the Berriman Ranch property (APNs 22-140-03 and 22-160-03) dated August 7, 2007, shall be implemented prior to issuance of grading permits or improvement permits for	**Mitigation Measure 3.5-2a: Modified 2014 SOI MM 3.7.2a** Prior to issuance of any grading plans or improvement permits for construction of roads, structures, or infrastructure on the former Bear River Mill Site portion of the project area, including the Hansen Bros. La Barr Meadows property (APNs 022-200-036, -037, -066; 022-230-010, -052; and 022-160-005) and the Rare Earth Landscape Materials property (APNs 022-160-004, -006, and -033), a certification of cleanup shall be obtained. **Mitigation Measure 3.5-2b: Modified 2014 SOI MM 3.7.2b** Prior to issuance of any grading permit or improvement permits for construction of roads, structures, or infrastructure on the Chrisetta Corp. La Barr Meadows Road property portion of the project area (APNs 009-620-010 and -012, 022-150-023 and -030, and ~~29-290-09~~029-350-012), a certification of cleanup shall be obtained.	LTS	LTS

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		construction of roads, structures, or infrastructure in this portion of the project area.	**Mitigation Measure 3.5-2c: Modified 2014 SOI MM 3.7.2c** All recommendations contained in the Phase I Environmental Site Assessment prepared for the Berriman Ranch property (APNs ~~22-140-03~~022-140-053, 022-140-057, and 022-160-003) dated August 7, 2007, shall be implemented prior to issuance of grading permits or improvement permits for construction of roads, structures, or infrastructure in this portion of the project area. Additionally, all recommendations and required actions identified in the DTSC's RAW shall be implemented prior to site development.		
Impact 3.5-3: Interfere with Emergency Plans	LTS	—	—	LTS	LTS
Hydrology and Water Quality					
Impact 3.6-1: Substantially Degrade Surface Water Quality	LTS	—	—	LTS	LTS
Impact 3.6-2: Substantially Degrade Groundwater Quality	LTS	**Adopted MM 3.8.2:** As part of the final design of specific future development projects, soil borings shall be taken at representative locations within the future project footprint to analyze the subsurface soils that are present and the elevation of the subsurface water table. If these soil borings identify shallow groundwater within 2 feet of the proposed bottom elevation of underground utilities, detention ponds, and/or structure foundations, a liner and/or best available water quality control features (i.e., leachate management system) shall be incorporated into the design of proposed underground utilities, detention ponds, and foundations, subject to City drainage standards and approval.	—	LTS	LTS
Impact 3.6-3: Substantially Alter the Existing Drainage Pattern of Project Area	LTS	—	—	LTS	LTS

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Impact 3.6-4: Risk Release of Pollutants Due to Inundation of a Flood Hazard, Tsunami Zone, or Seiche Zone	LTS	—	—	LTS	LTS
Impact 3.6-5: Conflict With or Obstruct Implementation of a Water Quality Control Plan or Sustainable Groundwater Management Plan	LTS	—	—	LTS	LTS
Noise					
Impact 3.7-1: Construction-Generated Noise	LTS	—	—	LTS	LTS
Impact 3.7-2: Increases in Traffic Noise that Exceed City Standards		**Adopted MM 3.9.2:** For any residential development proposed within 600 feet of State Route 49 or 100 feet of La Barr Meadows Road, an applicant shall submit an acoustical analysis for any tentative map. If the acoustic analysis shows any proposed outdoor activity area within the 60 dB Ldn or greater noise contour, the applicant shall mitigate the impact to a level that is less than 60 dB Ldn. Specific mitigation measures include, but are not limited to, (1) a redesign or reorientation of the lots (which allows the home to create a barrier between the outdoor area and noise source); (2) the addition of solid fencing or wall; (3) an increased setback; or (4) a redesign of the project to utilize the existing development or topography and vegetation to reduce the impact to an acceptable level.	—	LTS	LTS
Impact 3.7-3: Groundborne Vibration	LTS	—	—	LTS	LTS
Impact 3.7-4: Operational (Stationary) Noise Sources	LTS	—	—	LTS	LTS

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Public Utilities and Energy					
Impact 3.8-1: Environmental Effects due to Construction of New or Expanded Infrastructure	LTS	—	—	LTS	LTS
Impact 3.8-2: Insufficient Water Supply in Normal, Dry, and Multiple Dry Years	LTS	—	—	LTS	LTS
Impact 3.8-3: Wastewater Treatment Capacity	LTS	—	—	LTS	LTS
Transportation and Circulation					
Impact 3.9-1: Conflict or be Inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)	S	—	**Mitigation 3.9-1a: Provide Bicycle and Pedestrian Network Improvements** Subsequent development projects within the Southern SOI Amendment area shall ensure adequate access to destinations by making walking and biking feasible and safe. These improvements shall include, but are not limited to the following: ▶ Provide continuous Class II bicycle facilities for throughout the entirety of the Southern SOI Amendment area and provide connections to any adjacent off-site bicycle facilities; ▶ Provide for, contribute to, or dedicate land for the provision of off-site bicycle trails linking the project to designated bicycle commuting routes in accordance with an adopted citywide or countywide bikeway plan; ▶ Provide bicycle and pedestrian connections to the Empire Mine State Park trail network north and east of the Southern SOI Amendment area;	SU	Not evaluated

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			▶ Provide continuous pedestrian facilities (i.e., sidewalks, paths, cross-walks, etc.) along all roadways within the Southern SOI Amendment area; ▶ Provide pedestrian access connecting to all existing or planned external streets and pedestrian facilities contiguous with the within the Southern SOI Amendment area. If present, the implementation of this measure could include elimination of barriers (e.g., walls, landscaping, slopes) to pedestrian access and interconnectivity. ▶ Provide pedestrian and bicycle safety and traffic calming measures in excess of any applicable jurisdictional requirements designed to reduce motor vehicle speeds and encourage pedestrian and bicycle trips with traffic calming features. Traffic calming features may include: marked crosswalks, count-down signal timers, curb extensions, speed tables, raised crosswalks, raised intersections, median islands, tight corner radii, roundabouts or mini-circles, on-street parking, planter strips with street trees, chicanes/chokers, and others. **Mitigation 3.9-1b: Provision of Bicycle Parking** Subsequent development projects within the Southern SOI Amendment area shall provide secure and convenient bicycle parking at all nonresidential land uses. The associated bicycle parking shall include, but are not limited to the following: ▶ Provide bicycle parking facilities at all non-residential buildings that meet or exceed bicycle parking requirements required under the 2016 California Green Building Standards Code; ▶ Incorporate the provision of long-term bicycle parking and support facilities (i.e., shower/changing space,		

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			secure storage for bicycle gear) into the design of the commercial and high-density residential areas of the project site; ▶ Provide short-term bicycle parking (i.e., anchored bicycle racks) at all commercial, high density residential, industrial, and publicly dedicated open space areas within the Southern SOI Amendment area. **Mitigation 3.9-1c: Transit Service Improvements** As new development is proposed within the Southern SOI Amendment area, the City shall coordinate with Gold Country Stage to identify and support the provision of additional transit service and/or facility improvements within the area with a goal of providing bus service to residents and employees. Potential transit improvements may include construction of bus shelters/stops, modifying existing transit routes, of adding new routes to serve areas within the Southern SOI Amendment area. **Mitigation 3.9-1d: Develop Transportation Demand Management Programs** In coordination with the City, Subsequent development projects within the Southern SOI Amendment project site shall develop and/or contribute towards alternative transportation programs and TDM programs undertaken by the City and/or regional partners such as NCTC and the Northern Sierra Air Quality Management District. TDM programs may include the following element measures: ▶ Car-sharing and/or ride-sharing programs; ▶ Employer-sponsored vanpool/shuttle; ▶ Subsidized demand-responsive trips provided by contracting with private TNCs or taxi companies; and ▶ Actions that encourage telecommuting and alternative work schedules.		

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Wildfire					
Impact 3.10-1: Exacerbate Wildfire Risks and Thereby Expose Project Occupants to Pollutant Concentrations from a Wildfire or the Uncontrolled Spread of a Wildfire	LTS	—	—	LTS	LTS
Impact 3.10-2: Expose People or Structures to Significant Risks as a Result of Runoff, Post-Fire Slope Instability, or Drainage Changes	LTS	—	—	LTS	LTS

1 INTRODUCTION

The City of Grass Valley (hereinafter City) completed an extensive general plan and prezoning planning process for the 420-acre Southern Sphere of Influence Planning and Annexation Project, including certification of an environmental impact report (the 2014 SOI EIR), in 2014. The City is now proposing amendments to the Southern Sphere of Influence Planning and Annexation Project. The proposed modifications would change the boundary of the southern sphere of influence (SOI), revise land use designations through a general plan amendment, revise the prezoning, and annex the southern SOI into the city.

This draft subsequent environmental impact report (draft SEIR) evaluates the environmental impacts of the proposed amendments to the Southern Sphere of Influence and Annexation Project. This draft SEIR has been prepared in accordance with the requirements of the California Environmental Quality Act (CEQA; Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines.

1.1 TYPE OF DOCUMENT

The City, acting as lead agency, has prepared this EIR based on direction from the City Council to provide the public and responsible and trustee agencies with information about the potential environmental effects of the proposed project. As described in CEQA Guidelines Section 15121(a), an EIR is a public, informational document used in the planning and decision-making process that assesses the potential environmental effects of a proposed project. An EIR also discloses significant environmental impacts that cannot be avoided; any growth-inducing impacts of a project; effects found not to be significant; and significant cumulative impacts of past, present, and reasonably foreseeable future projects in combination with the impacts of a project. Public agencies are charged with the duty to consider and minimize environmental impacts of projects, where feasible, and an obligation to balance a variety of public objectives, including economic, environmental, and social factors.

The CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. As explained further below, this document is a SEIR that contains both program and project-level analysis.

1.1.1 Subsequent EIR

If a subsequent activity could result in effects not within the scope of the program EIR, including new or more severe significant impacts than identified in the program EIR, the lead agency must prepare a negative declaration, mitigated negative declaration, or a project-level EIR. Pursuant to State CEQA Guidelines Section 15162, a Subsequent EIR should be prepared if an EIR has been certified for a project, but one or more of the following conditions are met.

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:

   A. The project will have one or more significant effects not discussed in the previous EIR or negative declaration.

   B. Significant effects previously examined will be substantially more severe than shown in the previous EIR;

C. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

D. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

The City certified the Southern Sphere of Influence Planning and Annexation Project EIR and adopted the SOI in 2014 (State Clearinghouse No.2013052057). Due to the proposed modifications to the Adopted Southern SOI Project, the City has determined that preparation of a SEIR is appropriate, per the requirements of State CEQA Guidelines Section 15162.

The 2014 SOI Draft EIR and Final EIR are available for review through the City and online at the following location: https://www.cityofgrassvalley.com/pod/environmental-documents

Mitigation has been recommended where feasible to reduce or avoid the project's significant impacts. Mitigation measures from the 2014 SOI EIR that are adopted and apply to the project are identified. As an informational document for decision makers, a Draft SEIR is not intended to recommend either approval or denial of a project. CEQA requires the decision makers to balance the benefits of a project against its unavoidable environmental impacts. If environmental impacts are identified as significant and unavoidable (i.e., no feasible mitigation is available to reduce the impact to a less-than-significant level), the City may still approve the project if it believes that social, economic, or other benefits outweigh the unavoidable impacts. The City would then be required to make findings and state, in writing, the specific reasons for approving the project, based on information in the Draft SEIR and other information in the administrative record. In accordance with Section 15093 of the State CEQA Guidelines, the document containing such reasons is called a "statement of overriding considerations." The City did adopt such statement of overriding considerations related to certain traffic, noise, greenhouse gas, and air quality impact in 2014.

PROGRAM EIR

A program EIR enables the lead agency to consider broad environmental implications of development on a conceptual basis, recognizing that a series of actions will occur prior to development. Because they are prepared relatively early on, program EIRs allow greater flexibility in dealing with overall development options, basic environmental issues, and cumulative impacts. The 2014 SOI EIR is a program EIR.

The program EIR identifies and mitigates the effects of the overall program of development, and the lead agency incorporates feasible mitigation measures and alternatives developed in the program EIR into subsequent actions to implement the project. Because the project does not generally propose any development activities, the program EIR analysis is often based on broad development assumptions. Subsequent environmental analysis and/or other types of studies may be needed for future development within the project area.

Once a program EIR has been prepared, subsequent activities within the program must be evaluated to determine if additional CEQA documentation is required to address the significant impacts of such activities. Subsequent activities could be found to be within the program EIR scope and additional environmental documents may not be required (State CEQA Guidelines Section 15168[c]).

PROJECT EIR

A project EIR is the most common type of EIR. These documents examine the environmental impacts of a specific development project, focusing on the changes in the environmental that could result from development of the project.

1.2 PROJECT REQUIRING ENVIRONMENTAL ANALYSIS

The following is a synopsis of the project characteristics. For further information on the proposed project, see Chapter 2, "Project Description."

1.2.1 Geographic Extent of the Project Area

The project is located along State Route (SR) 49, immediately south of the existing City of Grass Valley limits and within the City of Grass Valley Planning Area in the central/western portion of Nevada County. The project spans both the east and west sides of SR 49, beginning in the vicinity of McKnight Road and extending south along SR 49 and La Barr Meadows Road to the western boundary of Empire Mine State Park. The project area also includes 32 acres within the current City limits. In total, the project area would be approximately 400 acres and include 55 Nevada County Assessor's Parcel Numbers.

1.2.2 Overview of the Proposed Changes to the Southern Sphere of Influence Planning and Annexation Project

With the proposed project, the City is seeking to amend the Adopted Southern SOI Project to include: 1) an amendment to the General Plan land use designations on 237 of the 400 acres; 2) a prezone of 237 of the 400 acres to various zone districts consistent with the proposed General Plan amendments; 3) an amendment to add 31 acres to the City's SOI; and 4) the annexation of approximately 400 acres. Prezoning is a required part of the annexation process. Most of the parcels located within the project area already contain some development, but some could potentially accommodate additional developed uses. The proposed General Plan land use designations and zoning changes would decrease the total development potential by up to 18 residential dwelling units and increase the total development potential of nonresidential uses by approximately 367,000 square feet. The project also includes General Plan land use redesignation and rezoning of approximately 17 acres of land area within the current City limits.

1.2.3 Project-Level Analysis of Residential Development Area

This SEIR also evaluates the potential effects of residential development on approximately 10 acres west of SR 49. In furtherance of the goals and policies of the 2019 Housing Element, the City identified this area for streamlined analysis based on: the breadth of existing environmental evaluation, proximity to existing and approved development, access to infrastructure, and anticipated environmental concerns. The area is anticipated to be developed with 60 duplex lots and approximately 68 multifamily units. No entitlements for this residential area are currently being proposed.

1.3 SCOPE OF ENVIRONMENTAL ANALYSIS

The 2014 SOI EIR determined that the Adopted Southern SOI Project would result in less-than-significant impacts (no mitigation required) in the following resources and issue areas: aesthetic resources; geology, soils, and mineral resources; land use, agriculture and forestry resources; population and housing; and public services and recreation. Given the similarities between the original project and the proposed project, and the relatively similar circumstances that exist today, it is unlikely that new features of the proposed project would result in new significant impacts or a substantial increase in severity of previously identified significant impacts in these areas. Therefore, the discussion of these topics is limited to include a summary of the conclusions of the 2014 SOI EIR with a brief, supplemental discussion substantiating the applicability of the 2014 SOI EIR analysis to the amended project. Refer to Chapter 5, "Other CEQA Sections."

The proposed modifications to the Adopted Southern SOI Project could result in potentially new significant impacts or an increase in the severity of previously identified significant impacts related to air quality; cultural and tribal cultural resources; biological resources; greenhouse gas emissions and climate change; hazards and hazardous

materials; hydrology and water quality; noise and vibration; public utilities and energy; transportation; and wildfire. These issues are the focus of this SEIR. The 2014 SOI EIR analysis has been updated to address the change in land use designations, zoning, and the addition of approximately 31 acres to the City's SOI and any relevant updates to the existing setting.

1.3.1 Significant and Unavoidable Impacts Identified in the 2014 SOI EIR

The 2014 SOI EIR identifies the project as having the following impacts that cannot be reduced to a less than significant level through mitigation measures. The detail of each impact, and an explanation of why mitigation is unable to reduce the impact to a less than significant level, is discussed in Sections 3.1 through 3.13 of the 2014 SOI EIR.

AIR QUALITY

- **Impact 3.2.1** Subsequent land use activities associated with implementation of the proposed project could result in short-term construction emissions that could violate or substantially contribute to a violation of federal and state standards for ozone and coarse and fine particulate matter. This is considered a significant and unavoidable impact.
- **Impact 3.2.2** Subsequent land use activities associated with implementation of the proposed project could result in long-term operational emissions that could violate or substantially contribute to a violation of federal and state standards for ozone and coarse and fine particulate matter. This is considered a significant and unavoidable impact.
- **Impact 3.2.6** Long-term operation of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the Mountain Counties Air Basin, would contribute to cumulative increases in emissions of ozone-precursor pollutants (ROG and NO_X) and PM_{10} that could contribute to future concentrations of ozone and PM_{10}, for which the region is currently designated nonattainment. This impact would be considered cumulatively considerable and significant and unavoidable.

CLIMATE CHANGE AND GREENHOUSE GASES

- **Impact 3.4.1** Implementation of the proposed project will result in greenhouse gas emissions that would further contribute to significant impacts on the environment. This is considered a cumulatively considerable and significant and unavoidable impact.

NOISE

- **Impact 3.9.2** As development in the project area occurs, traffic volumes would increase and result in an increase in traffic noise levels on the local roadway system. This project-generated traffic is expected to increase traffic noise levels by more than 1.5 dB for roadways that already exceed 65 dB. This impact is considered **potentially significant** and is **significant and unavoidable.**
- **Impact 3.9.6** The proposed project would contribute to the cumulative traffic noise environment at nearby land uses. The project's contribution to this impact would be **cumulatively considerable** and **significant and unavoidable**.

TRANSPORTATION AND CIRCULATION

- **Impact 3.13.1** Future development in the project area could conflict with plans, ordinances, or policies establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. This impact is **significant and unavoidable**.

- **Impact 3.13.6** When combined with cumulative conditions, future development within the project area could cause an increase in traffic that is substantial in relation to the existing traffic load and carrying capacity of the street system, or may exceed established level of service (LOS) standards at study area roadway segments. This impact is **cumulatively considerable** and **significant and unavoidable**.

1.4 AGENCY ROLES AND RESPONSIBILITIES

1.4.1 Lead Agency

According to CEQA, preparation of an EIR is required whenever it can be fairly argued, based on substantial evidence, that a proposed project may result in a significant environmental impact. Public agencies are required to consider the information presented in the EIR when determining whether to approve a project. The City of Grass Valley is the lead agency responsible for approving and carrying out the project and for ensuring that the requirements of CEQA have been met. After the SEIR public-review process is complete, the City will determine whether to certify the SEIR (see State CEQA Guidelines Sections 15090) and approve the project.

1.4.2 Responsible Agencies

Responsible agencies are public agencies, other than the lead agency, that have discretionary-approval responsibility for reviewing, carrying out, or approving elements of a project. Responsible agencies should participate in the lead agency's CEQA process, review the lead agency's CEQA document, and use the document when making a decision on project elements. Agencies that may have responsibility for, or jurisdiction over, the implementation of elements of the project include the following:

STATE AGENCIES

California Department of Transportation, District 3
703B Street
P.O. Box 911
Marysville, CA 95901

The California Department of Transportation will issue any encroachment permits (if needed) for future development in the project area, as well as for the future development of utility infrastructure that would be needed to serve the project area.

California Regional Water Quality Control Board, Central Valley Region
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670-6114

The Regional Water Quality Control Board regulates wastewater disposal and stormwater discharges through established waste discharge requirements, a National Pollutant Discharge Elimination System permit, and a stormwater pollution prevention plan.

California Department of Toxic Substances Control (DTSC), Sacramento Regional Office
8800 Cal Center Drive
Sacramento, CA 95826-3200

DTSC regulates the cleanup of contaminated properties, regulates facilities that use and handle hazardous wastes, and enforces hazardous waste laws. DTSC is involved in cleanup activities for contaminated sites located within the project area and would regulate hazardous material use by facilities located within the project area.

LOCAL AGENCIES

Nevada County Local Agency Formation Commission
950 Maidu Avenue
Nevada City, CA 95959

The Local Agency Formation Commission of Nevada County is a legislatively established commission responsible for coordinating logical and timely changes in local governmental boundaries; conducting special studies that review ways to reorganize, simplify, and streamline governmental structure; and preparing a sphere of influence for each city and special district in each county. The Local Agency Formation Commission will consider and ultimately approve or deny the request for annexation to the City and changes to service district boundaries.

Northern Sierra Air Quality Management District
200 Litton Drive, Suite 320
Nevada City, CA 95945

The Northern Sierra Air Management District was formed in 1986 by the merging of the air pollution control districts of Nevada, Plumas, and Sierra counties. The district participates with other air districts in the Mountain Counties Air Basin in formulating open burning plans and attainment plans for achieving and maintaining state ambient air quality standards. Control measures and mitigation of indirect source emissions are developed with as much uniformity as possible, considering unique differences among the various rural and urban areas.

The Northern Sierra Air Quality Management District is one of seven air pollution control districts that make up the Mountain Counties Air Basin. The air basin consists of the Northern Sierra, Placer County, El Dorado County, Amador County, Calaveras County, Tuolumne County, and Mariposa County air pollution control districts. These seven air quality districts work together to employ a regional approach to air pollution control.

Nevada Irrigation District
1036 West Main Street
Grass Valley, CA 5945

The Nevada Irrigation District (NID) delivers water to customers in Nevada, Placer and Yuba counties. NID water originates as snow melt found in 70,000 acres of high elevation watershed near the headwaters of the Yuba River, Bear River and Deer Creek. NID stores water in 29 reservoirs later moving it through one of six treatment plants and hundreds of miles of canal and pipe to become drinking and irrigation water for 25,000 homes, farms and businesses. The Southern SOI Amendment is within NID's service area.

1.4.3 Trustee Agencies

A trustee agency is a State agency that has jurisdiction by law over natural resources that are held in trust for the people of the State of California.

The following agency is identified as a trustee agency:

California Department of Fish and Wildlife (CDFW), Region 2
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670

CDFW is a trustee agency with authority, under the provisions of Fish and Game Code Section 1802, to exercise administration over the fish and wildlife resources of California. CDFW provides comments and recommend measures for the conservation and prevention of damage to fish and/or wildlife resources of the state. CDFW is also responsible for issuing a Streambed Alteration Agreement pursuant to Fish and Game Code Section 1602, if necessary, for activities that may substantially affect a stream.

1.5 PUBLIC REVIEW PROCESS

In accordance with CEQA regulations, a notice of preparation (NOP) was distributed on August 28, 2020, to responsible agencies, interested parties and organizations, private organizations, and individuals that could have interest in the project. The purpose of the NOP was to provide notification that an SEIR for the project was being prepared and to solicit input on the scope and content of the document. The NOP and comments to the NOP are included in Appendix A of this Draft SEIR.

1.5.1 Public Review of this Draft SEIR

This Draft SEIR is being circulated for public review and comment for a period of 45 days. During this period, comments from the general public, organizations, and agencies, may be submitted to the lead agency. Please send all comments to:

Thomas Last, Community Development Director
City of Grass Valley
125 E. Main Street
Grass Valley, CA 95945
toml@cityofgrassvalley.com

Agencies that will need to use the SEIR when considering permits or other approvals for the project should provide the name of a contact person, phone number, and email address. Comments provided by email should include the name and physical address of the commenter.

A copy of this Draft SEIR has been posted on the City's website: https://www.cityofgrassvalley.com. The Grass Valley Community Development Department is closed to in-person services while the shelter in place orders are in effect for Nevada County. Therefore, the Draft SEIR will only be available to the public online.

Upon completion of the public review and comment period, a final SEIR will be prepared that will include both written and oral comments on the draft SEIR received during the public-review period, responses to those comments, and any revisions to the draft SEIR made in response to public comments. The draft SEIR and final SEIR will comprise the SEIR for the project. Before adopting the project, the lead agency is required to certify that the SEIR has been completed in compliance with CEQA, that the decision-making body reviewed and considered the information in the SEIR, and that the SEIR reflects the independent judgment of the lead agency. Upon certification of an EIR, the lead agency makes a decision on the project analyzed in the EIR. A lead agency may: (a) disapprove a project because of its significant environmental effects; (b) require changes to a project to reduce or avoid significant environmental effects; or (c) approve a project despite its significant environmental effects, if the proper findings and statement of overriding considerations are adopted (State CEQA Guidelines Sections 15042 and 15043).

1.6 DOCUMENT ORGANIZATION

This Draft EIR is organized into chapters, as identified, and briefly described below. Chapters are further divided into sections (e.g., Chapter 3, "Environmental Impacts and Mitigation Measures" and Section 3.6, "Energy"):

- The "Executive Summary": This chapter introduces the proposed amendments to the Southern Sphere of Influence Planning and Annexation Project; provides a summary of the environmental review process, effects found not to be significant, and key environmental issues; and lists significant impacts and mitigation measures to reduce significant impacts to less-than-significant levels.
- Chapter 1, "Introduction": This chapter provides a description of the lead and responsible agencies, the legal authority and purpose for the document, and the public review process.
- Chapter 2, "Project Description": This chapter describes the location, background, and goals and objectives for the proposed Southern SOI Amendment, and describes the project elements in detail.

- Chapter 3, "Environmental Impacts and Mitigation Measures": The sections within this chapter evaluate the expected environmental impacts generated by the proposed Southern SOI Amendments, arranged by subject area (e.g., Hydrology and Water Quality). Within each subsection of Chapter 3, the regulatory background, existing conditions, analysis methodology, and thresholds of significance are described. For any significant or potentially significant impact that would result from project implementation, mitigation measures are presented and the level of impact significance after mitigation is identified.
- Chapter 4, "Alternatives": This chapter evaluates alternatives to the proposed Southern SOI Amendments, including alternatives considered but eliminated from further consideration and the No Project Alternative. The environmentally superior alternative is identified.
- Chapter 5, "Other CEQA Sections": This chapter provides information required by CEQA regarding cumulative impacts that would result from implementation of the proposed Southern SOI Amendments together with other past, present, and probable future projects. It also evaluates growth-inducing impacts and irreversible and irretrievable commitment of resources, and discloses any significant and unavoidable adverse impacts.
- Chapter 6, "Report Preparers": This chapter identifies the preparers of the document.
- Chapter 7, "References": This chapter identifies the organizations and persons consulted during preparation of this draft SEIR and the documents and individuals used as sources for the analysis.

2 PROJECT DESCRIPTION

The City of Grass Valley (hereinafter City) completed an extensive General Plan and pre-zoning planning process for the 420-acre Southern Sphere of Influence Planning and Annexation Project, including certification of an environmental impact report (the 2014 SOI EIR), in 2014. As previously analyzed, the project consisted of a General Plan amendment to change land use designations, prezoning of the project area, and partial annexation. In 2016, the City amended the project to include a combining or overlay zone on several industrial properties and prepared an addendum to the EIR.

The City is now proposing amendments to the Southern Sphere of Influence Planning and Annexation Project. This chapter presents a detailed description of the proposed modifications, which would change the boundary of the southern sphere of influence (SOI), revise land use designations through a General Plan amendment, revise the prezoning, and annex the southern SOI into the city. The following discussion provides information about the project background, existing conditions, elements of the proposed project, buildout and operation assumptions used in the analysis, the City's objectives, and required approvals.

2.1 PROJECT LOCATION

The project is located along State Route (SR) 49, immediately south of the existing City of Grass Valley limits and within the City of Grass Valley Planning Area in the central/western portion of Nevada County (Figure 2-1). The project spans both the east and west sides of SR 49, beginning in the vicinity of McKnight Road and extending south along SR 49 and La Barr Meadows Road to the western boundary of Empire Mine State Park (Figure 2-2).

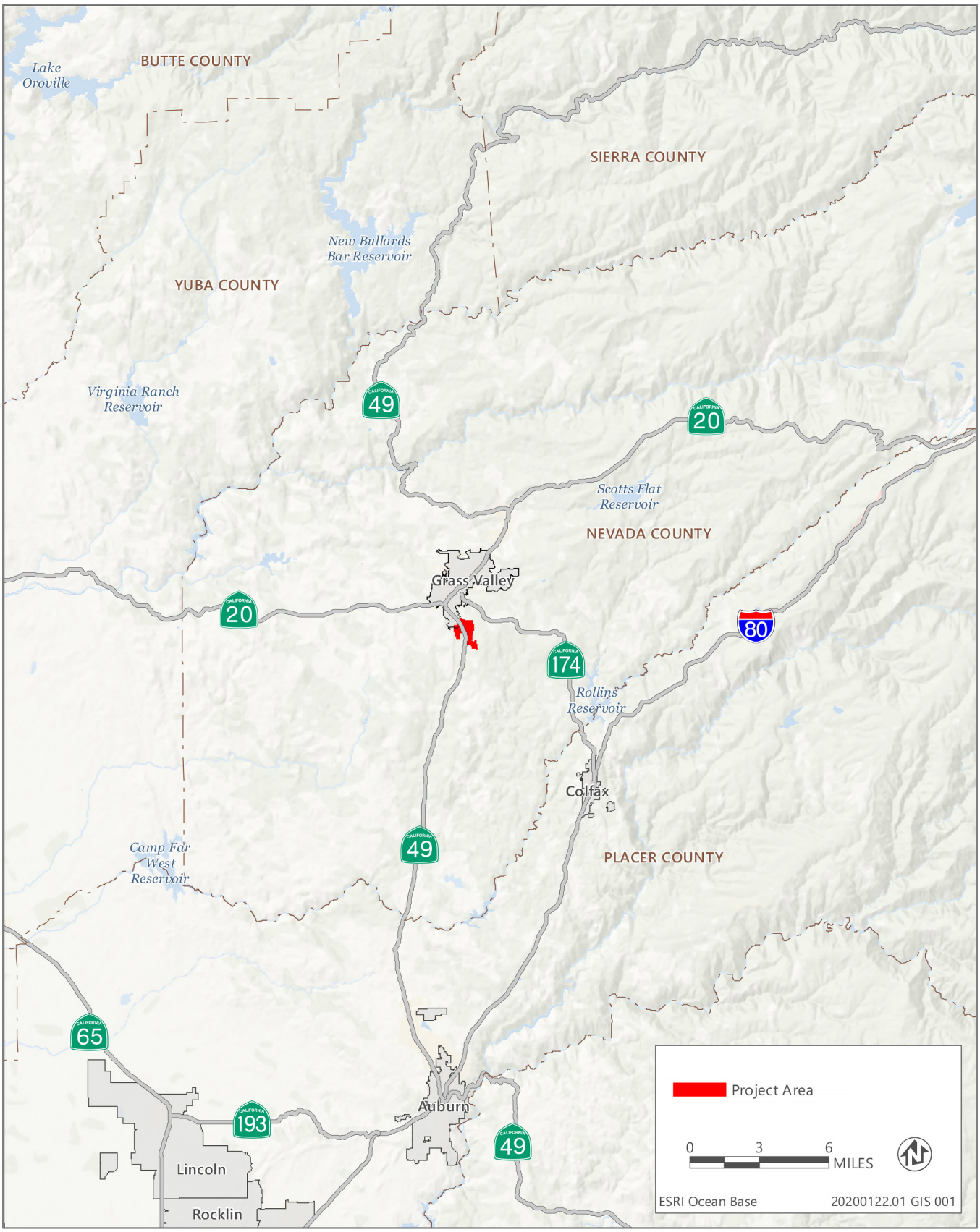
The project area includes 32 acres within the current City limits. In total, the project area would be approximately 400 acres and include 55 Nevada County Assessor's Parcel Numbers.

2.2 PROJECT BACKGROUND

The purpose of the Southern Sphere of Influence Planning and Annexation Project, as approved in 2014, was to prepare a planning framework for a large area south of the City limits that would address the lack of land zoned for industrial uses, establish compatible uses near existing industrial uses, provide opportunities for retail development, create an urban area with increased residential densities, and preserve hillsides and habitat corridors. In doing so, the project was intended to provide for a full range of jobs to meet the existing and long-term needs of the community, including opportunities to accommodate growth in the "primary jobs" sector (industrial/manufacturing sector jobs); provide opportunities for residents to shop local and meet their entire range of retail needs; and allow for urban form and a sustainable development pattern, which results in more efficient use of land and cost-effective infrastructure. In addition, the 2014 SOI EIR evaluated annexation of 120 acres to better position the City to seek infrastructure grants for the extension of the sewer collection system and assist with road improvements, which are tied to job creation.

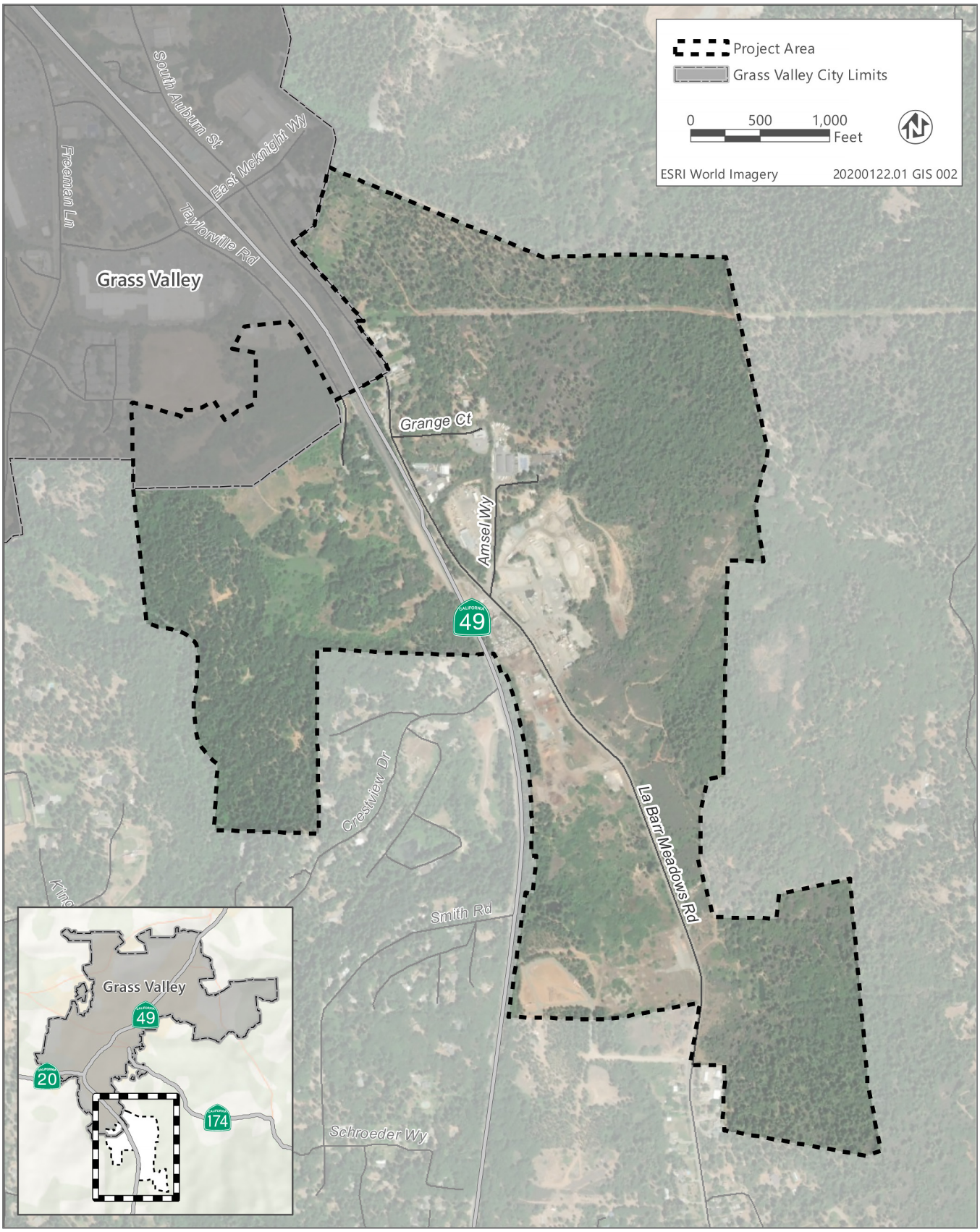
Following approval of the Southern Sphere of Influence Planning and Annexation Project by the City Council in March 2014, an addendum was prepared to create a combining or overlay zone on several industrial properties. This overlay was developed because of the unique industrial operation characteristics of the businesses in this area and intended to ensure the long-term protection and viability of these primary job sector businesses.

In July of 2015, a 32-acre portion of the SOI adjacent to the city limits west of SR 49 was annexed into the city. At the time of annexation, approximately 10 acres of this area was planned for medium density residential, and the remaining area was designated for low density residential, open space, and business uses. There are homes currently under construction within the area planned for medium density residential development with additional development approved. As part of the proposed amendments to the Southern Sphere of Influence Planning and Annexation Project, the City is considering modifications to the land use designations and zoning of the remaining 22 acres.



Sources: adapted by Ascent Environmental in 2020

Figure 2-1 Regional Location



Sources: Data received from SCO Planning & Engineering in 2020; adapted by Ascent Environmental in 2020

Figure 2-2 Project Area

Subsequent to completion of the Southern Sphere of Influence Planning and Annexation Project in 2014 and partial annexation in 2015, the City prepared the 2019 Housing Element and several key changes in land ownership have occurred. The proposed modifications to the Southern Sphere of Influence Planning and Annexation Project reflect the City's recent planning efforts and would further the City's goals of increasing residential opportunities and supporting established employment centers. The proposal would address the new ownership of large areas of land east of La Barr Meadows Road, implement programs in the Housing Element, create housing opportunities for multiple income levels, and provide more land to accommodate long-term industrial growth.

2.2.1 Regional Growth Projections and Planning Context

The population of Grass Valley increased by 181 people, or approximately 1 percent, between 2010 and 2018 according to California Department of Finance estimates cited in the City's 2019 Housing Element. The low rate of populations growth that the City has experienced in the last 20 years is largely attributable to annexations (nearly 900 acres have been annexed since 2000); without these annexations, the City predicts that the current population would be less than 20 years ago (City of Grass Valley 2019).

The City's General Plan Housing Element identifies the following challenges for the community through 2027:

- Providing sufficient sites for additional housing;
- Providing for a range in types and prices of housing, particularly workforce housing;
- Providing assistance in the cleanup of contaminated sites;
- Improving the opportunities for mixed-use housing; and
- Maintaining and improving the local environment and quality of life in Grass Valley.

EMPLOYMENT TRENDS

According to the City's Housing Element, the types of employment opportunities available in the city (largely in the areas of professional services and hospitality) are different than the occupations of employed Grass Valley residents. As a result, "many Grass Valley residents hold jobs outside the City in manufacturing, education, government, and construction trades" and "low- to moderate-wage workers employed in Grass Valley commute from homes outside the city" (City of Grass Valley 2019).

HOUSING NEEDS

The 2019-2027 Regional Housing Need Assessment Plan adopted by the State Department of Housing and Community Development allocates 743 housing units to the City of Grass Valley. The City is responsible for ensuring that adequate sites with infrastructure are available that can accommodate these housing units (City of Grass Valley 2019).

2.3 PROJECT OBJECTIVES

The project modifications are intended to achieve the following:

- Amend the Southern SOI to reflect land ownership and provide logical boundaries for the City.
- Revise the General Plan land use designations and zoning in the Southern SOI to better reflect land ownership and envisioned future uses.
- Provide for a range in types and prices of housing.
- Allow the City to be responsive to market demand for housing by establishing an area that has been fully evaluated for development.

- Refine the industrial uses envisioned for the area east of SR 49 and to ensure there is adequately zoned land to accommodate future industrial land uses in western Nevada County.
- Create opportunities for development that maintains and improves the local environment and quality of life in the City.
- Annex land to improve the City's efforts to obtain grants for infrastructure to support residential homes and for job creation.
- Facilitate the State's efforts to provide more housing and to expedite housing projects.

2.4 EXISTING CONDITIONS

2.4.1 Existing Land Use

Table 2-1 provides a brief description of existing land uses on each of the parcels in the project area. As indicated, much of the area is either vacant or developed with industrial uses. Eight parcels include a single residence. Generally, land uses immediately east of SR 49 are commercial and industrial, with undeveloped parcels west to Empire Mine State Park. Specific uses include sale and storage of landscaping materials, mini storage, a dismantling yard, a veterinary hospital, and a dog kennel. Land to the west of SR 49 supports undeveloped parcels and rural residential development.

Table 2-1 Existing Land Uses, Existing and Proposed Land Use Designation, and Existing and Proposed Prezoning for the Project Area

APN	Size (Acres)	Existing Use	Existing Land Use Designation	Proposed Land Use Designation	Existing Prezoning	Proposed Prezoning
009-620-003[+]	5.26	Vacant	UED	M/I		M-2 *
009-620-010[+]	5.47	Vacant	UED	M/I		M-2
009-620-012	19.1	Vacant	UMD	UMD	R-2	R-2
022-031-009[+]	20.54	Vacant	UED	M/I		M-2 *
022-140-005	1.5	Grange Hall	M/I	M/I	M-1	M-1
022-140-008	5.4	Industrial	M/I	M/I	M-2 *	M-2 *
022-140-010	10.1	Industrial	M/I	M/I	M-2 *	M-2 *
022-140-011	1.5	Industrial	M/I	M/I	M-2 *	M-2 *
022-140-012	1	Rental Yard	M/I	M/I	M-2 *	M-2 *
022-140-021	2.8	Industrial	M/I	M/I	M-2 *	M-2 *
022-140-022	6.9	Industrial	M/I	M/I	M-2 *	M-2 *
022-140-025	3.03	Industrial	M/I	M/I	M-2 *	M-2 *
022-140-035[#]	36.63	Vacant	M/I	M/I	M-1 *	M-2 *
022-140-036	2.8	Mini Storage	M/I	M/I	M-2	M-2
022-140-038	2.2	Veterinary Hospital	M/I	M/I	M-2	M-2
022-140-041	2.5	Dismantling Yard	M/I	M/I	M/I	M-2
022-140-043	2.6	Landscape Material	M/I	M/I	M-2	M-2
022-140-050	2.2	Dog Kennel	M/I	M/I	M-2	M-2
022-140-051	0.04	Wireless Tower	M/I	M/I	M-2	M-2
022-140-053[#]	59.88	Vacant	UMD/OS/C	UL,M,HD/OS	C2/R2/OS	R-1,2,3/OS

APN	Size (Acres)	Existing Use	Existing Land Use Designation	Proposed Land Use Designation	Existing Prezoning	Proposed Prezoning
022-140-057#	15.47	Vacant	C/OS	UMD/M/I,OS	C-2/OS	M-1/OS/R-2
022-140-058	1.94	Plumbing Supply	M/I	M/I	M-1	M-1
022-150-003	0.2	Vacant	M/I	M/I	M-1	M-1
022-150-004	0.3	Vacant	M/I	M/I	M-1	M-1
022-150-008	0.02	Right-of-Way	M/I	M/I	M-1	M-1
022-150-009	0.1	Auto Repair	M/I	M/I	M-1	M-1
022-150-010	0.5	House	M/I	M/I	M-1	M-1
022-150-011	0.05	Vacant	M/I	M/I	M-1	M-1
022-150-015	0.7	Auto Repair/Commercial	M/I	M/I	M-1	M-1
022-150-016	0.3	House	M/I	M/I	M-1	M-1
022-150-017	0.4	Vacant	M/I	M/I	M-1	M-1
022-150-018	0.4	House	M/I	M/I	M-1	M-1
022-150-021	1.2	House	M/I	M/I	M-1	M-1
022-150-022	3	House	M/I	M/I	M-1	M-1
022-150-023	0.26	Vacant	M/I	M/I	M-1	M-1
022-150-024+	1.99	C&D	C	M/I	C-2	M-1
022-150-026#	0.43	House	C	UMD	C2	R-2
022-150-027#	0.54	House	C	UMD	C2	R-2
022-150-028	0.3	Residential/Commercial	M/I	M/I	M-1	M-1
022-150-029#	0.44	House	C	UMD	C-2	R-2
022-150-030	7.8	Vacant	M/I	M/I	M-1	M-1
022-150-032	0.5	House	M/I	M/I	M-1	M-1
022-150-033	0.03	Vacant	M/I	M/I	M-1	M-1
022-160-003#	25.78	Vacant	OS/UED	OS	OS/RE	OS
022-160-004	11.3	Landscape Material	M/I	M/I	M-2	M-2
022-160-005#	10	Vacant	M/I	M/I	M-1	M-2 *
022-160-006	25.5	Vacant	M/I	M/I	M-2	M-2
022-160-033	8.3	Vacant	M/I	M/I	M-2	M-1
022-200-036#	14.6	Vacant	OS	M/I	OS	M-2 *
022-200-037#	7.3	Vacant	OS	M/I	OS	M-2 *
022-200-066#	7.53	Vacant	OS	M/I	OS	M-2 *
022-230-010#	2.3	Vacant	UMD	M/I	R-2	M-2 *
022-230-052#	42.9	Vacant	OS/UMD	M/I	OS/R-2	M-2 *
022-230-053#	5.74	Vacant	OS	M/I	OS	M-2 *
029-350-012#	11.4	Vacant	BP	C	CBP	C-2

Notes: + = New properties not included in 2014/2016; # = proposed zone change; * = Southeast Industrial Combining Zone

Source: Data provided by SCO Planning and Engineering in August 2020

SURROUNDING LAND USES

Commercial uses within the City of Grass Valley are located to the north of the project area. Empire Mine State Park and rural residential uses located to the east of the project area. The areas to the west include a scattering of smaller rural and urban residential land uses ranging from 0.08 to 5 acres in size. There are existing rural residential uses immediately to the south, and the Alta Sierra Country Club and associated residential uses are located approximately 2 to 3 miles south of the project area.

2.4.2 Existing Land Use Designations and Zoning

The existing General Plan designations include a range of residential, commercial, and manufacturing land uses as described in Table 2-1. Existing General Plan land use designations and zoning in the plan area are depicted in Figure 2-3 and Figure 2-4, respectively.

2.5 PROJECT ELEMENTS

With the proposed project, the City is seeking to amend the Southern Sphere of Influence Planning and Annexation Project to include: 1) an amendment to the General Plan land use designations on 237 of the 400 acres (Figure 2-5); 2) a prezone of 237 of the 400 acres to various zone districts consistent with the proposed General Plan amendments (Figure 2-6); 3) an amendment to add 31 acres to the City's SOI; and 4) the annexation of approximately 400 acres. The proposed General Plan land use designations and zoning changes would decrease the total development potential by up to 18 residential dwelling units and increase the total development potential of nonresidential uses by approximately 367,000 square feet. Though the project eliminates most of the commercial land use designations, it does increase the amount of land designated for industrial uses. The project also includes General Plan land use redesignation and rezoning of approximately 17 acres of land area within the current City limits.

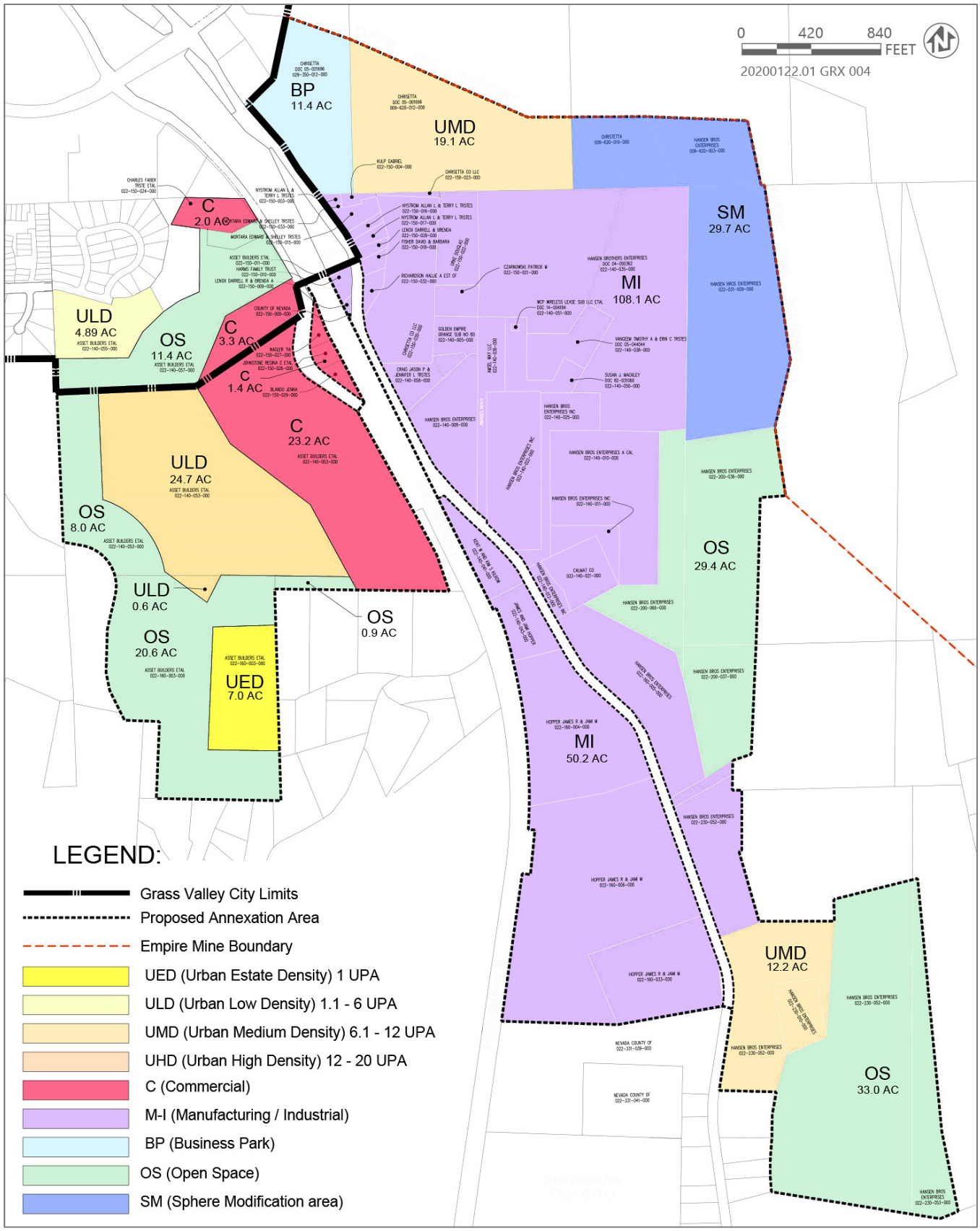
2.5.1 General Plan Amendment

The Grass Valley General Plan designates the project area as Urban Estate Density (UED), Urban Low Density (ULD), Urban Medium Density (UMD), Commercial (C), Business Park (BP), Manufacturing/Industrial (M/I), and Open Space (OS). The proposed project would change the General Plan designations to include a range of residential, commercial, and manufacturing land uses as shown in Table 2-1. See Figure 2-3 and Figure 2-5 for the location of the existing and proposed land use designations within the project area.

PROPOSED LAND USE DESIGNATIONS

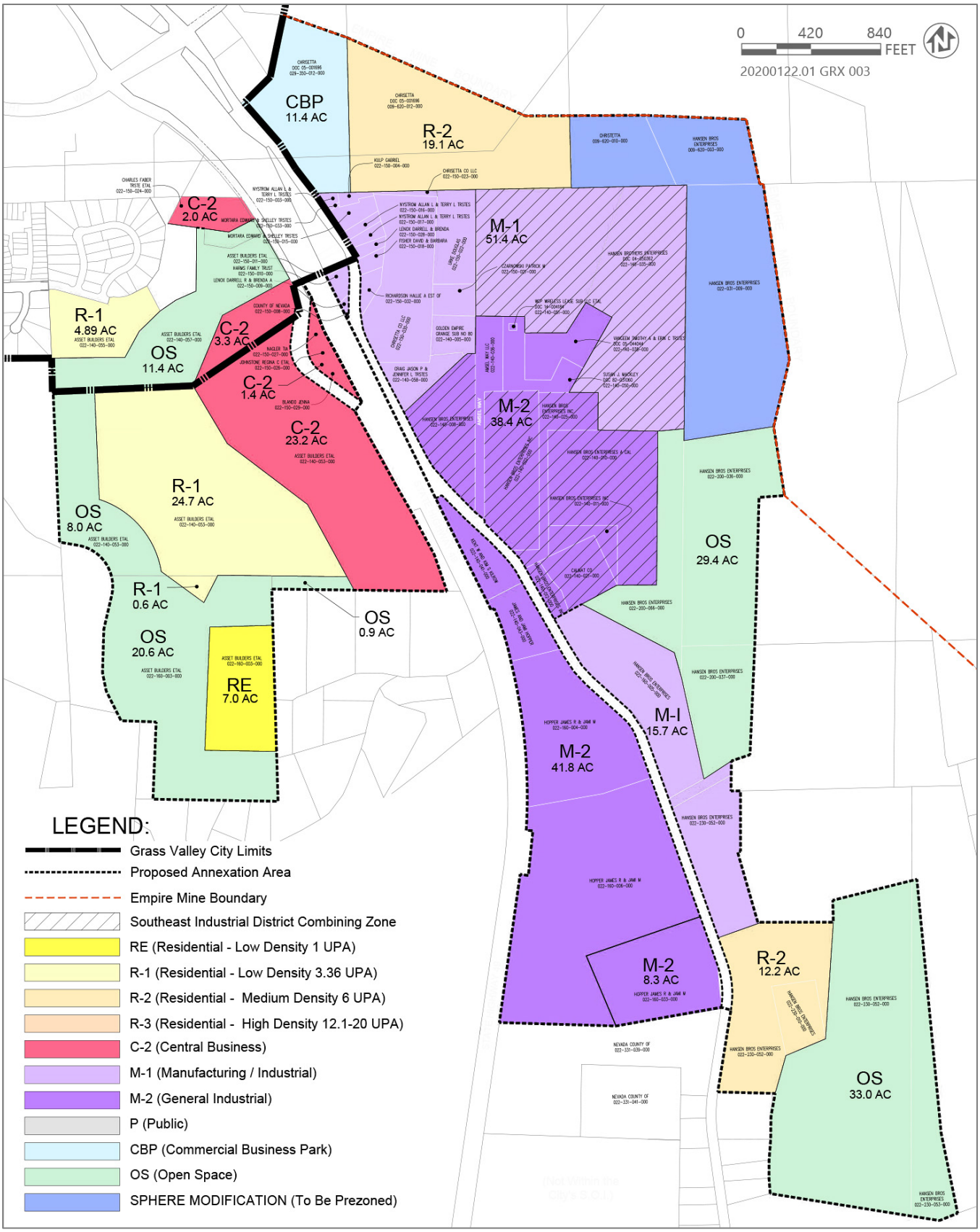
The proposed project would modify the land use designation of an 11.4-acre property east of the La Barr Meadows Road from Business Park (CBP) to Commercial (C-2). The project would also amend the General Plan for areas east of La Barr Meadows Road to re-designate 12.2 acres of Urban Medium Density and 62.4 acres of Open Space to Manufacturing/Industrial. In total, the project area would result in approximately 100 acres designated for Manufacturing/Industrial land use.

West of SR 49, proposed changes to land use designations include: 27.9 acres of Commercial to a combination of Urban High Density, Urban Medium Density and Open Space; partial re-designation of a 25.3-acre parcel designated Urban Medium Density to Urban Low Density; 7 acres of Urban High Density Open Space; 40.9 acres of Open Space to a combination of Open Space and Urban Low Density; and 2.7 acres of Commercial and Open Space to Manufacturing/Industrial land use.



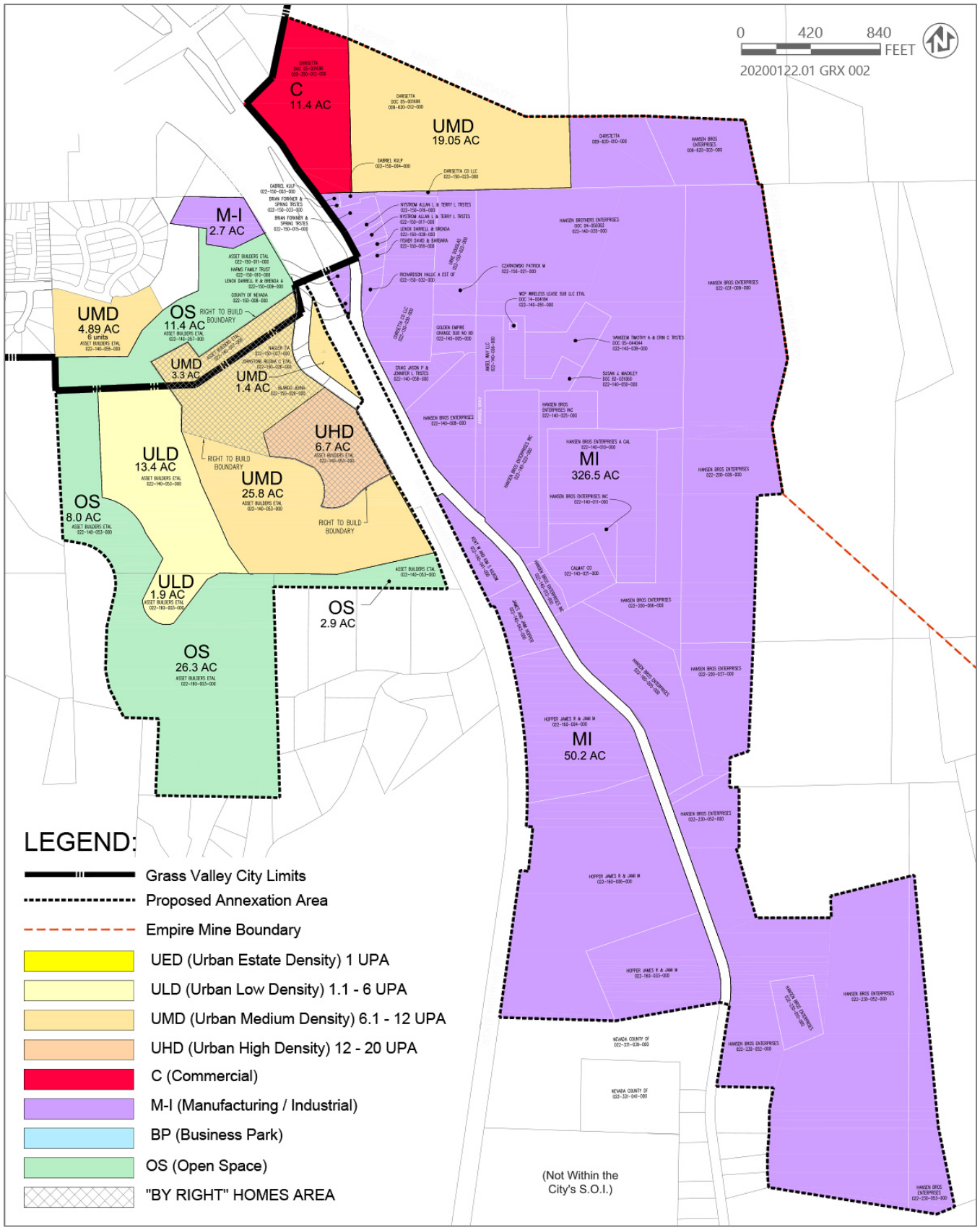
Source: Figure produced by SCO Planning and Engineering in 2020

Figure 2-3 Existing General Plan



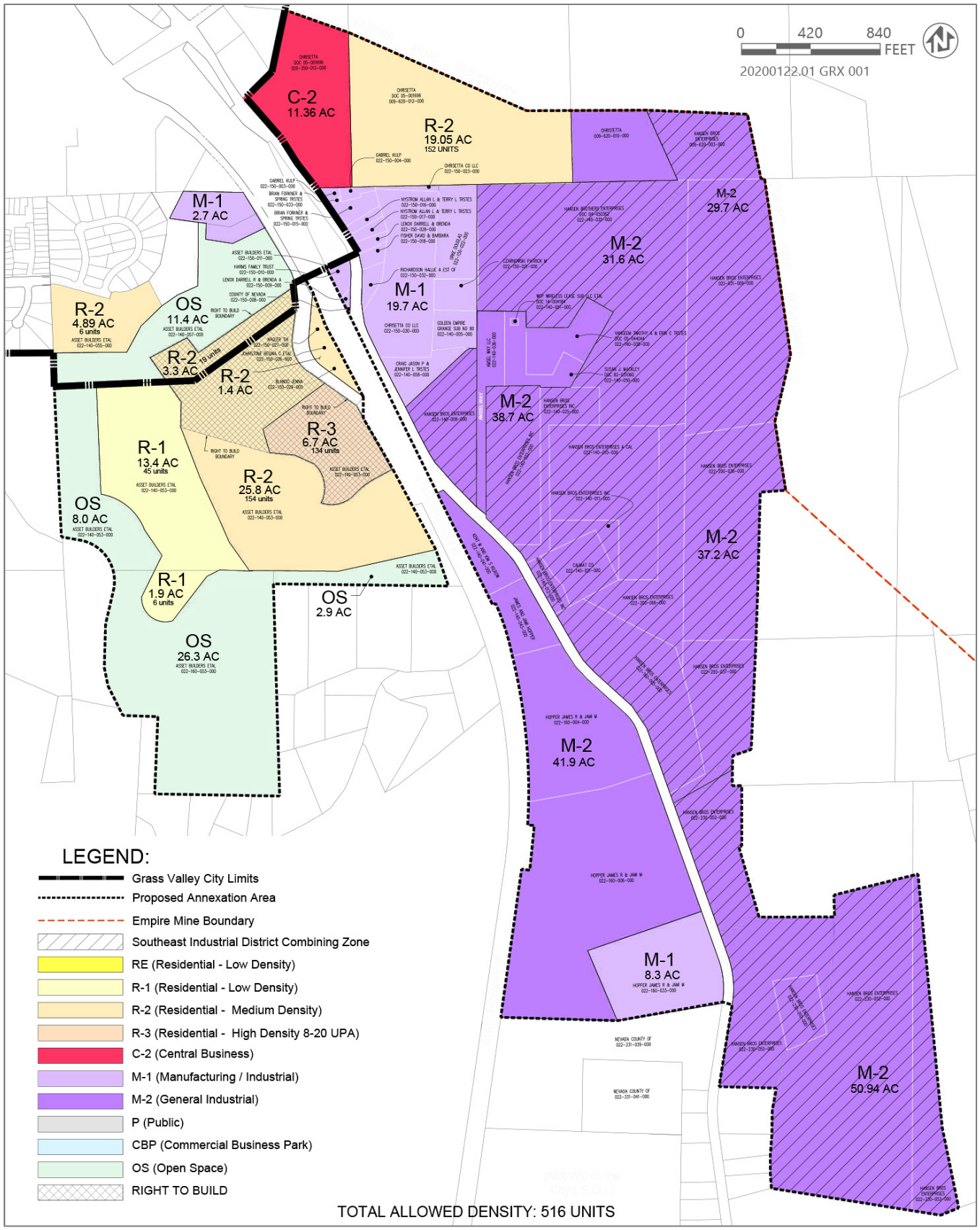
Source: Figure produced by SCO Planning and Engineering in 2020

Figure 2-4 Existing Zoning



Source: Figure produced by SCO Planning and Engineering in 2020

Figure 2-5 Proposed General Plan



Source: Figure produced by SCO Planning and Engineering in 2020

Figure 2-6 Proposed Prezoning

ULD (Urban Low Density)

Urban Low Density requires between 1.01 and 4.0 residential units per gross acre. Urban Low Density is intended primarily for single family detached houses, although higher density single family patio homes or town houses could be accommodated, if offset with sufficient open space to maintain the gross density within the indicated range.

UMD (Urban Medium Density)

Urban Medium Density requires between 4.01 and 8.0 residential units per gross acre. Urban Medium Density is intended to accommodate single family detached and attached homes, single family patio homes, duplexes, and town houses. Both single family and multi-family housing types are facilitated by Urban Medium Density designation.

UHD (Urban High Density)

Urban High Density requires between 8.01 and 20.0 residential units per gross acre. Urban High Density is intended to accommodate town house or row house styles, higher density apartments and condominiums (multiple family structural types), without distinction as to owner- or renter-occupancy.

C (Commercial)

Commercial is a broad category intended to encompass all types of retail commercial and commercial service establishments in any one of a variety of locations. Locations include the Downtown Central Business District, shopping centers, local or neighborhood locations, highway-oriented locations, or concentrations along major streets.

M-I (Manufacturing/Industrial)

The Manufacturing/Industrial designation is intended to accommodate a variety of industrial and service commercial uses. Although occupied by free-standing businesses without any overall internal plan or restrictions, Manufacturing/Industrial districts benefit from some clustering of compatible industrial or service commercial uses. Typical uses in Manufacturing/Industrial designated areas are: light manufacturing, automotive services, warehousing/distribution, and wholesale-retail outlets.

2.5.2 Pre-zoning

As part of the proposed project, the City would pre-zone the properties consistent with the revised General Plan, as shown in Figure 2-6. California Government Code Section 65859 allows the City to adopt an ordinance zoning land outside of the City. The properties remain subject to the existing County zoning until annexation.

PROPOSED ZONING DESIGNATIONS

In the portion of the project area east of SR 49, the 11-acre area that abuts the existing city limit at the northern boundary of the project area would be zoned for commercial uses consistent with existing uses within the city. The adjacent 19 acres would remain zoned for medium density residential development and could support up to 152 residential units. The remainder of the area east of SR 49 would be primarily zoned for industrial uses. Properties east of La Barr Meadows Road that would be re-zoned to the M-2 zoning designation include the area added to the SOI, 70 acres currently zoned M-1, 62 acres currently zoned OS, and 12 acres currently zoned R-2. In total, 176 acres east of La Barr Meadows Road would be zoned M-2. In addition, an 8-acre property west of La Barr Meadows Road would be rezoned from its current M-2 zoning to M-1.

West of SR 49, land would be primarily zoned for residential uses and open space. This area could support up to 364 residential units adjacent to the portion of the SOI that has been annexed into the city since the 2014 analysis. Specifically, the proposed project would rezone 28 acres of C-2 to a combination of R-2, R-3, and OS zoning, 25 acres of R-2 to a combination of R-1 and R-2, 7 acres of Residential – Low Density (RE) to OS, 41 acres of OS to OS and R-1.

Southeast Industrial District Combining Zone

This Combining Zone is intended to permit the expansion of the industrial activities occurring in this area, to allow the full range of industrial uses, create different development standards such as setbacks, signs, walls and fences, parking, and the design review process.

R-1 (Residential - Low Density)

The R-1 zone is applied to areas of the City that are appropriate for neighborhoods of single dwellings on standard urban lots, surrounding the more densely developed City core.

R-2 (Residential - Medium Density)

The R-2 zone is applied to areas of the City that are appropriate for a mixture of both single and two-family dwellings.

R-3 (Residential - High Density)

The R-3 zone is applied to areas of the City that are appropriate for a variety of higher density housing types, located in proximity to parks, schools, and public services.

C-2 (Central Business)

The C-2 zone is applied to areas of the Downtown where existing auto-oriented development is expected to be maintained that are not covered by the TC (Town Core) zone.

M-1 (Manufacturing/Industrial)

The M-1 zone is applied to areas appropriate for a range of light industrial uses.

M-2 (General Industrial)

The M-2 zone is applied to areas appropriate for a range of heavy industrial activities including manufacturing, assembly and processing, the storage and distribution of raw materials, aggregate plants, and related industrial uses that are generally compatible with and require locations removed from residential and visitor serving uses.

OS (Open Space)

The OS zone is applied to properties that are largely unimproved and used for the preservation of natural resources and habitats, passive outdoor recreation, scenic resources, and/or for the protection of public health and safety (e.g., preservation of flood plains). Allowable uses are limited to those that support maintenance and/or recreational uses.

2.5.3 Sphere of Influence Amendment

A SOI is defined under California Government Code Section 56425 as a plan for the probable physical boundary and service area of a local governmental agency. The project would modify the City's Sphere of Influence Map to add 31.5 acres along the northeasterly boundary of the existing SOI east of La Barr Meadows Road, between the SOI boundary and the Empire Mine State Park boundaries, to allow that area to be annexed into the City. The General Plan would be amended to designate this area as Manufacturing/Industrial. The inclusion of this land in the City's SOI would bridge a gap between the existing SOI and the Empire Mine State Park and prevent creation of a small island area that would remain in the County if the land were not included.

The Southern SOI Amendment would require Nevada County Local Agency Formation Commission (LAFCo) approval. LAFCos are state-mandated quasi-judicial county-wide commissions that have the sole discretion to approve, modify and approve, or disapprove boundary changes of cities and special districts, the formation of new agencies, including the incorporation of new cities and districts, and the consolidation or reorganization of special districts and or cities as provided for under the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000. LAFCos are charged to ensure the orderly formation of local governmental agencies, to preserve agricultural and open space lands, and to discourage urban sprawl.

2.5.4 Annexation

The project includes annexation of the revised southern SOI, with the exception of approximately 20 acres located between SR 49 and La Barr Meadows Road currently within and at the southernmost boundary of the SOI. This land is now owned by Nevada County and is no longer envisioned for annexation into the City. In total, roughly 400 acres would be annexed into the City. Nevada County LAFCo would be responsible for approving the annexation.

2.5.5 Project-Level Analysis of Residential Development Area

In furtherance of the goals and policies of the 2019 Housing Element, the City has obtained Senate Bill (SB) 2 grant funding from the State. Through this program, the State assists local governments with the preparation, adoption, and implementation of plans that streamline housing approvals and accelerate housing production to respond to the state's housing shortage and high housing costs.

The City identified approximately 10 acres west of SR 49 for streamlined analysis based on: the breadth of existing environmental evaluation, proximity to existing and approved development, access to infrastructure, and anticipated environmental concerns. The area is anticipated to be developed with 60 duplex lots and approximately 68 multifamily units. Figure 2-7 shows the conceptual layout of the development.

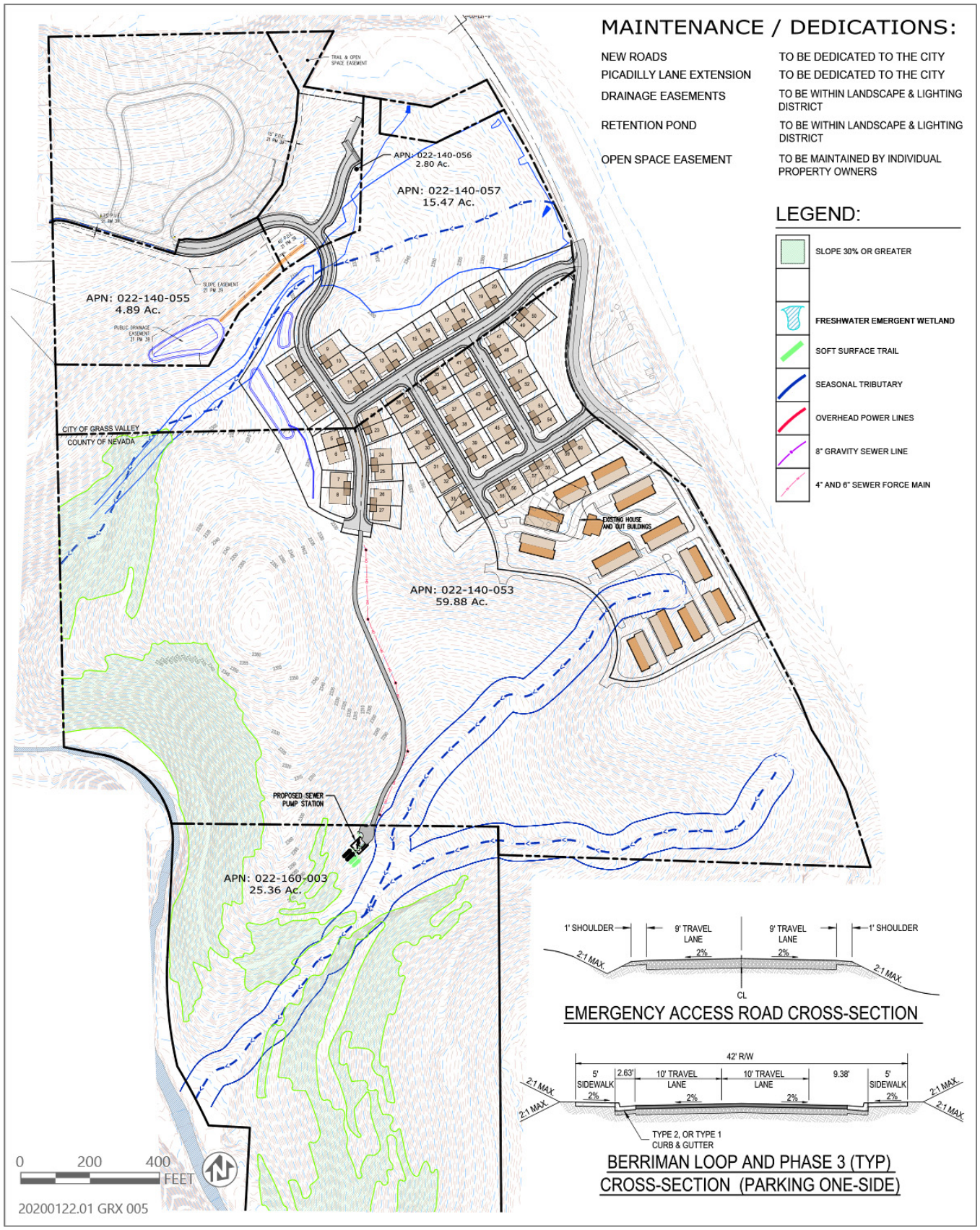
2.6 BUILDOUT AND OPERATION ASSUMPTIONS

By prezoning and modifying existing land use designations, the City is providing for future development that could happen. In addition, annexation of lands that are currently within Nevada County's jurisdiction would result in the need for the City to provide services to those areas, rather than Nevada County.

To determine the possible future impacts that could happen if development were to occur within the project area, development assumptions were developed by the City using the maximum possible development potential of the parcels as described in the Grass Valley Development Code and the General Plan land use designations. For nonresidential parcels, the City made assumptions for floor area ratios based on the intensity of similar development in Grass Valley and the surrounding areas and the presence of site constraints such as steep slopes. The City assumes that the maximum possible floor area ratio would be 0.15 for industrial-zoned properties and 0.25 for commercial-zoned sites based on the assumptions used in the 2014 SOI EIR.

It should be noted that the analysis in this EIR assumes that all parcels within the project area will be developed to their maximum development potential and does not take into account parcels that are already partially developed.

For the purpose of this supplemental analysis, the City has applied the same development assumptions to the Southern SOI Amendment as employed in the previous analysis of the project. This permits the City to compare the anticipated environmental impacts of the development potential of the Southern SOI Amendment to the effects previously addressed in the 2014 SOI EIR. As described above, it is assumed that the proposed Southern SOI Amendment would decrease the total development potential by up to 18 residential dwelling units and increase the total development potential of nonresidential uses by approximately 367,000 square feet. Table 2-2 provides the development potential analyzed in the 2014 SOI EIR and the development potential of the Southern SOI Amendment.



Source: SCO Planning Engineering and Surveying in 2020

Figure 2-7 Residential Development Area Conceptual Site Plan

Table 2-2 Development Potential of the 2014 Sphere of Influence and Sphere of Influence Amendment

Proposed City Pre-Zoning	Adopted Southern SOI Project[1]			Southern SOI Amendment			Change in Development Potential
	Total Acres	Potential DU	Potential Nonresidential SF[2]	Total Acres	Potential DU	Potential Nonresidential SF[2]	
C-2	27.7	–	301,762	11.4	–	124,146	-177,616 SF
CBP	11.4	–	124,146	0	–	0	-124,146 SF
M-1	70.2	–	458,882	30.7	–	200,594	-258,288 SF
M-2	88.2	–	576,103	230.0	–	1,503,081	926,978 SF
OS	117.0	–	–	48.6	–	–	-68.4 acres
Public	20.3	–	–	0	–	–	-20.3 acres
R-1	16.4	66	–	15.3	51	–	-15 du
R-2	57.6	461	–	57.1	331	–	-130 du
RE	7.5	7	–	0	0	–	-7 du
R-3	0	0	–	6.7	134	–	134 du
Total	**416.3**	**534**	**1,460,893**	**399.9**	**516**	**1,934,979**	**+366,928 SF nonresidential development -18 residential du**

Notes: Totals may not add due to rounding
1= source: 2014 SOI EIR, Table 2.0-2
2= FAR = 0.25 for commercial and business park, 0.15 for industrial

2.6.1 Anticipated Form of Industrial Development

There is not currently an application before the City for development of the approximately 188 acres of the project area on the east side of La Barr Meadows Road is owned by Hansen Brothers Enterprises (HBE). Although this EIR evaluates the full development potential of the project area based on proposed land use designations and zoning, the City acknowledges that this area is currently envisioned for an expansion of existing uses (including materials storage) and development of a large lot industrial subdivision, as described below. Therefore, the actual intensity of developed land use is anticipated to be less than the maximum permitted by the zoning and evaluated herein. The area would be included in the Southeast Industrial District Combining Zone and is subject to a Pre-Annexation Processing Agreement that identifies the area for industrial use.

LANDSCAPE MATERIALS YARD

The 21-acre landscape materials yard would be relocated further south on La Barr Meadows Road and expanded to provide larger bins and room for more variety of materials. Materials would be visible from La Barr Meadows Road to assist the public in understanding the available options. This site would be supported by a new sales office and maintenance shop that would also manage the expanded rental yard and personal storage areas. The area would be graded into terraces that can be serviced by loaders and trucks. Access to the area is planned directly from La Barr Meadows Road.

RENTAL YARD

The 9-acre rental yard would be located south of the landscape material yard and would be managed by the new office/shop building serving all of the new uses on-site. The rental yard would include terraced equipment storage spaces with aisles adequate to access the equipment. Equipment spaces will vary in size, as needed. Rental equipment would be visible from La Barr Meadows Road to assist the public's understanding of what is available. The yard would be fenced and secured at all times. Equipment rentals can vary from small hand tools to large dump trucks and tractors. Access to the yard is planned directly from La Barr Meadows Road.

RV AND PERSONAL STORAGE

The 42-acre property south of the proposed rental yard on La Barr Meadows Road is planned for personal storage in all forms, including mini-storage units and storage for recreational vehicles of all types (e.g., motor homes, travel trailers, boats, motorcycles, and cars). Uses are anticipated to include uncovered, covered, and building enclosed parking spaces on graded terraces. This area is likely to be developed in phases, based on market demand. This operation would be managed from the new shop and sales office building. A radio or communications tower may also be sited in this area. The existing man-made pond would be retained. Access to the area is planned directly from La Barr Meadows Road.

FUEL SALES

The 2.5-acre parcel at the southwestern boundary of the HBE property is planned to support fuel sales. Uses would include a full-service gas station and mini mart with as many as 10 double sided gas pumps offering all grades of gasoline, diesel, and kerosene. It is anticipated that there could also be as many as three diesel exhaust fluid dispensers. Fuel storage between 90,000 and 100,000 gallons would be in above ground tanks. A small retail building of 4,000 to 5,000 SF would manage the pumps, provide limited groceries, and restrooms. The timing and details of this use would depend on tenant demand and the design details would be subject to City approval. The station would serve the larger industrial complex area's businesses and employees, along with passerby traffic. Access to the station is planned directly from La Barr Meadows Road.

LARGE LOT INDUSTRIAL SUBDIVISION

To the north and east of the existing operation, the sloping hillsides give way to areas of moderate topography. This 68-acre area is expected to be developed into 10-12 large lots of 3 acres or more that could be sold or leased to other industrial users or for expansion of HBE operations. The lot sizes are intended to provide room for cut/fill slopes and other retaining systems to create large flat areas or terraces. These lots would be able to support any of the full range of land uses allowed by the prevailing zoning, ranging from large building coverage in warehouses or manufacturing businesses, to small buildings with outside storage like corporation yards with large equipment.

A circulation pattern would be developed with access roads of modest width to minimize grading. Access is planned by utilizing an extension of Amsel Way with possible connections through the existing facility or near the new landscape material area or the new rental yard. This area might also support one or more radio or communication towers. This area could be developed in phases, with emergency secondary access provide by all-weather gravel road until complete buildout.

OPEN SPACE

The plan anticipates providing a minimum of 10 percent natural open space in appropriate locations along the edges and interior of the HBE-owned property. Generally, open space would be retained on steeper slopes, along residential boundaries, and along the seasonal stream corridor in the northern part of the property. Open Space areas may include onsite wastewater disposal and water wells.

2.6.2 Utility and Service Providers

Annexation of lands within the project area would result in changes to some of the utility providers, which could potentially result in the need for new or expanded infrastructure to serve the project area. While some service providers would change upon annexation, some would remain as they are. For example, the Nevada Irrigation District would continue to provide water to users in the project area. Similarly, the service providers for electricity, natural gas, telephone, cable, schools, and solid waste collection and disposal services would be unchanged.

Currently, the project area is served by the Nevada County Sheriff's Department for law enforcement services and by the Nevada County Consolidated Fire District for fire protection services. Upon annexation, responsibility for these services would be shifted to the Grass Valley Police Department and the Grass Valley Fire Department. These potential impacts were evaluated in Section 3.11, "Public Services," of the 2014 SOI EIR.

Developed uses within the project area are currently served by individual septic systems for wastewater disposal. Upon annexation and extension of wastewater collection systems to the project area, those developed lands could connect to the City's wastewater system, if needed. Conversion from the use of individual on-site septic systems to connection to the City's wastewater system would require the future development of wastewater infrastructure within the project area. Section 3.12, "Public Utilities," of the 2014 SOI EIR addresses the potential impacts associated with the development of such infrastructure.

2.7 POTENTIAL PERMITS AND APPROVALS REQUIRED

The City of Grass Valley is the lead agency for the proposed project. The project will require the approval of a number of entitlements granted by the City of Grass Valley, as well as by other agencies. The entitlements that are necessary for approval of the project and related improvements are listed below.

City of Grass Valley approvals include the following discretionary entitlements:

- General Plan amendment,
- SOI amendment and annexation entitlement request to the Nevada County LAFCo, and
- Prezone for parcels added to the Southern SOI and revision to the prezone for 15 additional parcels.

This EIR may be used as the primary environmental document to evaluate planning and permitting actions associated with the project for the following agencies:

- LAFCo approval of the proposed SOI amendment and annexation,
- California Department of Transportation and Nevada County Department of Transportation approval of an encroachment permit for improvements along SR 49,
- Nevada County approval of an encroachment permit for construction within and realignment of Crestview Drive,
- California Department of Fish and Wildlife approval of a Section 1600 Streambed Alteration Agreement,
- Department of Toxic Substances approval of Mine Waste Rock Clean-Up, and
- Northern Sierra Air Quality Management District approval of Authority to Construct and Dust Management Plan.

3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

FORMAT OF THE ENVIRONMENTAL ANALYSIS

Sections 3.1 through 3.10 of this draft Subsequent Environmental Impact Report (SEIR) present a discussion of regulatory background, existing conditions, environmental impacts associated with implementing the proposed changes to the Southern Sphere of Influence Planning and Annexation Project (the Southern SOI Amendment), new mitigation measures to reduce the impact, and residual level of significance (i.e., after application of mitigation, including impacts that would remain significant and unavoidable after application of all feasible mitigation measures). Issues evaluated in these sections consist of the environmental topics identified for review in the notice of preparation prepared for the project (Appendix A). A discussion of resource topics dismissed from detailed analysis is provided in Chapter 5, "Other CEQA Sections."

Each section begins with descriptions of applicable regulatory and environmental settings, these are the conditions against which potential impacts are evaluated and are based on the environmental and regulatory setting information published in the 2014 SOI EIR. Where the setting information provided in that document remains applicable to the analysis of the Southern SOI Amendment, it is incorporated by reference. Where changes to the environmental or regulatory setting (e.g., new information, regulatory changes) are relevant to understanding the Southern SOI Amendment's potential impacts, additional background information is provided in the draft SEIR resource sections. In accordance with California Environmental Quality Act (CEQA) Guidelines Section 15125, the discussions of the environmental setting focus on information relevant to the issue under evaluation.

The setting description in each section is followed by an impacts and mitigation discussion. The thresholds used to determine the level of significance of the environmental impacts for each resource topic are provided, in accordance with State CEQA Guidelines Sections 15126, 15126.2, and 15143. These thresholds of significance are based on the checklist presented in Appendix G of the State CEQA Guidelines; best available data; and the applicable regulatory standards of the City, County, State, and agencies. In turn, impact statements are based upon the thresholds of significance and are prefaced by a number in bold-faced type. The impact number consists of the section of the SEIR in which that impact is identified followed by a dash to indicate the number of the impact in that section. For example, Impact 3.1-1 is the first impact identified in Section 3.1.

A summary impact statement precedes a more detailed discussion of the environmental impact. The discussion includes the analysis, rationale, and substantial evidence upon which conclusions are drawn. The determination of level of significance of the impact is identified in bold text. A "less-than-significant" impact is one that would not result in a substantial adverse change in the physical environment. A "potentially significant" impact or "significant" impact is one that would result in a substantial adverse change in the physical environment; both are treated the same under CEQA in terms of procedural requirements and the need to identify feasible mitigation. Per Public Resources Code Section 21061.1, feasible means capable of being accomplished in a successful manner within a reasonable period of time, taking into account, economic, environmental, legal, social, and technological factors. Where mitigation measures are identified, a discussion of impact significance with the implementation of these measures follows.

In this draft SIER, each impact discussion is divided into three parts. First, the impact discussion and conclusion in the 2014 SOI EIR are summarized. Relevant adopted mitigation measures from the 2014 SOI EIR are provided. Next, the programmatic impact of the Southern SOI Amendment is evaluated. Finally, the impact of the 10-acre residential development area evaluated. As appropriate, these discussions identify whether the previous mitigation would address the potential impacts and includes a statement regarding whether there would be a new significant effect and/or if the impact could be more severe than the impact identified in the 2014 SOI EIR. Additional mitigation measures are identified, as feasible, to avoid, minimize, rectify, reduce, or compensate for significant or potentially significant impacts, in accordance with the State CEQA Guidelines Section 15126.4. All mitigation measures pertinent

to each individual impact follow directly after the impact statement. The degree to which the identified mitigation measure(s) would reduce the impact is also described.

For an evaluation of alternatives to the project that could reduce environmental effects, the reader is referred to Chapter 4, "Alternatives," which presents a reasonable range of alternatives and evaluates the environmental effects of those alternatives relative to the Southern SOI Amendment, as required by Section 15126.6 of the State CEQA Guidelines. Chapter 5, "Other CEQA Sections," presents an analysis of the Southern SOI Amendment's impacts considered together with other past, present, and probable future projects producing related impacts, as required by Section 15130 of the State CEQA Guidelines, as well as an analysis of the project's growth inducing impacts, as required by Section 21100(b)(5) of CEQA. Chapter 5 also provides summary of resource analyses adequately addressed in the 2014 SOI EIR that are not further addressed in this SEIR.

APPROACH TO THE ENVIRONMENTAL ANALYSIS

Adverse physical impacts to the environment associated with implementation of the Southern SOI Amendment are the focus of this environmental analysis. Physical changes could result from subsequent development pursuant to land use designations established through the Southern SOI Amendment and offsite or indirect development that is necessitated by the Southern SOI Amendment (e.g., new facilities, infrastructure upgrades). The Southern SOI Amendment would be required to comply with all previously adopted mitigation, and the potential for a new or substantially more severe impact are evaluated assuming implementation of these measures, unless otherwise indicated.

The level of significance for each impact is determined by comparing the impacts of physical changes anticipated with implementation of the Southern SOI Amendment to the environmental setting, with a focus on how the land uses that may be developed under the Southern SOI Amendment could change the significance of the impacts identified in the 2014 SOI EIR. The methodology used in each impact analysis is described in each resource section. The draft SEIR uses the same assumptions as the 2014 SOI EIR whenever appropriate. Where the 2014 SOI EIR concluded that there would be no impacts or impacts would be less than significant without the application of mitigation for specific threshold criteria and there is no evidence of potential impacts due to the proposed SOI modifications or the residential development, the impacts have been dismissed from further analysis with a brief explanation provided in the resource section.

The analysis herein reflects changes in applicable regulations (including CEQA) and standards of review. It is important to note that environmental impact analyses under CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents, unless the proposed project might cause or risk exacerbating environmental hazards or conditions that already exist (CCR Section 15126.2[a]). In those specific instances, it is the project's impact on the environment and not the environment's impact on the project that compels an evaluation of how future residents or users could be affected by exacerbated conditions (*California Building Industry Association v. Bay Area Air Quality Management District* [2015] 62 Cal. 4th 369). Further, where an existing law, regulation, or permit specifies mandatory and prescriptive actions about how to fulfill the regulatory requirement, leaving little discretion in its implementation, and would avoid an impact or maintain it at a less-than-significant level, the environmental protection afforded by the regulation is considered before determining impact significance. Where existing laws or regulations specify a mandatory permit process for future projects, performance standards without prescriptive actions to accomplish them, or other requirements that allow substantial discretion in how they are accomplished, or have a substantial compensatory component, the level of significance is determined before applying the influence of the regulatory requirements. In this circumstance, the impact would be potentially significant or significant, and the regulatory requirements would be included as a mitigation measure.

Development Assumptions

Development assumptions were established in the 2014 SOI EIR to evaluate the environmental effects that could occur as a result of buildout of the SOI. The City used the maximum possible development potential of the parcels, as

described in the Grass Valley Development Code and the General Plan land use designations. For nonresidential parcels, the City made assumptions for floor area ratios based on the intensity of similar development in Grass Valley and the surrounding areas and the presence of site constraints such as steep slopes. The City assumed that the maximum possible FAR would be 0.15 for industrial-zoned properties and 0.25 for commercial-zoned sites.

For the purpose of this supplemental analysis, the City has applied the same development assumptions to the Southern SOI Amendment as employed in the previous analysis of the project. This allows the City to compare the anticipated environmental impacts of the development potential of the amended project to the effects previously addressed in the 2014 SOI EIR. As described further in Chapter 2, "Project Description," it is assumed that the proposed Southern SOI Amendment would decrease the total development potential by up to 18 residential dwelling units and increase the total development potential of nonresidential uses by approximately 367,000 square feet.

Note that the analysis in this SEIR assumes that all parcels within the project area will be developed to their maximum development potential and does not take into account parcels that are already partially developed.

Adopted Mitigation Measures

The 2014 SOI EIR included mitigation measures intended to reduce the potentially significant environmental effects of implementing the Adopted Southern SOI Project. Unless otherwise indicated in the analysis that follows, these adopted measures remain applicable to the to the proposed amendments and would be implemented. In addition, new or revised mitigation measures are proposed to address new or substantially more severe impacts and to replace previously adopted mitigation to reflect changes in applicable regulations (including CEQA) and standards of review.

Table 3-1 Adopted Mitigation Measures from the 2014 SOI EIR

Adopted Mitigation Measures
Air Quality
MM 3.2.1a: Future development projects within the Southern Sphere of Influence Planning and Annexation project area shall submit to the NSAQMD for approval an Off-Road Construction Equipment Emission Reduction Plan prior to groundbreaking demonstrating that all off-road equipment (portable and mobile) meets or is cleaner than Tier 2 engine emission specifications unless prior written approval for any exceptions is obtained from the NSAQMD. Note that all off-road equipment must meet all applicable state and federal requirements. Construction contracts shall stipulate the following: ▶ Emissions from on-site construction equipment shall comply with NSAQMD Regulation II, Rule 202, Visible Emissions. ▶ The primary contractor shall be responsible to ensure that all construction equipment is properly tuned and maintained. ▶ Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes when not in use (as required by California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points. ▶ All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. ▶ Existing power sources (e.g., power poles) or clean fuel generators shall be utilized rather than temporary power generators where feasible.
MM 3.2.1b: All architectural coating activities associated with construction of future development projects within the Southern Sphere of Influence Planning and Annexation project area shall be required to use interior and exterior coatings that contain less than 250 grams of volatile organic compounds (VOC/ROG) per liter of coating.
MM 3.2.1c: Grid power shall be used (as opposed to diesel generators) for construction site power needs where feasible during construction.
MM 3.2.1d: Deliveries of construction materials shall be scheduled to direct traffic flow to avoid the peak hours of 7 to 9 AM and 4 to 6 PM.
Biological Resources
MM 3.3.1: Rare Plant Surveys. The project applicant for each future development project proposed within the project area shall retain a qualified biologist to perform focused surveys to determine the presence/absence of special-status plant species with potential to occur in and adjacent to (within 100 feet, where appropriate) the proposed impact area, including construction access routes. These surveys shall be conducted in accordance with the *Guidelines for Assessing Effects of Proposed Developments on Rare Plants and Plant Communities* (Nelson 1994). These guidelines require that rare plant surveys be conducted at the proper time of year when rare or endangered species are both

Adopted Mitigation Measures
evident and identifiable. Field surveys shall be scheduled to coincide with known flowering periods and/or during appropriate developmental periods that are necessary to identify the plant species of concern. If any state- or federally listed CNPS List 1 or CNPS List 2 plant species are found in or adjacent to (within 100 feet) the proposed impact area during the surveys, these plant species shall be avoided to the extent possible and the following mitigation measures shall be implemented: 1. In some cases involving state-listed plants, it may be necessary to obtain an incidental take permit under Fish and Game Code Section 2081 The applicant shall consult with the CDFW to determine whether a 2081 permit is required, and obtain all required authorizations prior to initiation of ground-breaking activities. 2. Before the approval of grading plans or any ground-breaking activity within the study area, the applicant shall submit a mitigation plan concurrently to the CDFW and the USFWS for review and comment. The plan shall include mitigation measures for the population(s) to be directly affected. Possible mitigation for impacts to special-status plant species can include implementation of a program to transplant, salvage, cultivate, or re-establish the species at suitable sites (if feasible), through the purchase of credits from an approved mitigation bank, or through an in-lieu fee program, if available. The actual level of mitigation may vary depending on the sensitivity of the species, its prevalence in the area, and the current state of knowledge about overall population trends and threats to its survival. The final mitigation strategy for directly impacted plant species shall be determined by the CDFW and the USFWS through the mitigation plan approval process. 3. Any special-status plant species that are identified adjacent to the study area, but not proposed to be disturbed by the project, shall be protected by barrier fencing to ensure that construction activities and material stockpiles do not impact any special-status plant species. These avoidance areas shall be identified on project plans.
MM 3.3.2: Coast Horned Lizard Survey. Project applicants for each future development project proposed within the project area shall retain qualified biologists to determine if suitable habitat for this species occurs within 250 feet of the proposed impact area, including construction access routes as part of submittals of tentative maps and /or improvement plans. If suitable habitat exists, development agreements will require preconstruction surveys to be performed by a qualified biologist in a manner to maximize detection of coast horned lizards (i.e., during warm weather, walking slowly) prior to any grading activity. If any coast horned lizards are discovered within the work areas, they shall be actively moved or passively encouraged to leave the work area. Workers shall drive slowly when driving overland, within suitable habitat areas, to allow any lizards to move out of the way of the vehicles.
MM 3.3.3a: Migratory Bird Surveys. If clearing and/or construction activities for future development projects within the project area will occur during the migratory bird nesting season (April 15–August 15), preconstruction surveys to identify active migratory bird nests shall be conducted by a qualified biologist within 14 days of construction initiation. Focused surveys must be performed by a qualified biologist for the purposes of determining presence/absence of active nest sites within the proposed impact area, including construction access routes and a 200-foot buffer (if feasible). If active nest sites are identified within 200 feet of project activities, the applicant shall impose a limited operating period (LOP) for all active nest sites prior to commencement of any project construction activities to avoid construction or access-related disturbances to migratory bird nesting activities. An LOP constitutes a period during which project-related activities (i.e., vegetation removal, earth moving, and construction) will not occur, and will be imposed within 100 feet of any active nest sites until the nest is deemed inactive. Activities permitted within and the size (i.e., 100 feet) of LOPs may be adjusted through consultation with the CDFW and/or the City. **MM 3.3.3b: Raptor Surveys.** If clearing and/or construction activities for future development projects will occur during the raptor nesting season (January 15–August 15), preconstruction surveys to identify active raptor nests shall be conducted by a qualified biologist within 14 days of construction initiation. Focused surveys must be performed by a qualified biologist for the purposes of determining presence/absence of active nest sites within the proposed impact area, including construction access routes and a 500-foot buffer (if feasible). If active nest sites are identified within 500 feet of project activities, the applicant shall impose an LOP for all active nest sites prior to commencement of any project construction activities to avoid construction or access-related disturbances to nesting raptors. An LOP constitutes a period during which project-related activities (i.e., vegetation removal, earth moving, and construction) will not occur, and will be imposed within 250 feet of any active nest sites until the nest is deemed inactive. Activities permitted within and the size (i.e., 250 feet) of LOPs may be adjusted through consultation with the CDFW and/or the City.
MM 3.3.4 No Net Loss of Riparian Habitat. The project applicant for each future development project proposed within the project area shall ensure that there is no net loss of riparian vegetation. Mitigation can include on-site restoration or purchase of mitigation credits at a USACE-approved mitigation bank. Mitigation as required in regulatory permits issued through the CDFW, the USACE, or the RWQCB may be applied to satisfy this measure. Evidence of compliance with this mitigation measure shall be provided to the appropriate agencies prior to construction and grading activities for future development in the project area.

Adopted Mitigation Measures
MM 3.3.5: No Net Loss of Federally Protected Waters. The City shall ensure that the project will result in no net loss of federally protected waters through impact avoidance, impact minimization, and/or compensatory mitigation, as determined in CWA Section 404 and 401 permits and/or 1602 Streambed Alteration Agreement. Evidence of compliance with this mitigation measure shall be provided prior to construction and grading activities for the proposed project.
Climate Change and Greenhouse Gases
MM 3.4.1: Subsequent development projects within the Southern Sphere of Influence Planning and Annexation project area shall submit to the City of Grass Valley and receive approval for a GHG Emissions Reduction Plan prior to issuance of building permits for the development project in question. The GHG Emissions Reduction Plan shall demonstrate adherence to the following measures or alternative measures equaling the same or greater emission reduction values. ▶ Indoor water conservation measures shall be incorporated, such as use of low-flow toilets, showers, and faucets (kitchen and bathroom), in each residential unit. (181 metric ton reduction) ▶ The proposed project shall be designed to exceed state energy efficiency standards by 15 percent (to Tier 1 Title 24 Standards) as directed by Appendix A5 of the 2010 California Green Building Standards (CBSC 2011). This measure helps to reduce emissions associated with energy consumption. (222 metric ton reduction) ▶ Low-water-use landscaping (i.e., drought-tolerant plants and drip irrigation) shall be installed. At least 75 percent of all landscaping plants shall be drought-tolerant as determined by a licensed landscape architect or contractor. (4 metric ton reduction) ▶ The installation of wood-burning fireplaces shall be prohibited in all new residential units. (427 metric ton reduction)
Cultural and Paleontological Resources
MM 3.5.1a: To the extent feasible, future development within the project area will avoid and preserve the cultural resource site Berriman #1 as well as prepare a site preservation plan as noted in the 2006 Archaeological Inventory Survey (Sean Jensen). If preservation "as is" cannot be ensured, then those specific attributes and qualities which renders site Berriman #1 significant per CEQA shall be determined through formal archaeological data collection work as specified in the 2006 survey. **MM 3.5.1b:** When a proposal affects a previously undeveloped parcel in an area identified as having high or moderate cultural sensitivity in the General Plan, a cultural resource study shall be prepared as part of the CEQA analysis. If the proposal affects an area addressed previous cultural studies, the City shall review the report(s) to confirm whether conditions documented in the previously prepared study have changed and if the recommendations (if any) required by the study are still applicable and appropriate for the future proposed project. If the City determines that conditions have changed from the previous study, the City will require that an appropriate updated to the analysis or a new analysis be prepared. **MM 3.5.1c:** If, during the course of construction of future projects within the project area, cultural resources (i.e., prehistoric sites, historic sites, and isolated artifacts and features) are discovered, work shall be halted immediately within 50 feet of the discovery, and the City of Grass Valley Community Development Department shall be notified. A qualified archaeologist (that meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology) shall be retained to determine the significance of the discovery. Based on the significance of the discovery, the professional archaeologist shall present options to the City and the project applicant for protecting the resources. The City and the project applicant shall consider mitigation recommendations presented by a qualified archaeologist (as described) for any unanticipated discoveries. The City and the project applicant shall consult and agree upon implementation of a measure or measures that the City and the project applicant deem feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. The project applicant shall be required to implement any mitigation necessary for the protection of cultural resources. **MM 3.5.1d:** The Native American community will be notified of any unanticipated and accidental discoveries of prehistoric or historic Native American cultural resources and will monitor activities associated with determining the significance of any discoveries as agreed to by the City of Grass Valley in consultation with the Native American community. **MM 3.5.1e:** If human remains are discovered, all work shall be halted immediately within 50 feet of the discovery, the City of Grass Valley Community Development Department shall be notified, and the Nevada County Coroner must be notified, according to Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.

Adopted Mitigation Measures
MM 3.5.2: Should any potentially unique paleontological resources (fossils) be encountered during future development activities, work shall be halted immediately within 50 feet of the discovery, the City of Grass Valley Community Development Department shall be immediately notified, and a qualified paleontologist shall be retained to determine the significance of the discovery. The City and the project applicant shall consider the mitigation recommendations of the qualified paleontologist for any unanticipated discoveries. The City and the project applicant shall consult and agree upon implementation of a measure or measures that the City and the project applicant deem feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. The project applicant shall be required to implement any mitigation necessary for the protection of paleontological resources.
Hazards and Hazardous Materials
MM 3.7.2a: Prior to issuance of any grading plans or improvement permits for construction of roads, structures, or infrastructure on the Bear River Mill Site portion of the project area (APNs 22-160-04, -05, -06, -07, -09, -12, and -33), a certification of cleanup shall be obtained. **MM 3.7.2b:** Prior to issuance of any grading permit or improvement permits for construction of roads, structures, or infrastructure on the La Barr Meadows Road property portion of the project area (APNs 09-620-10 and -12, 22-150-23 and -30, and 29-290-09), a certification of cleanup shall be obtained. **MM 3.7.2c:** All recommendations contained in the Phase I Environmental Site Assessment prepared for the Berriman Ranch property (APNs 22-140-03 and 22-160-03) dated August 7, 2007, shall be implemented prior to issuance of grading permits or improvement permits for construction of roads, structures, or infrastructure in this portion of the project area.
Hydrology and Water Quality
MM 3.8.2: As part of the final design of specific future development projects, soil borings shall be taken at representative locations within the future project footprint to analyze the subsurface soils that are present and the elevation of the subsurface water table. If these soil borings identify shallow groundwater within 2 feet of the proposed bottom elevation of underground utilities, detention ponds, and/or structure foundations, a liner and/or best available water quality control features (i.e., leachate management system) shall be incorporated into the design of proposed underground utilities, detention ponds, and foundations, subject to City drainage standards and approval.
Noise
MM 3.9.2: For any residential development proposed within 600 feet of State Route 49 or 100 feet of La Barr Meadows Road, an applicant shall submit an acoustical analysis for any tentative map. If the acoustic analysis shows any proposed outdoor activity area within the 60 dB L_{dn} or greater noise contour, the applicant shall mitigate the impact to a level that is less than 60 dB L_{dn}. Specific mitigation measures include, but are not limited to, (1) a redesign or reorientation of the lots (which allows the home to create a barrier between the outdoor area and noise source); (2) the addition of solid fencing or wall; (3) an increased setback; or (4) a redesign of the project to utilize the existing development or topography and vegetation to reduce the impact to an acceptable level.
Transportation and Circulation
MM 3.13.1: The project proponent or successor in interest is responsible for project improvements at the SR 49/McKnight Way intersection as follows: 1. If the project would result in more than 63 total PM peak hour trips and add more than 10 PM peak-hour trips at the intersection of McKnight Way at Taylorville Road, McKnight Way at SR 49 SB Ramps and/or at McKnight Way at S. Auburn St/La Barr Meadows Road, a traffic study shall be prepared to determine the extent of impact(s) and appropriate mitigation responsibility assigned as a condition of approval. As a result of the study, the project could: a) Be required to install the improvements at the SR 49/McKnight Way intersection; or b) Pay the project's proportionate share of the SR 49/McKnight Way intersection improvements; or c) Construct some associated improvement that would address project impacts at the SR 49/McKnight Way intersection; or d) Be required to complete some combination of the above to address project impacts at the SR 49/McKnight Way intersection identified in the traffic study.
MM 3.13.8: The City of Grass Valley shall establish an alignment and development setback for new development proposed within the area depicted on **Figure 3.13-8** intended for the future Crestview Drive interchange with State Route 49. As part of the setback area, the City will determine the extent of any development that can occur within the interchange setback area.

3.1 AIR QUALITY

This section includes a discussion of existing air quality conditions, a summary of applicable regulations, and an analysis of potential construction and operational air quality impacts caused by proposed development of the Southern Sphere of Influence Planning and Annexation Project. Mitigation is developed as necessary to reduce significant air quality impacts to the extent feasible.

Section 3.2, "Air Quality," of the 2014 SOI EIR evaluated the potential air quality impacts that could occur from implementation of the project. The 2014 SOI EIR concluded that there would be a less-than-significant impact related to local mobile-source carbon monoxide (CO) concentrations (Impact 3.2.3), exposure to stationary- and mobile-source toxic air contaminants (TACs) (Impact 3.2.4), and exposure to construction- and operational-related odors (Impact 3.2.5).

The 2014 SOI EIR concluded that short-term construction emissions of criteria air pollutants (impact 3.2.1) would be potentially significant and Mitigation Measures MM 3.2.1a, 3.2.1b, 3.2.1c, and 3.2.1d were recommended and adopted. Similarly, long-term regional emissions of criteria air pollutants and precursors (Impact 3.2.2) were determined to be potentially significant and Mitigation Measure MM 3.4.1 (taken from Section 3.4, "Climate Change and Greenhouse Gases") was applied and adopted; however, the 2014 SOIR EIR concluded the application of the aforementioned mitigation measures were not sufficient to minimize impacts to less-than-significant levels, and these impacts were therefore concluded to be significant and unavoidable.

During the comment period for the notice of preparation, the Northern Sierra Air Quality Management District (NSAQMD) submitted a comment expressing concern over potential new sources of air pollution associated with operation of the industrial land uses proposed under the project, the project's upwind proximity to the City of Grass Valley, and potentially adverse cumulative impacts when combined with emissions from the proposed Idaho-Maryland and Rise Grass Valley mines, and future emissions from the Dorsey Marketplace project. Emissions of criteria air pollutants associated with operation of the land uses proposed under the project are evaluated under Impact 3.1-2 and cumulative air quality impacts are discussed in Chapter 5, "Other CEQA Sections."

3.1.1 Regulatory Setting

Air quality in the project area is regulated by various federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, planning, policy-making, education, and a variety of programs. The agencies include, the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and NSAQMD.

The 2014 SOI EIR included a summary of the relevant regulations and programs that regulate air quality within the U.S., California, and the Mountain Counties Air Basin (MCAB) that were in effect at that time. This discussion is hereby incorporated by reference; however, where appropriate, new regulatory developments since the certification of the 2014 SOI EIR, as well as other pertinent information omitted in the 2014 SOI EIR, are summarized below.

FEDERAL

U.S. Environmental Protection Agency

U.S. Environmental Protection Agency (EPA) has been charged with implementing national air quality programs. EPA's air quality mandates draw primarily from the federal Clean Air Act (CAA), which was enacted in 1970. The most recent major amendments were made by Congress in 1990.

Criteria Air Pollutants

The CAA required EPA to establish national ambient air quality standards (NAAQS) for six common air pollutants found all over the U.S., referred to as criteria air pollutants (i.e., ozone, nitrogen dioxide [NO_2], sulfur dioxide [SO_2], respirable particulate matter with an aerodynamic diameter of 10 microns or less [PM_{10}], fine particulate matter with an aerodynamic diameter of 2.5 or less [$PM_{2.5}$], and lead). The NAAQS are periodically updated; the most recent update occurred in 2015 to the 8-hour ozone standard of 0.070 parts per million (ppm), which superseded the previous 2008 standard of 0.075 ppm averaged over an 8-hour period. The most recent iteration of the NAAQS are shown in Table 3.1-1.

The CAA requires each state to prepare a State implementation plan (SIP) for attaining and maintaining the NAAQS. California's SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments, and whether implementation will achieve air quality goals.

In October 2012, EPA and the National Highway Traffic Safety Administration, on behalf of the U.S. Department of Transportation, issued final rules to reduce air pollution and improve corporate average fuel economy (CAFE) standards for light-duty vehicles for model years 2017 and beyond (77 Federal Register [FR] 62624). These rules would increase fuel economy to the equivalent of 54.5 miles per gallon (mpg) for the fleet of cars and light-duty trucks by model year 2025 (77 FR 62630). However, on April 2, 2018, the EPA administrator announced a final determination that the current standards should be revised. The U.S. Department of Transportation and EPA proposed the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE Rule), which amended existing CAFE standards for passenger cars and light-duty trucks by retaining the current model year 2020 standards through model year 2026 and establish new standards covering model years 2021 through 2026 (NHTSA 2018).

The CAA grants California the ability to enact and enforce more strict fuel economy standards through the acquisition of an EPA-issued waiver. Each time California adopts a new vehicle emission standard, the state applies to EPA for a preemption waiver for those standards. However, Part One of the SAFE Rule, which became effective on November 26, 2019, revokes California's existing waiver to establish a nation-wide standard (84 FR 51310). At the time of preparing this environmental document, the implications of the SAFE Rule on California's future emissions are contingent upon a variety of unknown factors, including the outcome of legal challenges and policy directives by the federal government. However, the impact analysis included in this chapter assumes that the SAFE Rule would continue to be implemented, and uses emissions factors developed by CARB that account for the potential for a less fuel-efficient future vehicle fleet as a result of the SAFE Rule (CARB 2019).

Table 3.1-1 National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California (CAAQS)[a,b]	National (NAAQS)[c]	
			Primary[b,d]	Secondary[b,e]
Ozone	1-hour	0.09 ppm (180 µg/m^3)	–[e]	Same as primary standard
	8-hour	0.070 ppm (137 µg/m^3)	0.070 ppm (147 µg/m^3)	
Carbon monoxide (CO)	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	Same as primary standard
	8-hour	9 ppm[f] (10 mg/m^3)	9 ppm (10 mg/m^3)	
Nitrogen dioxide (NO_2)	Annual arithmetic mean	0.030 ppm (57 µg/m^3)	53 ppb (100 µg/m^3)	Same as primary standard
	1-hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	—
Sulfur dioxide (SO_2)	24-hour	0.04 ppm (105 µg/m^3)	—	—
	3-hour	—	—	0.5 ppm (1300 µg/m^3)
	1-hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	—
Respirable particulate matter (PM_{10})	Annual arithmetic mean	20 µg/m^3	—	Same as primary standard
	24-hour	50 µg/m^3	150 µg/m^3	
Fine particulate matter ($PM_{2.5}$)	Annual arithmetic mean	12 µg/m^3	12.0 µg/m^3	15.0 µg/m^3
	24-hour	—	35 µg/m^3	Same as primary standard
Lead [f]	Calendar quarter	—	1.5 µg/m^3	Same as primary standard
	30-Day average	1.5 µg/m^3	—	—
	Rolling 3-Month Average	–	0.15 µg/m^3	Same as primary standard
Hydrogen sulfide	1-hour	0.03 ppm (42 µg/m^3)	No national standards	
Sulfates	24-hour	25 µg/m^3		
Vinyl chloride [f]	24-hour	0.01 ppm (26 µg/m^3)		
Visibility-reducing particulate matter	8-hour	Extinction of 0.23 per km		

Notes: µg/m^3 = micrograms per cubic meter; km = kilometers; ppb = parts per billion; ppm = parts per million.

a California standards for ozone, carbon monoxide, SO_2 (1- and 24-hour), NO_2, particulate matter, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

b Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

c National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over three years, is equal to or less than the standard. The PM_{10} 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. The $PM_{2.5}$ 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact the U.S. Environmental Protection Agency for further clarification and current federal policies.

d National primary standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

e National secondary standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

f The California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants with no threshold of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Source: EPA 2016, CARB 2016

Hazardous Air Pollutants and Toxic Air Contaminants

TACs, or, to use the EPA's nomenclature, hazardous air pollutants (HAPs), are a defined set of airborne pollutants that may pose a present or potential hazard to human health. TACs and HAPs are essentially interchangeable terms for pollutants that are defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. For the purpose of this analysis, CARB's preferred term TAC is used to evaluated potential impacts associated with exposure to these pollutants.

TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. A wide range of sources, from industrial plants to motor vehicles, emit TACs. The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage; or short-term acute affects such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches.

For evaluation purposes, TACs are separated into carcinogens and non-carcinogens based on the nature of the physiological effects associated with exposure to the pollutant. Carcinogens are assumed to have no safe threshold below which health impacts would not occur. This contrasts with criteria air pollutants for which acceptable levels of exposure can be determined and for which the NAAQS and California ambient air quality standards (CAAQS) have been established (Table 3.1-1). Cancer risk from TACs is expressed as excess cancer cases per one million exposed individuals, typically over a lifetime of exposure. EPA regulates HAPs through its National Emission Standards for Hazardous Air Pollutants. The standards for a particular source category require the maximum degree of emission reduction that the EPA determines to be achievable, which is known as the Maximum Achievable Control Technology—MACT standards. These standards are authorized by Section 112 of the 1970 Clean Air Act and the regulations are published in 40 CFR Parts 61 and 63.

STATE

California Air Resources Board

CARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA). The CCAA, which was adopted in 1988, required CARB to establish CAAQS (Table 3.1-1).

Criteria Air Pollutants

CARB has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the above-mentioned criteria air pollutants. In most cases the CAAQS are more stringent than the NAAQS. Differences in the standards are generally explained by the health effects studies considered during the standard-setting process and the interpretation of the studies. In addition, the CAAQS incorporate a margin of safety to protect sensitive individuals.

The CCAA requires that all local air districts in the state endeavor to attain and maintain the CAAQS by the earliest date practical. The CCAA specifies that local air districts should focus particular attention on reducing the emissions from transportation and area-wide emission sources. The CCA also provides air districts with the authority to regulate indirect sources.

Toxic Air Contaminants

TACs in California are regulated primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807, Chapter 1047, Statutes of 1983) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588, Chapter 1252, Statutes of 1987). AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. Research, public participation, and scientific peer review are required before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and adopted EPA's list of HAPs as TACs. Most recently, particulate matter (PM) exhaust from diesel engines (diesel PM) was added to CARB's list of TACs.

After a TAC is identified, CARB then adopts an airborne toxics control measure for sources that emit that particular TAC. If a safe threshold exists for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If no safe threshold exists, the measure must incorporate best available control technology for toxics to minimize emissions.

The Hot Spots Act requires that existing facilities that emit toxic substances above a specified level prepare an inventory of toxic emissions, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

CARB has adopted diesel exhaust control measures and more stringent emissions standards for various transportation-related mobile sources of emissions, including transit buses, and off-road diesel equipment (e.g., tractors, generators). Over time, the replacement of older vehicles will result in a vehicle fleet that produces substantially lower levels of TACs than under current conditions. Mobile-source emissions of TACs (e.g., benzene, 1-3-butadiene, diesel PM) have been reduced significantly over the last decade and will be reduced further in California through a progression of regulatory measures (e.g., Low Emission Vehicle/Clean Fuels and Phase II reformulated gasoline regulations) and control technologies. With implementation of CARB's Risk Reduction Plan and other regulatory programs, it is estimated that emissions of diesel PM will be less than half of those in 2010 by 2035 (CARB 2021). Adopted regulations are also expected to continue to reduce formaldehyde emissions emitted by cars and light-duty trucks. As emissions are reduced, it is expected that risks associated with exposure to the emissions will also be reduced.

As a part of the Air Toxics Hot Spots Program the Office of Environmental Health Hazard Assessment (OEHHA) has published a *Guidance Manual for Preparation of Health Risk Assessments* (2015 Guidance) (OEHHA 2015). The 2015 Guidance includes a description of the algorithms, recommended exposure variates, cancer and non-cancer values, and the air modeling protocols to perform a health risk assessment (HRA). HRAs may be conducted and used to evaluated TAC impacts for projects undergoing environmental review. Where appropriate, the 2015 OEHHA guidance is referenced and incorporated.

LOCAL

Northern Sierra Air Quality Management District

Criteria Air Pollutants

NSAQMD is the agency primarily responsible for ensuring that federal and state ambient air quality standards are not exceeded and that air quality conditions are maintained. Responsibilities of NSAQMD include, but are not limited to, preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution and responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by the CAA and the Clean Air Act Amendments. NSAQMD rules and regulations applicable to the proposed project include the following:

- **Rule 205—Nuisance:** This rule prohibits the discharge of air contaminants or other material from any source which cause injury, detriment, nuisance, or annoyance to any considerable number of persons, or to the public, or which endangers the comfort, repose, health, or safety of any such persons, or the public or which cause to have a natural tendency to cause injury or damage to business or property.
- **Rule 226—Dust Control:** This rule requires the submittal of a Dust Control Plan to NSAQMD for approval prior to any surface disturbance, including clearing of vegetation.
- **Rule 501—Permit Required:** Before any source may be operated, a Permit to Operate shall be obtained from the Air Pollution Control Officer. No Permit to Operate shall be granted either by the Air Pollution Control Officer or the Hearing Board for any source constructed or modified without authorization or not in compliance with other NSAQMD rules and regulations, including those specified in NSAQMD Regulation IV.

In addition, if modeled construction- or operation-related emissions for a project exceed NSAQMD's mass emission thresholds for criteria air pollutants and precursors then NSAQMD recommends implementing mitigation to reduce these emissions. Section 3.1.3, "Environmental Impacts and Mitigation Measures," presents NSAQMD's mass emission thresholds.

Toxic Air Contaminants

At the local level, air districts may adopt and enforce CARB control measures. Under NSAQMD Rule 510 ("Permits Required") all sources that possess the potential to emit TACs are required to obtain permits from NSAQMD. NSAQMD may issue permits to these operations if they are constructed and operated in accordance with applicable regulations, including New Source Review standards and air toxics control measures. NSAQMD prioritizes TAC-emitting stationary sources based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors. Sensitive receptors are people or facilities that generally house people (e.g., residences, schools, hospitals) that may experience adverse effects from unhealthful concentrations of air pollutants.

3.1.2 Environmental Setting

The environmental setting provided on pages 3.2-1 through 3.2-6 of the 2014 SOI EIR is relevant to understanding the potential air quality impacts of the project. In addition, the following information provides an update of information from the 2014 SOI EIR and reflects the current environmental setting.

The project site is located in the MCAB. The MCAB consists of nine counties or portions of counties (i.e., Amador, Calaveras, El Dorado, Mariposa, Nevada, Placer, Plumas, Sierra, and Tuolumne counties) stretching from Plumas County on the north to Mariposa County on the south. The ambient concentrations of air pollutant emissions are determined by the amount of emissions released by the sources of air pollutants and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources, as discussed separately below.

CLIMATE, METEROLOGY, AND TOPOGRAPHY

The environmental setting provided on page 3.1-1 of the 2014 SOI EIR comprehensively addressed issues related to the topography, meteorology, climate, atmospheric stability, and inversions characteristic of the MCAB. The existing conditions related to these topics have not changed appreciably since the 2014 SOI EIR and no new information is available regarding these topics that would affect the conclusions provided in that EIR.

The local meteorology of the project site and surrounding area is represented by measurements recorded at the Western Regional Climate Center Nevada City Station. The average annual precipitation from an 1893 to 2016 period is approximately 25 inches. Average January temperatures range from a normal minimum of 30°F to a normal maximum of 51°F. July temperatures range from a normal minimum of 53°F to a normal maximum of 88°F (WRCC 2016). The prevailing wind direction is from the west (WRCC 2002).

CRITERIA AIR POLLUTANTS

Concentrations of criteria air pollutants are used to indicate the quality of the ambient air. A brief description of key criteria air pollutants in the MCAB was included in the 2014 SOI EIR, which is herein incorporated by reference. However, in the wake of the 2018 California Supreme Court Decision *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502 (herein referred to as the Friant Ranch Decision), the health effects associated with exposure to each criteria air pollutant in exceedance of the NAAQS and CAAQS are described in greater detail below. Table 3.1-2 shows Nevada County's attainment status for the CAAQS and the NAAQS.

Table 3.1-2 Attainment Status Designations for Nevada County

Pollutant	National Ambient Air Quality Standard	California Ambient Air Quality Standard
Ozone	—	Nonattainment (1-hour)[a]
	Nonattainment (8-hour)[b] Classification=Moderate	Nonattainment (8-hour)
Respirable particulate matter (PM_{10})	Unclassified (24-hour)	Nonattainment (24-hour)
	—	Nonattainment (Annual)
Fine particulate matter ($PM_{2.5}$)	Unclassified/Attainment (24-hour)	—
	Unclassified/Attainment (Annual)	Unclassified (Annual)
Carbon monoxide (CO)	Unclassified/Attainment (1-hour)	Attainment (1-hour)
	Unclassified/Attainment (8-hour)	Attainment (8-hour)
Nitrogen dioxide (NO_2)	Unclassified/Attainment (1-hour)	Attainment (1-hour)
	Unclassified/Attainment (Annual)	Attainment (Annual)
Sulfur dioxide (SO_2)[c]	Unclassified/Attainment (1-Hour)	Attainment (1-hour)
		Attainment (24-hour)
Lead (Particulate)	Unclassified/Attainment (3-month rolling avg.)	Attainment (30-day average)
Hydrogen Sulfide	No Federal Standard	Unclassified (1-hour)
Sulfates		Attainment (24-hour)
Visibly Reducing Particles		Unclassified (8-hour)
Vinyl Chloride		Unclassified (24-hour)

[a] Per Health and Safety Code (HSC) Section 40921.5(c), the classification is based on 1989–1991 data, and therefore does not change.

[b] 2015 Standard. The western portion of Nevada County, which contains the project site, is classified as moderate nonattainment by EPA. The eastern portion is not characterized by the same designation.

[c] 2010 Standard.

Sources: CARB 2019; EPA 2021

Ozone

Acute health effects of ozone exposure include increased respiratory and pulmonary resistance, cough, pain, shortness of breath, and lung inflammation. Chronic health effects include permeability of respiratory epithelia and possibility of permanent lung impairment (EPA 2018). Emissions of the ozone precursors ROG and NO_X have decreased over the past two decades because of more stringent motor vehicle standards and cleaner burning fuels and are projected to continue decreasing from 2010 to 2035 (CARB 2013).

Nitrogen Dioxide

Acute health effects of exposure to NO_X include coughing, difficulty breathing, vomiting, headache, eye irritation, chemical pneumonitis, or pulmonary edema, breathing abnormalities, cough, cyanosis, chest pain, rapid heartbeat, and death. Chronic health effects include chronic bronchitis and decreased lung function (EPA 2018).

Particulate Matter

Acute health effects of exposure to PM_{10} include breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases including asthma and chronic obstructive pulmonary disease, and premature death. Chronic health effects include alternations to the immune system and carcinogenesis (EPA 2018). For $PM_{2.5}$, short-term exposures (up to 24-hours duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. Long-term (months to years) exposure to $PM_{2.5}$ has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children (EPA 2018).

Direct emissions of PM_{10} are projected to remain relatively constant through 2035. Direct emissions of $PM_{2.5}$ have steadily declined in the MCAB between 2000 and 2010 and then are projected to increase very slightly through 2035. Emissions of $PM_{2.5}$ in the MCAB are dominated by the same sources as emissions of PM_{10} (CARB 2013).

TOXIC AIR CONTAMINANTS

According to the 2013 Edition of the California Almanac of Emissions and Air Quality, health risks from TACs can largely be attributed to relatively few compounds, the most important being diesel PM (CARB 2013). Diesel PM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances. Although all diesel-fueled internal combustion engines emit diesel PM, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emissions control system is being used. Unlike the other TACs, no ambient monitoring data are available for diesel PM because no routine measurement method currently exists. However, CARB has made preliminary concentration estimates based on a PM exposure method. This method uses the CARB emissions inventory's PM_{10} database, ambient PM_{10} monitoring data, and the results from several studies to estimate concentrations of diesel PM. In addition to diesel PM, the TACs for which data are available that pose the greatest existing ambient risk in California are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene. Overall, levels of most TACs, except para-dichlorobenzene and formaldehyde, have decreased since 1990 (CARB 2013).

ODORS

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals can smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity. Typical odor sources of concern include wastewater treatment plants, sanitary landfills, composting facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting operations, rendering plants, food packaging plants, and cannabis (OPR 2017). No major sources of odors are within proximity to the project site; however, the landscaping supply business located along SR 49, Rare Earth, does generate some odors during composting activities. Additionally, Vulcan Materials Company, also located along SR 49, generates odors during the production and mixing of asphalt and other construction materials. Nevertheless, these odors are generated intermittently and are not considered major sources of odor.

3.1.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

The following resources were used for this subsequent analysis: the 2014 SOI EIR; the California Emissions Estimator Model (CalEEMod) 2016.3.2 Computer Program (CAPCOA 2017), and NSAQMD's *Guidance for Assessing and Mitigating Air Quality Impacts of Land Use Projects* (NSAQMD 2009).

The analysis compares the effects of the Adopted Southern SOI Project addressed in the 2014 SOI EIR to the anticipated effects of the Southern SOI Amendment. Previously adopted mitigation is detailed and the potential for new or substantially more severe impacts are evaluated assuming implementation of these mitigation measures,

unless otherwise indicated. This analysis focuses on the changes between the Adopted Southern SOI Project and the Southern SOI Amendment.

Where appropriate, impacts related to the Southern SOI Amendment and Residential Development Area are grouped together due to the characteristic of air pollution. Emissions of criteria air pollutions affects air quality on a regional level, therefore construction- and operational-generated emissions of criteria air pollutants and ozone precursors associated with Southern SOI Amendment and Residential Development Area these are evaluated concurrently.

Criteria Health Pollutants

Regional and local criteria air pollutant emissions and associated impacts, as well as impacts from TACs, CO concentrations, and odors are assessed in accordance with NSAQMD-recommended methodologies and then evaluated against NSAQMD-adopted thresholds.

To determine whether the Southern SOI Amendment would result in a new significant impact or a substantially more severe impact with respect to construction- and operation-generated criteria air pollutants and ozone precursors, emissions for the Adopted Southern SOI Project were estimated and then compared to emissions from the Southern SOI Amendment. Although emissions were already estimated for the Adopted Southern SOI Project in the 2014 SOI EIR, these emissions estimates are now considered outdated due to the availability of new versions of the CalEEMod computer program, as well as regulatory developments that were unknown at the time previous emissions were estimated. Thus, to provide a more accurate comparison of the Southern SOI Amendment and the Adopted Southern SOI Project, new emissions modeling of the Southern SOI Amendment has been prepared using the same version of the CalEEMod computer program (i.e., version 2016.3.2) as well as identical assumptions regarding compliance with the most current regulations, rules, and policies summarized in Section 3.1.1, "Regulatory Setting," of this section.

This analysis presents the estimated emissions associated with construction and operations, then evaluates the difference between the approved and proposed projects to determine whether the Southern SOI Amendment would result in a new significant impact or a substantially more severe impact than what was identified in the 2014 SOI EIR. It should be noted that the project would not approve subsequent development projects in the SOI area so actual construction emissions that occur may vary from modeling provided in this SEIR.

Construction and operational emissions of criteria air pollutants and precursors associated with Adopted Southern SOI Project and Southern SOI Amendment were calculated using CalEEMod, as recommended by NSAQMD. Modeling was based on project-specific information (e.g., proposed land uses, acreage, area to be graded, area to be paved, paintable surfaces) where available; reasonable assumptions based on typical construction activities; and default values in CalEEMod that are based on the project's location and land use type. The 2014 SOI EIR used a construction period of 2014 (the year the 2014 SOI EIR was prepared) and 2021 (the General Plan period horizon). To provide a comparative analysis of the Adopted Southern SOI Project and Southern SOI Amendment, this construction period has been retained. As described above, emissions are generally expected to decrease over time in response to regulatory requirements; therefore, use of the 2014 to 2021 construction period may result in higher modeled emissions than using a 2021 to 2028 period for the subsequent analysis.

Operational emissions of criteria air pollutants for the Adopted Southern SOI Project and Southern SOI Amendment were estimated in CalEEMod for the year 2040. 2040 was used as the first full year of operation to be consistent with the vehicle miles traveled (VMT) modeling conducted in Section 3.9, "Transportation and Circulation," of this Draft SEIR, which provided project-level data that informed the emissions modeling from mobile source activity.

CalEEMod default energy values were amended to reflect compliance with the 2019 California Energy Code. Notably, the California Energy Code is updated triennially; therefore, residential and nonresidential buildings constructed throughout the lifespan of the Southern SOI Amendment would likely be more energy efficient and emit less air pollution than is assumed in this analysis as the Title 24 California Building Code continues to decarbonize (i.e., transition to carbon-free sources of power) and become more energy efficient. In addition, default vehicle emissions factors in CalEEMod were adjusted based on updated Safe Rule emissions factors (see Section 3.1.1, "Regulatory Setting") assuming implementation of the SAFE Rule. Criteria air pollutant emissions for landscaping activity were derived using CalEEMod default values. Emissions estimates are presented in annual and daily values and compared

to the applicable thresholds of significance and screening criteria (discussed in greater detail below under the heading, "Thresholds of Significance").

Specific model assumptions and inputs for these calculations can be found in Appendix B.

Evaluation of Health Risks

Since the certification of the 2014 SOI EIR, the California Supreme Court issued a ruling in the Friant Ranch Decision regarding an air quality analysis prepared for the Friant Ranch Development Project EIR in December 2018. The Court asserted that the air quality analysis performed for the project did not adequately explain the nature and magnitude of long-term air quality impacts from emissions of criteria pollutants and ozone precursors. The Court held that the EIR lacked "sufficient detail to enable those who did not participate in its preparation to understand and consider meaningfully the issues the proposed project raises."

The Court expressed the need to determine whether there was a connection between the significant project emissions and the human health impacts associated with such emissions. According to the Court, one pathway would be to estimate the level of ozone that would be produced from the project, measure to what extent human health would be affected, and describe where daily exceedances of the NAAQS and CAAQS would occur in an air basin. This detailed approach to modeling is founded on the assumption that such an exercise would produce estimates of meaningful accuracy.

As discussed below under the heading, "Thresholds of Significance," NSAQMD has established annual thresholds of significance. As discussed in greater detail below, annual thresholds of significance are tied to long-term regional air quality planning. The NAAQS and CAAQS were developed in consideration of scientific research indicating that human health impacts may occur from exposure to certain concentrations of criteria air pollutants; therefore, a correlation between a violation of an AAQS and adverse health impacts, as described above in Section 3.1.2, "Environmental Setting," can be made if a specific exceedance can be identified.

Typically, air districts develop thresholds of significance for CEQA evaluation (summarized below) in consideration of maintaining or achieving attainment under the NAAQS and CAAQS for the geographical area they oversee (long-term regional air quality planning). These thresholds are tied to an air district in nonattainment's SIP for criteria air pollutants within a cumulative context. Air quality plans identify a budget that accounts for new, future sources of pollution from land use development and stationary sources. These budgets inform the development of CEQA thresholds of significance and represent an allowable level of pollution that, when emitted in volumes below such thresholds, would not conflict with an air district's long-term regional air quality planning or attainment date.

As discussed previously, the NAAQS and CAAQS represent concentrations of criteria air pollutants protective of human health and are substantiated by scientific evidence. EPA and CARB recognize that ambient air quality below these concentrations would not cause adverse health impacts to exposed receptors. In connecting an air district's (e.g., NSAQMD) thresholds of significance to its anticipated date of attainment, projects that demonstrate levels of construction and/or operational emissions below the applicable thresholds would be consistent with long-term regional planning efforts. These projects would not result in emissions that would conflict with an area achieving future attainment status under the NAAQS and CAAQS as outlined by an applicable air quality plan.

Similarly, projects that demonstrate emissions levels in exceedance of an applicable threshold could contribute to the continued nonattainment designation of a region or potentially degrade a region from attainment to nonattainment, resulting in acute or chronic respiratory and cardiovascular illness associated with exposure to concentrations of criteria air pollutants above what EPA and CARB consider safe. However, the exact location and magnitude of specific health impacts that could occur as a result of project-level construction- or operation-related emissions is infeasible to model with a high degree of accuracy. While dispersion modeling of project-generated PM may be conducted to evaluate resulting ground-level concentrations, the secondary formation of PM is similar to the complexity of ozone formation, and localized impacts of directly emitted PM do not always equate to local PM concentrations due to the transport of emissions. Ozone is also a secondary pollutant formed from the oxidation of ROG and NO_X in the presence of sunlight. Rates of ozone formation are a function of a variety of complex physical factors, including topography, building influences on air flow (e.g., downwash), ROG and NO_X concentration ratios, multiple

meteorological conditions, and sunlight exposure (Seinfeld and Pandis 1996:298). For example, rates of ozone formation are highest in elevated temperatures and when the ratio of ROG to NO_X is 5.5:1. When temperatures are lower and this ratio shifts, rates of ozone formation are stunted (Seinfeld and Pandis 1996:299–300). In addition, ROG emissions are composed of many compounds that have different levels of reactivity leading to ozone formation. Methane, for instance, is the most common ROG compound, yet it has one of the lowest reactivity potentials (Seinfeld and Pandis 1996:309, 312). Moreover, some groups may develop more severe health impacts than others. For instance, infants, children, the elderly, and individuals with preexisting medical conditions are more susceptible to developing illnesses from exposure to air pollutants.

NSAQMD has not developed a dispersion model to evaluate resulting human health impacts for project-level emissions with resulting concentrations of ozone precursors within the MCAB. Thus, for the reasons stated above, human health impacts are evaluated qualitatively rather than quantitatively due to inherent uncertainty pertaining to a particular individual's vulnerability to air pollution.

Toxic Air Contaminants

CO impacts were assessed qualitatively, using the screening criteria set forth by NSAQMD and results from the traffic analysis. The level of health risk from exposure to construction- and operation-related TAC emissions was assessed qualitatively. This assessment was based on the proximity of TAC-generating construction activity to off-site sensitive receptors, the number and types of diesel-powered construction equipment being used, and the duration of potential TAC exposure.

Odors

Impacts related to odors were also assessed qualitatively, based on proposed construction activities, equipment types and duration of use, overall construction schedule, and distance to nearby sensitive receptors. The focus of the analysis is construction-related odors as the Southern SOI Amendment does not include any uses that would generate odors different from typical existing urban, suburban, and mixed-use development in the area.

THRESHOLDS OF SIGNIFICANCE

To assist local jurisdictions in the evaluation of air quality impacts, NSAQMD has published a guidance document for the preparation of the air quality portions of environmental documents that includes thresholds of significance to be used in evaluating land use proposals. Thresholds of significance are based on a source's projected impacts and are a basis from which to apply mitigation measures (NSAQMD 2009). NSAQMD has developed a tiered approach to significance levels: a project with emissions meeting Level A thresholds require the most basic mitigations; projects with projected emissions in the Level B range require more extensive mitigations; and those projects which exceed Level C thresholds require the most extensive mitigations and should be evaluated in an EIR. The NSAQMD-recommended thresholds are identified in Table 3.1-3.

Table 3.1-3 Northern Sierra Air Quality Management District Significance Thresholds

Significance Level	Project-Level Significance Thresholds (lb/day)		
	NO_X	ROG	PM_{10}
Level A	<24	<24	<79
Level B	25-136	25-136	80-136
Level C	>136	>136	>136

Notes: lb/day = pounds per day, NO_X = oxides of nitrogen, ROG = reactive organic gases, PM_{10} = respirable particulate matter
Sources: NSAQMD 2009

The significance criteria used to evaluate project impacts on air quality under CEQA are based on Appendix G of the State CEQA Guidelines and Northern Sierra Air Quality Management District Significance Thresholds. The project would result in a significant impact related to transportation if it would:

- generate short- or long-term increases in emissions in excess of Levels A thresholds for NO_X and ROG of 24 pounds per day (lb/day) and PM_{10} of 79 lb/day; generate emissions in excess of Level B thresholds for NO_X and ROG of 24–236 lb/day and PM_{10} of 79–136 lb/day; and generate emissions exceeding Level C thresholds for NO_X, ROG, or PM_{10} (i.e., 136 pounds per day). NSAQMD has not adopted thresholds of significance for $PM_{2.5}$. However, because $PM_{2.5}$ is a subset of PM_{10}, significant increases in PM_{10} would be considered to also result in significant increases in $PM_{2.5}$.

  It is important to note that in any case when predicted emissions are projected to be above Level A thresholds, impacts would be considered potentially significant and would require mitigation. The extent of mitigation is determined by the significance levels summarized in Table 3.1-3. This analysis therefore uses Levels A and C thresholds to determine the degree to which mitigation should be applied to project-generated emissions.
- exceed the NSAQMD health risk public notification thresholds set at 10 excess cancer cases in a million for cancer risk, or a Hazard Index of greater than one (1.0) for noncancer risk;
- result in a violation of a state ambient air quality standard for CO; and/or
- result in the frequent exposure of sensitive land uses to odorous emissions.

ISSUES NOT DISCUSSED FURTHER

All topics related to air quality are evaluated in this section.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.1-1: Violate Air Quality Standard or Contribute Substantially to an Air Quality Violation: Short-Term Construction Emissions

The 2014 SOI EIR quantified construction emissions associated with the Adopted Southern SOI Project assuming continual construction and growth through the General Plan period (i.e., 2014–2021) under Impact 3.2.1. The 2014 SOI EIR concluded that short-term daily emissions of NO_X and PM_{10} associated with development would not exceed NSAQMD's recommended Level C significance threshold of 136 lb/day; however, emissions would exceed the NSAQMD-recommended Level C ROG significance thresholds of 136 lb/day. This impact was identified as significant and unavoidable. Based on updated modeling performed for the Adopted Southern SOI Project, construction generated ROG would exceed Level A significance and NO_X would exceed Level C significance. While the Southern SOI Amendment would generally reduce construction emissions as compared to the Adopted Southern SOI, it would still result in an exceedance of NSAQMD's recommended Level C significance threshold for NO_X and would exceed Level A significance for ROG. The mitigation identified in the 2014 SOI would continue to be applied to the Southern SOI Amendment but the impact would remain significant and avoidable as identified in the 2014 SOI EIR. There is no new significant impact, and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. Project impacts would remain **significant**.

Impact 3.2.1 of the 2014 SOI EIR quantified construction emissions and assumed that due to the project's size and construction phasing, construction emissions would produce a significant and unavoidable regional air quality impact. The 2014 SOI EIR disclosed that there is inherent uncertainty surrounding the actual phasing of future development allowed under the city's General Plan, and therefore, actual daily emissions would vary day to day and would be dependent of specific activities constructed. Thus, while the modeled NO_X and PM_{10} construction emissions under Impact 3.2.1 would not exceed NSAQMD's Level C significance thresholds, the 2014 SOI EIR concluded that construction-generate emissions of air pollutants could potentially exceed NSAQMD's significance thresholds, and Mitigation Measures MM 3.2.1a, 3.2.1b, 3.2.1c, and 3.2.1d were recommended and adopted; however, implementation of Mitigation Measures MM 3.2.1a, 3.2.1b, 3.2.1c, and 3.2.1d were not sufficient to reduce impacts to a less-than-significant level and impacts were concluded to be significant and unavoidable.

Adopted MM 3.2.1a: Future development projects within the Southern Sphere of Influence Planning and Annexation project area shall submit to the NSAQMD for approval an Off-Road Construction Equipment Emission Reduction Plan prior to groundbreaking demonstrating that all off-road equipment (portable and mobile) meets or is cleaner than Tier 2 engine emission specifications unless prior written approval for any exceptions is obtained from the NSAQMD. Note that all off-road equipment must meet all applicable state and federal requirements.

Construction contracts shall stipulate the following:

- Emissions from on-site construction equipment shall comply with NSAQMD Regulation II, Rule 202, Visible Emissions.
- The primary contractor shall be responsible to ensure that all construction equipment is properly tuned and maintained.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes when not in use (as required by California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Existing power sources (e.g., power poles) or clean fuel generators shall be utilized rather than temporary power generators where feasible.

Adopted MM 3.2.1b: All architectural coating activities associated with construction of future development projects within the Southern Sphere of Influence Planning and Annexation project area shall be required to use interior and exterior coatings that contain less than 250 grams of volatile organic compounds (VOC/ROG) per liter of coating.

Adopted MM 3.2.1c: Grid power shall be used (as opposed to diesel generators) for construction site power needs where feasible during construction.

Adopted MM 3.2.1d: Deliveries of construction materials shall be scheduled to direct traffic flow to avoid the peak hours of 7 to 9 AM and 4 to 6 PM.

Southern SOI Amendment/Residential Development Area

Construction-related activities associated with the Adopted Southern SOI Project and Southern SOI Amendment would both result in emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ from site preparation (e.g., grading and clearing), off-road equipment, material delivery, worker commute exhaust emissions, vehicle travel, and other miscellaneous activities (e.g., building construction, asphalt paving, application of architectural coatings). Fugitive dust emissions would be associated primarily with site preparation and would vary as a function of soil silt content, soil moisture, wind speed, and area of disturbance. Other PM emissions would result from a combination of fuels and from tire and brake wear. Emissions of ozone precursors (i.e., ROG and NO_X) would be associated primarily with exhaust from construction equipment, haul truck trips, and worker trips. Off-gas emissions of ROG would also be emitted during asphalt paving in parking lots and the application of architectural coatings on new buildings. Maximum annual construction emissions for the Adopted Southern SOI Project are summarized in Tables 3.1-4 and 3.1-5, respectively. The tables present maximum daily emissions of ROG, NO_X, $PM_{10,}$ and $PM_{2.5}$ for each construction year (i.e., 2014–2021). As indicated above, modeled emissions above NSAQMD's Level A threshold require mitigation, as recommended in NSAQMD's *Mitigation for Use During Design and Construction Phases for Classifications as Level B Threshold* contained within the District's CEQA guidance document (NSAQMD 2009). Refer to Appendix B for a detailed summary of the modeling assumptions, inputs, and outputs.

As shown in Table 3.1-4, the Adopted Southern SOI Project daily emissions of ROG would exceed NSAQMD's Level A thresholds for every construction year. Daily emissions of NO_X would exceed NSAQMD's Level C thresholds for every construction year except 2021.

Table 3.1-4 Maximum Daily Emissions of Criteria Pollutants and Precursors Associated with Construction of the Adopted Southern SOI Project (2014–2021)

Year	ROG (lb/day)[1]	NO_X (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
2014	65	301	59	21
2015	57	274	57	19
2016	50	256	57	19
2017	44	238	56	18
2018	38	221	55	17
2019	34	206	54	17
2020	30	187	54	16
2021	33	13	10	2
NSAQMD Level A/C Thresholds	24/136	24/136	79/136	None
Exceeds NSAQMD Level A/C Thresholds	Yes/No	Yes/Yes	No/No	N/A

Notes: lb/day = pounds per day, ROG = reactive organic gases, NO_X = oxides of nitrogen, PM_{10} = respirable particulate matter, $PM_{2.5}$ = fine particulate matter, NSAQMD = Northern Sierra Air Quality Management District

[1] CalEEMod estimates for construction ROG emissions were adjusted to reflect a more accurate emissions estimate of architectural coatings based on construction phasing.

Source: Modeling conducted by Ascent Environmental in 2021 using CalEEMod v. 2016.3.2

Table 3.1-5 summarizes maximum daily construction emissions for the Southern SOI Amendment.

Table 3.1-5 Maximum Daily Emissions of Criteria Pollutants and Precursors Associated with Construction of the Southern SOI Amendment (2014–2021)

Year	ROG (lb/day)[1]	NO_X (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
2014	39	181	35	10
2015	34	165	34	8
2016	30	155	34	8
2017	26	144	33	8
2018	23	133	33	8
2019	21	124	32	8
2020	18	112	32	8
2021	39	13	5	1
NSAQMD Level A/C Thresholds	24/136	24/136	79/136	None
Exceeds NSAQMD Level A/C Thresholds	Yes/No	Yes/Yes	No/No	N/A

Notes: lb/day = pounds per day, ROG = reactive organic gases, NO_X = oxides of nitrogen, PM_{10} = respirable particulate matter, $PM_{2.5}$ = fine particulate matter, NSAQMD = Northern Sierra Air Quality Management District

[1] CalEEMod estimates for construction ROG emissions were adjusted to reflect a more accurate emissions estimate of architectural coatings based on construction phasing.

Source: Modeling conducted by Ascent Environmental in 2021 using CalEEMod v. 2016.3.2

As shown in Table 3.1-5, daily emissions of ROG would exceed NSAQMD's Level A thresholds in years 2014 through 2017 and again in 2021. Daily emissions of NO_X would exceed NSAQMD's Level C thresholds for every construction year except 2021. NSAQMD considers emissions in excess of Level A thresholds to have a potentially significant

impact and emissions above Level C thresholds to have a significant air quality impact. However, this analysis reviews the difference between the construction emissions associated with the Adopted Southern SOI Project and the Southern SOI Amendment. Table 3.1-6 identifies the change in construction emissions between the two land use scenarios.

Table 3.1-6 Annual Emissions Difference of Criteria Pollutants and Precursors Associated with Construction of Southern SOI Amendment Compared to the Adopted Southern SOI Project (2014–2021)

Year	ROG (lb/day)[1]	NO_X (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
2014	-26	-120	-24	-11
2015	-23	-109	-23	-11
2016	-20	-101	-23	-11
2017	-18	-94	-23	-10
2018	-15	-88	-23	-9
2019	-13	-82	-23	-9
2020	-12	-75	-22	-8
2021	6	0	-5	-1

Notes: lb/day = pounds per day, ROG = reactive organic gases, NO_X = oxides of nitrogen, PM_{10} = respirable particulate matter, $PM_{2.5}$ = fine particulate matter

Source: Modeling conducted by Ascent Environmental in 2021 using CalEEMod v. 2016.3.2

As shown above, the Southern SOI Amendment would result in fewer emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ than the previously approved project for every construction year except in 2021, when ROG emissions would be higher and NO_X emissions would be the same. Nonetheless, as shown in Table 3.1-5, daily construction emissions under the Southern SOI Amendment would exceed NSAQMD's Level A and Level C daily mass emissions thresholds for ROG and NO_X, respectively, similar to the Adopted Southern SOI Project. This impact would remain **significant,** as identified in the 2014 SOI EIR.

Notably, while PM_{10} emissions summarized in Table 3.1-5 do not exceed any of NSAQMD's thresholds, all future subsequent development projects would be subject to the requirements of NSAQMD Rule 226, "Dust Control." In accordance with Rule 226, a dust suppression control plan (DSCP) would be submitted for individual future projects using project-level detail for approval by NSAQMD. The DSCP must identify project phases and construction schedules to be implemented to ensure that mitigated construction-generated emissions would not exceed NSAQMD-recommended significance thresholds. The DSCP is required to include the following NSAQMD-recommended measures for the control of fugitive dust emissions:

- The project applicant shall be responsible for ensuring that all adequate dust control measures are implemented in a timely manner during all phases of project development and construction.
- All material excavated, stockpiled, or graded shall be sufficiently watered, treated, or covered to prevent fugitive dust from leaving the property boundaries and causing a public nuisance or a violation of an ambient air standard. Watering should occur at least twice daily, with complete site coverage.
- All areas with vehicle traffic shall be watered or have dust palliative applied as necessary for regular stabilization of dust emissions.
- All on-site vehicle traffic shall be limited to a speed of 15 mph on unpaved roads.
- All land clearing, grading, earth moving, or excavation activities on a project shall be suspended as necessary to prevent excessive windblown dust when winds are expected to exceed 20 mph.
- All inactive portions of the development site shall be covered, seeded, or watered until a suitable cover is established. Alternatively, the applicant may apply Nevada County-approved nontoxic soil stabilizers (according

to manufacturers' specifications) to all inactive construction areas (previously graded areas which remain inactive for 96 hours) in accordance with the local grading ordinance.

- All material transported off-site shall be either sufficiently watered or securely covered to prevent public nuisance, and there must be a minimum of 6 inches of freeboard in the bed of the transport vehicle.
- Paved streets adjacent to the project shall be swept or washed at the end of each day, or more frequently if necessary, to remove excessive or visibly raised accumulations of dirt and/or mud which may have resulted from activities at the project site.
- Prior to final occupancy, the applicant shall re-establish ground cover on the site through seeding and watering in accordance with the local grading ordinance.

Notably, at this programmatic level, project-level detail that would satisfy the requirements of an NSAQMD-approved DSCP is unknown at this time, and would be prepared on an individual basis for all future development projects.

Because the Southern SOI Amendment would not generate greater emissions than what would occur under the Adopted Southern SOI Project, this impact is not more severe than the impact identified in the 2014 SOI EIR.

The following modifications to the adopted mitigation measures (shown in underline and ~~strikeout~~) are proposed. The following mitigation measures would modify adopted Mitigation Measures MM 3.2.1.a and MM 3.2.1b.

Mitigation Measures

Mitigation Measure 3.1-1a: Modified 2014 SOI MM 3.2.1a

Future development projects within the Southern Sphere of Influence Planning and Annexation project area shall submit to the NSAQMD for approval an Off-Road Construction Equipment Emission Reduction Plan prior to groundbreaking demonstrating that all off-road equipment (portable and mobile) meets or is cleaner than Tier ~~2~~ 4 engine emission specifications unless prior written approval for any exceptions is obtained from the NSAQMD. Note that all off-road equipment must meet all applicable state and federal requirements.

Construction contracts shall stipulate the following:

- Emissions from on-site construction equipment shall comply with NSAQMD Regulation II, Rule 202, Visible Emissions.
- The primary contractor shall be responsible to ensure that all construction equipment is properly tuned and maintained.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes when not in use (as required by California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Existing power sources (e.g., power poles) or clean fuel generators shall be utilized rather than temporary power generators where feasible.

Mitigation Measure 3.1-1b: Modified 2014 SOI MM 3.2.1b

All architectural coating activities associated with construction of future development projects within the Southern Sphere of Influence Planning and Annexation project area shall be required to use interior and exterior coatings that contain less than ~~250~~ 100 grams of volatile organic compounds (VOC/ROG) per liter of coating.

Significance After Mitigation

Implementation of Adopted Mitigation Measures 3.2.1a through 3.2.1d, as modified through Mitigation Measures 3.1-1a and 3.1-1b above, would reduce construction-related emissions; however, as concluded in the 2014 SOI EIR, the

efficacy of implementation of these measures would vary on a project-by-project basis. Because reducing construction emissions below applicable thresholds cannot be assured, this impact would remain **significant and unavoidable** as identified in the 2014 SOI EIR. Because the Southern SOI Amendment would not generate greater emissions than what would occur under the Adopted Southern SOI Project, this impact is not more severe than the impact identified in the 2014 SOI EIR.

Impact 3.1-2: Violate Air Quality Standard or Contribute Substantially to an Air Quality Violation: Long-Term Operational Emissions

The 2014 SOI EIR evaluated the generation of long-term regional emissions of criteria air pollutants and ozone precursors and determined that emissions of ROG, NO_X, and PM_{10} would exceed NSAQMD's Level A thresholds of significance and ROG and NO_X would exceed NSAQMD's Level C thresholds of significance (Impact 3.2.2). This impact was identified as significant and unavoidable. Based on updated modeling performed for this analysis, the Adopted Southern SOI Project and the Southern SOI Amendment would generate emissions of ROG, NO_X, and PM_{10} in exceedance of NSAQMD's Level A thresholds of significance and ROG and NO_X would exceed NSAQMD's Level C thresholds, consistent with the findings of the 2014 SOI EIR. The Southern SOI Amendment would result in fewer total emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ as compared to the Adopted Southern SOI Project. Therefore, this impact would not be substantially more severe than the impact identified in the 2014 SOI EIR. Project impacts would remain **significant**.

Impact 3.2.2 of the 2014 SOI EIR quantified operational emissions and assumed that due to the project's size and land uses, operational emissions would produce a potentially significant regional air quality impact. Table 3.2-7 in the 2014 SOI EIR shows operational emissions of criteria air pollutants and ozone precursors and determined that emissions of ROG, NO_X, and PM_{10} would exceed NSAQMD's Level A thresholds of significance, and ROG and NO_X would exceed NSAQMD's Level C thresholds of significance. The 2014 SOI EIR concluded that operation-generated emissions of air pollutants would exceed NSAQMD's significance thresholds and Adopted Mitigation Measures MM 3.4.1 (identified in Section 3.4, "Climate Change and Greenhouse Gas Emissions," of the 2014 SOI EIR) was recommended. Due to the inherent uncertainty regarding the nature of subsequent development that could contribute to operational emissions, the 2014 SOI EIR determined that the impact would be significant and unavoidable with implementation of Adopted Mitigation Measure 3.4.1.

> **Adopted MM 3.4.1:** Subsequent development projects within the Southern Sphere of Influence Planning and Annexation project area shall submit to the City of Grass Valley and receive approval for a GHG Emissions Reduction Plan prior to issuance of building permits for the development project in question. The GHG Emissions Reduction Plan shall demonstrate adherence to the following measures or alternative measures equaling the same or greater emission reduction values.
>
> - Indoor water conservation measures shall be incorporated, such as use of low-flow toilets, showers, and faucets (kitchen and bathroom), in each residential unit.
> - The proposed project shall be designed to exceed state energy efficiency standards by 15 percent (to Tier 1 Title 24 Standards) as directed by Appendix A5 of the 2010 California Green Building Standards (CBSC 2011). This measure helps to reduce emissions associated with energy consumption.
> - Low-water-use landscaping (i.e., drought-tolerant plants and drip irrigation) shall be installed. At least 75 percent of all landscaping plants shall be drought-tolerant as determined by a licensed landscape architect or contractor.
> - The installation of wood-burning fireplaces shall be prohibited in all new residential units.

Southern SOI Amendment/Residential Development Area

Table 3.1-7 summarizes the modeled operational emissions associated with the Adopted Southern SOI Project and the Southern SOI Amendment for the assumed first full year of operation (i.e., 2040). See Appendix B for detailed modeling assumptions.

Table 3.1-7 Maximum Daily Emissions of Criteria Air Pollutants and Precursors Associated with Operation of the Adopted Southern SOI Project and the Southern SOI Amendment (2040)

Year	ROG (lb/day)[1]	NO_X (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
Adopted Southern SOI Project	894	194	258	173
Southern SOI Amendment	876	161	236	164
NSAQMD Level A/C Thresholds	24/136	24/136	79/136	None
Exceeds NSAQMD Level A/C Thresholds?	Yes/Yes	Yes/Yes	Yes/No	N/A
Net Difference	-18	-33	-22	-9

Notes: lb/day = pounds per day, ROG = reactive organic gases, NO_X = oxides of nitrogen, PM_{10} = respirable particulate matter, $PM_{2.5}$ = fine particulate matter, NSAQMD = Northern Sierra Air Quality Management District

Source: Modeling conducted by Ascent Environmental in 2021 using CalEEMod v. 2016.3.2

As shown in Table 3.1-7, operational emissions associated with the Adopted Southern SOI Project and the Southern SOI Amendment of ROG, NO_X, and $PM_{2.5}$ would exceed NSAQMD's Level A thresholds of significance and emissions of ROG and NO_X would also exceed NSAQMD's Level C thresholds of significance. Table 3.1-7 also summarizes the difference in emissions between the Adopted Southern SOI Project and the Southern SOI Amendment. As noted above, the 2014 SOI EIR determined that operational emissions of criteria air pollutants would be significant (Impact 3.2.2), and mitigation was adopted. With the application of Adopted Mitigation Measure MM 3.4.1 (summarized above), operational emissions under this impact were reduced, but would remain **significant**.

As shown in Table 3.1-7, operational emissions generated by both the Adopted Southern SOI Project and the Southern SOI Amendment would exceed respective NSAQMD thresholds of significance; however, as shown in Table 3.1-7, operational emissions under the Southern SOI Amendment would generate less operational emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ than the Approved Southern SOI Project. This is attributable to land use changes under the Southern SOI Amendment from residential to industrial land uses. Additionally, under the Adopted Southern SOI Project, more single-family housing units would have been constructed, likely with lawns and/or outdoor areas that would be treated with synthetic fertilizers, another source of ROG.

In summary, the Southern SOI Amendment would generate operational emissions in exceedance of applicable thresholds consistent with the findings of the 2014 SOI EIR (significant and unavoidable); however, these operational emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ would be less under the Southern SOI Amendment as compared to the Adopted Southern SOI Project. Because the Southern SOI Amendment would not generate greater emissions than what would occur under the Adopted Southern SOI Project, this impact is not more severe than the impact identified in the 2014 SOI EIR.

The following modifications to the adopted mitigation measures (shown in <u>underline</u> and ~~strikeout~~). The following mitigation measure would modify Adopted Mitigation Measure MM 3.4.1.

Mitigation Measures

Mitigation Measure 3.1-2: Modified 2014 SOI MM 3.4.1

Subsequent development projects within the Southern Sphere of Influence Planning and Annexation project area shall submit to the City of Grass Valley and receive approval for a GHG Emissions Reduction Plan prior to issuance of building permits for the development project in question. The GHG Emissions Reduction Plan shall demonstrate adherence to the following measures or alternative measures ~~equaling the same or greater emission reduction values~~ <u>to reduce GHG emissions</u>.

- <u>Prior to the issuance of building permits for residential and commercial development the project developer or its designee shall submit a Zero Net Energy Confirmation Report (ZNE Report) prepared by a qualified building energy efficiency and design consultant to the City for review and approval. For residential and commercial development within the project area, the ZNE Report shall demonstrate that the most recent version of the California Energy Code has been applied. Residential and commercial development shall be designed and shall</u>

be constructed to achieve ZNE, as defined by CEC in its 2015 Integrated Energy Policy Report, or otherwise achieve an equivalent level of energy efficiency, renewable energy generation, or GHG emissions savings. If the ZNE Report determines that attainment of ZNE is not feasible, it shall substantiate this conclusion and will identify the maximum building energy efficiency that is attainable.

- All buildings shall include rooftop solar photovoltaic systems to supply electricity to the buildings. Alternatively, solar photovoltaic systems can be installed on canopies that also shade parking areas. The project applicant shall provide pre-wired solar for residential garage/parking structures as a design feature.
- Any household appliances included in the original sale of the residential units shall be electric and certified Energy Star-certified (including clothes washers, dish washers, fans, and refrigerators, but not including tankless water heaters).
- Indoor water conservation measures shall be incorporated, such as use of low-flow toilets, showers, and faucets (kitchen and bathroom), in each residential unit.
- All buildings shall be designed to include cool roofs consistent with requirements established by Tier 2 of the CALGreen Code.
- The proposed project shall be designed to exceed ~~state energy efficiency standards~~ the California Energy Code in effect at the time of construction by 15 percent ~~(to Tier 1 Title 24 Standards) as directed by Appendix A5 of the 2010 California Green Building Standards (CBSC 2011). This measure helps to reduce emissions associated with energy consumption~~.
- Low-water-use landscaping (i.e., drought-tolerant plants and drip irrigation) shall be installed. At least 75 percent of all landscaping plants shall be drought-tolerant as determined by a licensed landscape architect or contractor.
- The installation of wood-burning fireplaces shall be prohibited in all new residential units.
- The project applicant shall provide a minimum of one single-port electric vehicle charging station at each new single-family housing unit that achieves similar or better functionality as a Level 2 charging station (referring to the voltage that the electric vehicle charger uses). The project applicant shall also provide Level 2 electric vehicle charging stations at a minimum of 10 percent of parking spaces that serve multi-family residential buildings.
- Parking lots serving non-residential buildings shall have at least 12.5 percent of parking spaces served by electric vehicle charging stations that achieves similar or better functionality as a Level 2 charging station.

Significance after Mitigation

Implementation of Adopted Mitigation Measure MM3.4.1, as modified through Mitigation Measure 3.1-2, would reduce operational emissions through energy efficiency, use of electrical appliances, renewable energy generation that address stationary and mobile sources from natural gas and vehicle fuel use; however, as concluded in the 2014 SOI EIR, the efficacy of implementation of these measures would vary on a project-by-project basis. At the time of writing this Draft EIR, the 2019 California Energy Code (the most current version of the California Energy Code) does not require that residential and nonresidential buildings be constructed to achieve ZNE; however, the California Energy Efficiency Strategic Plan prepared by the California Public Utilities Commission sets ambitious goals towards achieving ZNE is all new residential and commercial construction by 2030. Therefore, ZNE in new residential and commercial development may be achieved through compliance with future versions of the California Energy Code. Because reducing operational emissions below applicable thresholds cannot be assured, this impact would remain **significant and unavoidable** as identified in the 2014 SOI EIR. The Southern SOI Amendment would not generate greater emissions than would occur under the Adopted Southern SOI Project; therefore, this impact is not more severe than the impact identified in the 2014 SOI EIR.

Impact 3.1-3: Expose Sensitive Receptors to Substantial Carbon Monoxide Pollutant Concentrations

The 2014 SOI EIR evaluated the generation of CO from project-generated vehicle trips. The 2014 SOI EIR concluded that the Adopted Southern SOI Project would not contribute to CO concentrations that exceed the CAAQS of 9 ppm for 8 hours or 20 ppm for 1 hour (Impact 3.2.3). The proposed land uses under the Southern SOI Amendment would result in the redistribution of trips as compared to what was evaluated in the 2014 SOI EIR. However, this redistribution would not result in a new CO impact. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. This impact would be **less than significant**.

Impact 3.2.3 of the 2014 SOI EIR evaluated whether implementation of the Adopted Southern SOI Project would generate a CO hotspot resulting in an exceedance of the CAAQS of 9 ppm for 8 hours or 20 ppm for 1 hour. Using level of service (LOS) data available for the 2014 SOI EIR, the 2014 SOI EIR found that three intersections in the project area (i.e., McKnight Way/Taylorville Road, McKnight Way/State Route 49 Southbound Ramp, and McKnight Way/La Barr Meadows Road) were projected to operate at unacceptable LOS. Modeling performed for the 2014 SOI EIR evaluated CO concentrations for anticipated traffic conditions at these intersections using worst-case meteorological conditions. Results indicated that the estimated 1-hour and 8-hour CO concentrations did not exceed the recommended significance thresholds of 20 ppm and 9 ppm. Therefore, this impact was determined to be less than significant.

Southern SOI Amendment

As discussed in Section 3.6, "Transportation and Circulation," the Southern SOI Amendment would result in a redistribution and reduction in of VMT per household, per capita, and per employee compared to the Adopted Southern SOI Project. Notably, the Southern SOI Amendment would result in fewer overall average daily vehicle trips to the project area compared to the Adopted Southern SOI Project. Based on the modeling conducted in the 2014 SOI EIR, which found that CO emissions would not result in a CO hotspot at identified intersections. The 2021 GHD Sphere of Influence Specific Plan Grass Valley Traffic Analysis identifies that the Southern SOI Amendment would generate 21,739 daily vehicle trips and 1,275 P.M. peak hour trips that would be a 46 percent reduction in P.M. peak hour trips anticipated under the Adopted Southern SOI Project as identified in the 2014 SOI EIR Table 3.13-5 (GHD 2021). The reduction of vehicle traffic would not cause CO hotspots at any project-affected intersection. Also, as summarized in Appendix C, the project would not introduce new traffic that would degrade the aforementioned intersections to below target level LOS D.

Additionally, mobile-source CO emissions have historically decreased since the advent of catalytic converters, which decrease mobile-source exhaust emissions, and there have been improvements in fuel economy since 2014 through regulatory compliance implemented by EPA and CARB (e.g., the CAFE standards and Advanced Clean Cars program). As such, CO emissions from the Southern SOI Amendments would not introduce a substantially new or more severe impact as compared to what was evaluated in the 2014 SOI EIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. This impact would be **less than significant**.

Residential Development Area

The proposed residential development would result in increased traffic volumes primarily along SR 49 and Taylorville Road, which provide access to the residential development area. The traffic study included in Appendix C includes daily trip rates for medium- and high-density residential land uses, which are the types of land uses proposed within the residential development area. Based on these projected trip rates and the number of units proposed for each type of land use, the proposed residential development would result in an additional 1,059 daily trips along Taylorville Road and SR 49. This increase could result in new CO emission. While localized concentrations of criteria air pollutants can expose sensitive receptors to substantial pollutant concentrations, criteria air pollutants generally produce regional impacts. Criteria air pollutants are predominantly generated in the form of mobile-source exhaust from vehicle trips associated with land use development projects. These vehicle trips occur throughout a paved network of roads and, therefore, associated exhaust emissions of criteria air pollutants are not generated in a single location where high concentrations could be formed. However, there may be unique situations or infrastructure designs (e.g., tunnels, enclosed underpasses) where a project with high levels of emissions may require concentration modeling to determine if the emissions will expose sensitive receptors to substantial pollutant concentrations. In the case of the Southern SOI Amendment, these infrastructure designs would not be incorporated as component of

project design on the roadway segment along Taylorville Road and SR 49, thus minimizing the potential for a CO hotspot to occur. Therefore, CO impacts associated with operation of the proposed residential development would not result in a new or substantially more severe impact than was addressed in the 2014 SOI EIR.

Mitigation Measures

No new mitigation is required.

Impact 3.1-4: Expose Sensitive Receptors to Toxic Air Contaminant Pollutant Concentrations that Exceed the NSAQMD Health Risk Public Notification Thresholds

The 2014 SOI EIR evaluated the potential exposure to TACs from short-term construction and long-term operational activities. The 2014 SOI EIR found that the Adopted Southern SOI Project would not result in increased existing or planned sensitive land uses to stationary or mobile-source TACs that would exceed an applicable standard (Impact 3.2.4). The proposed land uses under the Southern SOI Amendment would result in greater square footage of manufacturing land uses, which could generate TAC emissions that could result in exposure of sensitive receptors to substantial pollutant concentrations. This would result in a substantially more severe impact than what was evaluated in the 2014 SOI EIR. Therefore, this impact would be **potentially significant**.

Impact 3.2.4 of the 2014 SOI EIR evaluated the potential exposure of sensitive receptors to TACs generated from construction activity, and operational mobile and stationary sources. The 2014 SOI EIR concluded that, due to the short-term nature of construction activity (less than 70 years), receptors would likely not be exposed for a duration long enough to generate conditions where cancer risk is measured at greater than 10 in 1 million. Since the certification of the 2014 SOI EIR, OEHHA published new guidance (2015 Guidance) that indicates that potential exposure should be evaluated for exposures shorter than 30- and 70-years (OEHHA 2015). Nevertheless, Impact 3.2.4 of the 2014 SOI EIR concluded that construction-related TAC exposure would be less than significant.

Impact 3.2.4 of the 2014 SOI EIR also reviewed potential exposure from long-term operational source of TACs. Using the Sacramento Metropolitan Air Quality Management District's (SMAQMD's) *Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways*, the 2014 SOI EIR concluded that the highest exposure to mobile-source TAC emissions, which would occur only SR 49 at peak-hours, would not exceed SMAQMD's Screening Threshold of 276 per million at any distance from SR 49. Thus, the 2014 SOI EIR concluded that mobile-source TAC impacts would be less than significant. SMAQMD no longer uses its *Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways*, which was replaced in 2018 by the *Mobile Source Air Toxics Protocol* (MSAT Protocol). The MSAT Protocol is specific to Sacramento County and can no longer be applied to roadways outside of SMQMD's jurisdiction.

Impact 3.2.4 of the 2014 SOI EIR assessed potential exposure from stationary sources of TACs. The 2014 SOI EIR did not identify any existing stationary sources of TACs that would affect on-site receptors. Further, the 2014 SOI EIR noted that any future stationary sources of TACs would be subject to applicable rules and requirement such as NSAQMD Regulation IV, "Authority to Construct," Regulation V, "Permit to Operate," and Regulation IX, "Toxic Air Contaminants." Through compliance with these local regulations, stationary source impacts were found to be less than significant.

Southern SOI Amendment

Short-Term Construction Toxic Air Contaminant Sources

The TAC that is the focus of this analysis is diesel PM because it is known that diesel PM would be emitted during project construction. Construction-related activities that would result in temporary, intermittent emissions of diesel PM would be from the exhaust of off-road equipment used during site preparation and construction and on-road heavy-duty trucks. On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment are less of a concern because they do not operate at any one location for extended periods of time such that they would expose a single receptor to excessive diesel PM emissions.

Based on the construction-related emissions modeling conducted (see Appendix B), maximum daily emissions of exhaust PM_{10} would be approximately 5 lb/day during construction for the Southern SOI Amendment. Additionally, the Adopted Southern SOI Project would result in exhaust PM_{10} emissions of about 7 lb/day. A portion of these

emissions would be due to haul trucks traveling to and from the site and would not occur on the project site. This is below the NSAQMD-recommended Level A daily threshold of 79 lb/day.

Construction-related TAC emissions would not expose sensitive receptors to an incremental increase in cancer risk greater than 10 in 1 million or a hazard index greater than 1.0. The low exposure level reflects the (i) relatively low mass of diesel PM emissions that would be generated by construction activity on the project site; (ii) the relatively short duration of diesel PM-emitting construction activity at the project site; and (iii) the highly dispersive properties of diesel PM. Therefore, there is no new significant impact and the impact is not more severe than the impact identified in the 2014 SOI EIR with respect to construction-related TACs.

Operational Toxic Air Contaminant Emissions

The Southern SOI Amendment would generate fewer overall trips to the project area (see Section 3.9, "Transportation and Circulation"). Additionally, the Southern SOI Amendment proposes to reduce the total square footage of commercial space by approximately 301,700 square feet (sq. ft.) that could otherwise be served by diesel-powered delivery trucks (see Table 2-2 in Chapter 2, "Project Description"). The movement of these trucks could result in the generation of diesel PM; however, due to the decrease in overall commercial space under the Southern SOI Amendment, the overall amount would comparatively be less than what would occur under the Adopted Southern SOI Project.

Notably, however, the Southern SOI Amendment proposes the expansion of approximately 926,000 sq. ft. of manufacturing land uses (see Table 2-2 in Chapter 2, "Project Description"), which could be sources of both mobile- and stationary-source TAC emissions. The level of diesel PM associated with these manufacturing land uses is unknown because no specific industrial development is proposed; however, it is foreseeable that diesel PM could result in exposure of sensitive receptors to substantial pollutant concentrations.

As discussed in the 2014 SOI EIR, any stationary sources of TACs constructed and operated under the Southern SOI Amendment would be required to comply with permitting regulations overseen by NSAQMD. These sources would be required to comply with NSAQMD Regulation IV, "Authority to Construct," Regulation V, "Permit to Operate," and Regulation IX, "Toxic Air Contaminants." The permitting process, as overseen by NSAQMD, would ensure that stationary sources would be within emissions limits through the use of best available control technology, emissions controls, and limitations on activity levels. Stationary sources in excess of TAC emissions limits would not obtain a permit to operate; thus, these emissions would not be generated. Through compliance with these local regulations, stationary source impacts would be less than significant.

As stated previously, the 2014 SOI EIR utilized SMAQMD's *Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways*, which was a tool available for use outside of Sacramento County to assess mobile-source TAC impacts. However, since certification of the 2014 SOI EIR, the MSAT Protocol has superseded the previous protocol and is no longer applicable for use outside of SMAQMD's jurisdiction.

Because the commercial and manufacturing land uses under the Southern SOI Amendment would be accessed by diesel-powered trucks, receptors could be exposed to harmful concentrations of diesel PM emissions. Additionally, due SMAQMD's replacement of the previous protocol used in the 2014 SOI EIR, diesel PM emissions cannot be assured to be less than significant using the same methodology applied in the 2014 SOI EIR. Moreover, at this programmatic level of analysis, the number and type of diesel-powered trucks that would access these land uses is unknown.

Thus, because diesel-powered trucks would access loading docks operated within the commercial and manufacturing land uses proposed for the Southern SOI Amendment, receptors could be exposed to harmful concentrations of diesel PM, this impact could be **potentially significant**. Thus, the Southern SOI Amendment would result in a substantially more severe impact than what was identified in the 2014 SOI EIR. New Mitigation Measure 3.1-4 is provided below.

Residential Development Area

Short-Term Construction Toxic Air Contaminant Sources

Construction-related exposure to TACs under the proposed residential development would be similar to that discussed above and would generate comparable levels PM_{10} exhaust. Therefore, construction-related TAC impacts would be less than significant.

Operational Toxic Air Contaminant Emissions

The proposed residential development is anticipated to result in 128 duplex and apartment homes on approximately 10 acres currently designated for commercial use. As discussed in Section 3.6, "Transportation and Circulation," residential development generates shorter and fewer average trips compared to commercial land uses. Therefore, exposure to mobile-source emissions of TACs would be less from the proposed residential development.

Additionally, the proposed residential development would not support loading docks that could be assessed by diesel-fueled trucks nor would it introduce substantial sources of stationary TACs. It is foreseeable that a future resident could purchase and operate a diesel-powered generator for personal use; however, new generators would be required to comply with the emissions requirement established and enforced by CARB.

There is no new impact and impacts would not be substantially more severe than what was evaluated in the 2014 SOI EIR for the residential development area. The impact would be **less than significant**.

Mitigation Measures

Mitigation Measure 3.1-4: Incorporation of Design Features at Truck Loading/Unloading Areas to Reduce Health-Risk Exposure at Sensitive Receptors

As part subsequent development project submittals to the City, project applicants shall design developments so that truck loading/unloading facilities and sensitive receptors are not located within 1,000 feet of each other. For the purpose of this mitigation measure, a truck loading/unloading facility is defined as any truck distribution yard, truck loading dock, or truck loading or unloading area that accommodates (i) more than 100 trucks per day, (ii) more than 40 trucks with operating transport refrigeration units per day (TRU), or (iii) where TRU units operations exceed 300 hours per week. Sensitive receptors include residential land uses, campus dormitories and student housing, residential care facilities, hospitals, schools, parks, playgrounds, or daycare facilities. A truck loading/unloading facility and a sensitive receptor can be located within 1,000 feet of each other only if a project proponent prepares a qualified, site-specific HRA showing that the associated level of cancer risk at the sensitive receptors would not exceed 10 in 1 million. The HRA shall be conducted in accordance with guidance from NSAQMD and shall be approved by the City. If the HRA determines that a nearby sensitive receptor would be exposed to an incremental increase in cancer risk greater than 20 in 1 million then design measures shall be incorporated to reduce the level of risk exposure to less than 10 in 1 million. Design measures may include, but are not limited to, the following:

- Require that all truck loading/unloading facilities be equipped with one 110/208-volt power outlet for every two-truck loading/unloading docks. A minimum 2-foot-by-3-foot sign shall be clearly visible at each loading dock that indicates, "Diesel engine idling limited to a maximum of 5 minutes." The sign shall include instructions for diesel trucks idling for more than 5 minutes to connect to the 110/208-volt power to run any auxiliary equipment. This measure is consistent with measure VT-1 in the California Air Pollution Control Officers Association (CAPCOA) guide *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA 2010:300–303).
- Use electric-powered "yard trucks" or forklifts to move truck trailers around a truck yard or truck loading/unloading facility.
- Use buildings or walls to shield commercial activity from nearby residences or other sensitive land uses.
- Plant and maintain a vegetative buffer between the truck loading/unloading facility and nearby sensitive residences, schools, and daycare facilities.

Significance after Mitigation

Implementation of Mitigation Measure 3.1-4 would ensure that a sensitive receptor (e.g., residence, school, daycare facility) and a truck loading/unloading facility would not be located with 1,000 feet of each other. The 1,000-foot setback is the CARB-recommended setback distance and would be sufficient to reduce the associated level of cancer risk at the locations of sensitive receptors to less than 10 in 1 million, unless a future site-specific, city-approved HRA indicates that locating a truck loading/unloading facility within this setback distance would generate cancer risk in exceedance of 10 in 1 million (CARB 2005). In such cases, implementation of the measures listed above would reduce cancer risk to below 10 in 1 million. With implementation of this mitigation measure, this impact would be **less than significant**.

Impact 3.1-5: Expose Sensitive Receptors to Odorous Emissions

The 2014 SOI EIR evaluated the potential exposure to odors from implementation of the Adopted Southern SOI Project and determined that the project would result in less-than-significant odor impacts through compliance with NSAQMD Rule 205, "Nuisance" (Impact 3.2.5). The proposed land uses under the Southern SOI Amendment would also be subject to Rule 205 and additionally project-level review. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. This impact would be **less than significant**.

Impact 3.2.5 of the 2014 SOI EIR evaluated potential odor impacts associated with the Adopted Southern SOI Project and found odor impacts to be less than significant because compliance with NSAQMD Rule 205, "Nuisance," would address potential odors from future projects.

Southern SOI Amendment

The proposed Southern SOI Amendment would change the land use designations established by the Adopted Southern SOI Project, resulting in the potential for more industrial development in the project area. While implementation of the Southern SOI Amendment could lead to the development of commercial and industrial land uses which could be a source of odors in the future, the actual construction phasing and specific configuration of future development allowed under the Southern SOI Amendment is not known at this time, as no specific development projects are proposed as part of the Southern SOI Amendment. Therefore, the evaluation of specific odor impacts would be overly speculative. Future development allowed under the proposed project would be subject to project-level analyses of odor impacts in accordance with CEQA requirements, and would be conducted on a case-by-case basis as future development allowed under the proposed project proceeds.

No major sources of odors were identified in the vicinity of the project area that could potentially affect proposed on-site land uses, with the possible exception of a landscape materials retailer. However, NSAQMD Rule 205, "Nuisance," prohibits the discharge of any material from any source which could cause nuisance or annoyance to any considerable number of persons.

The Southern SOI Amendment would increase the amount of industrial (manufacturing) square footage as compared to the Adopted Southern SOI Project. The Southern SOI Amendment would not introduce any new sources of odor that were not identified in the 2014 SOI EIR. In addition, since certification of the 2014 SOI EIR, there has not been any changes in surrounding development, nor changes in planned development, that would place a new source of odorous emissions in the vicinity of the Southern SOI Amendment site. With no change in conditions regarding odorous emissions on or off the project site, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. This impact would be **less than significant**.

Residential Development Area

The proposed residential development area would result in the conversion of existing commercial zoning to residential development. As stated previously, land uses commonly considered to be potential sources of odorous emissions include wastewater treatment plants, sanitary landfills, food processing facilities, chemical manufacturing plants, rendering plants, paint/coating operations, and agricultural feedlots and dairies. None of these odor sources would be introduced in the proposed residential development area. With no change in conditions regarding odorous emissions on or off the project site, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. This impact would be **less than significant**.

Mitigation Measures

No new mitigation is required.

3.2 BIOLOGICAL RESOURCES

This section addresses biological resources known or with potential to occur in or near the project area and describes potential effects of implementation of the Southern SOI Amendment and residential development on these resources. The 2014 SOI EIR included Section 3.3, "Biological Resources," which evaluated the potential effects of the Adopted Southern SOI Project. The 2014 SOI EIR concluded that there would be no impact related to movement of native resident or migratory fish or wildlife species or established migratory corridors (Impact 3.3.6) or resulting from conflict with local policies or ordinances (Impact 3.3.7) or conservation plans (Impact 3.3.8).

The 2014 SOI EIR identified potential impacts on special-status plant species (Impact 3.3.1); coast horned lizard (Impact 3.3.2); California black rail and other special-status avian species, including raptors (Impact 3.3.3); riparian habitat (Impact 3.3.4); and jurisdictional waters of the United States or state, including wetlands (Impact 3.3.5). These impacts were found to be less than significant with the incorporation of Adopted Mitigation Measures MM 3.3.1, MM 3.3.2, MM 3.3.3a, MM 3.3.3b, MM 3.3.4, and MM 3.3.5. These mitigation measures would require surveys for sensitive biological resources (i.e., special-status plants, coast horned lizard, migratory birds, raptors), avoidance of sensitive resources through physical buffers and limited operating periods, and compensation for impacts on riparian habitat and wetlands and waters such that there is no net loss.

No comments related to biological resources were received in response to the notice of preparation.

3.2.1 Regulatory Setting

The regulatory setting provided in the 2014 SOI EIR remains applicable to this analysis. The regulatory information provided on pages 3.3-20 through 3.3-26 of the 2014 SOI EIR provides a description of the applicable federal, state, and local regulations designed to reduce impacts on biological resources and adequately describes these regulations. These regulations are applicable to special-status wildlife species, including those listed by U.S. Fish and Wildlife Service (USFWS) under the federal Endangered Species Act and by California Department of Fish and Wildlife (CDFW) under the California Endangered Species Act, as well as those protected under California Fish and Game Code (i.e., fully protected species, nesting birds). These regulations also apply to sensitive habitats, including riparian habitat, waters of the United States, waters of the state, and protected trees.

Since 2014, the U.S. Environmental Protection Agency and the U.S. Department of the Army's Navigable Waters Protection Rule: Definition of "Waters of the United States" (NWPR) has been updated. The NWPR establishes the scope of federal regulatory authority under the Clean Water Act, and this update resulted in several types of surface waters being disclaimed by U.S. Army Corps of Engineers. These waters, including ephemeral streams that do not provide a surface connection to a Traditional Navigable Water, ephemeral swales, ephemeral pools, and ditches constructed in uplands, are no longer under federal jurisdiction.

3.2.2 Environmental Setting

The 2014 SOI EIR (pages 3.3-1 through 3.3-35) provides an overview of the regional setting, local setting (i.e., hydrology, soils, climate), vegetative communities, sensitive habitats and other protected resources (i.e., waters of the United States, wetlands, riparian habitats, wildlife movement corridors), and special-status species.

As described in the 2014 SOI EIR, vegetative communities within and immediately surrounding the project area consist primarily of disturbed annual grassland, mixed chaparral, ponderosa pine (*Pinus ponderosa*) forest, montane hardwood-conifer forest, disturbed lands, and potential waters of the United States. Conditions, including vegetation communities, in the residential development area west of SR 49 are not substantially different than described in the 2014 SOI EIR. This area is mapped in the 2014 SOI EIR as primarily annual grassland, surrounded by montane hardwood forest.

East of La Barr Meadows Road, the predominant vegetative community is ponderosa pine forest. The 30-acre addition included in the Southern SOI Amendment also supports the ponderosa pine vegetative community. As described in the 2014 SOI EIR, this vegetative community is composed of both pure stands of ponderosa pine and mixed stands of species where at least 50 percent of the canopy is composed of ponderosa pine and provides good general habitat for a variety of wildlife species.

The 2014 SOI EIR environmental setting adequately describes the conditions within the project area and remains applicable to this analysis. There is no evidence of potential for new or additional occurrences of special-status species in the project area. Additionally, since certification of the 2014 SOI EIR, there have been no changes in the listing status of the special-status species analyzed in the 2014 SOI EIR.

3.2.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

This impact evaluation is based on review of updated results of a California Natural Diversity Database record search and California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California search of the Grass Valley, French Corral, Nevada City, North Bloomfield, Rough and Ready, Chicago Park, Wolf, Lake Combie, and Colfax U.S. Geological 7.5-minute quadrangles, as well as review of a biological inventory, a wetland delineation, and a special-status plant survey report prepared for the residential development area, aerial photographs, and information from several previously completed documents that address biological resources in the project vicinity (CNDDB 2020; CNPS 2020; SCO Planning, Engineering & Surveying 2018; SCO Planning, Engineering & Surveying 2014; EcoSynthesis 2008).

The following subsequent analysis compares the effects of the Adopted Southern SOI Project disclosed in the 2014 SOI EIR to the anticipated effects of the Southern SOI Amendment. Previously adopted mitigation is detailed and the potential for a new or substantially more severe impacts are evaluated assuming implementation of these mitigation measures, unless otherwise indicated.

THRESHOLDS OF SIGNIFICANCE

An impact on biological resources is considered significant if implementation of Southern SOI Amendment and residential development would do any of the following:

- 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, marsh, vernal pool, coastal, 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 a tree preservation policy or ordinance; and/or
- conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

ISSUES NOT DISCUSSED FURTHER

The 2014 SOI EIR determined that subsequent development projects would result in no impact on the movement of native resident or migratory fish or wildlife species or established migratory corridors. Vegetation communities and the overall character of the Southern SOI Amendment is not substantially different than the project area analyzed in the 2014 SOI EIR and is not expected to provide higher quality migratory corridor habitat. Additionally, conditions within the residential development area have not changed since certification of the 2014 SOI EIR. Thus, there would be no new significant effects or more severe impacts than identified in the 2014 SOI EIR. There would be **no impact**.

The 2014 SOI EIR determined that subsequent development projects would not result in conflict with any local policies or ordinances, including the City's General Plan, Development Code, and Community Design Guidelines because the City verifies compliance with adopted standards through the development review process and subsequent environmental review of specific projects. Development within the Southern SOI Amendment area and residential development area would also be verified by the City for compliance with adopted standards during the development review process. Thus, implementation of the amendments and residential development would not result in a new significant effect and the impact is not more severe than the impact identified in the 2014 SOI EIR. There would be **no impact**.

The 2014 SOI EIR determined that subsequent development projects would not result in conflict with any adopted habitat conservation plans, natural community conservation plans, or adopted biological resources recovery or conservation plans of any federal or state agency, because project area is not within the coverage area of any such plan. No such plans have been adopted since 2014. Thus, implementation of the amendments and residential development would not result in a new significant effect and the impact is not more severe than the impact identified in the 2014 SOI EIR. There would be **no impact**.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.2-1: Result in a Substantial Adverse Effect on Special-Status Plant Species

The 2014 SOI EIR determined that subsequent development projects could result in adverse effects on special-status plant species that could occur within the project area. Implementation of Adopted Mitigation Measure MM 3.3.1 would reduce impacts on special-status plants by requiring rare plant surveys, avoidance of special-status plants detected during the surveys, or compensation for direct impacts on special-status plants detected during the surveys. This mitigation would also address the potential for development in the Southern SOI Amendment and residential development area to adversely affect special-status plants. Thus, implementation of the amendments and residential development would not result in a new significant effect and the impact on special-status plants would not be more severe than the impact identified in the 2014 SOI EIR. This impact would be **less than significant** with mitigation.

Impact 3.3.1 of the 2014 SOI EIR (page 3.3-28) evaluated the potential for impacts on special-status plants associated with theoretical buildout of the project area and concluded that this impact would be potentially significant. Special-status plant species that could be adversely affected by theoretical buildout of the project area are brownish beaked-rush (*Rhynchospora capitellata*), Cantelow's Lewisia (*Lewisia cantelovii*), elongate copper moss (*Mielichhoferia elongata*), finger rush (*Juncus digitatus*), inundated bog club-moss (*Lycopodiella inundata*), Norris' beard moss (*Didymodon norrisii*), pine hill flannelbush (*Fremontodendron decumbens*), red hills soaproot (*Chlorogalum grandiflorum*), Scadden Flat checkerbloom (*Sidalcea stipularis*), and Stebbins' morning glory (*Calystegia stebbinsii*). Implementation of Adopted Mitigation Measure MM 3.3.1 would reduce impacts on special-status plants by requiring rare plant surveys, avoidance of special-status plants detected during the surveys or permitting and compensation for direct impacts on special-status plants detected during the surveys.

> **Adopted MM 3.3.1:** The project applicant for each future development project proposed within the project area shall retain a qualified biologist to perform focused surveys to determine the presence/absence of special-status plant species with potential to occur in and adjacent to (within 100 feet, where appropriate) the proposed impact area, including construction access routes. These surveys shall be conducted in accordance

with the *Guidelines for Assessing Effects of Proposed Developments on Rare Plants and Plant Communities* (Nelson 1994). These guidelines require that rare plant surveys be conducted at the proper time of year when rare or endangered species are both evident and identifiable. Field surveys shall be scheduled to coincide with known flowering periods and/or during appropriate developmental periods that are necessary to identify the plant species of concern.

If any state- or federally listed CNPS List 1 or CNPS List 2 plant species are found in or adjacent to (within 100 feet) the proposed impact area during the surveys, these plant species shall be avoided to the extent possible and the following mitigation measures shall be implemented:

1. In some cases involving state-listed plants, it may be necessary to obtain an incidental take permit under Fish and Game Code Section 2081. The applicant shall consult with the CDFW to determine whether a 2081 permit is required, and obtain all required authorizations prior to initiation of ground-breaking activities.
2. Before the approval of grading plans or any ground-breaking activity within the study area, the applicant shall submit a mitigation plan concurrently to the CDFW and the USFWS for review and comment. The plan shall include mitigation measures for the population(s) to be directly affected. Possible mitigation for impacts to special-status plant species can include implementation of a program to transplant, salvage, cultivate, or re-establish the species at suitable sites (if feasible), through the purchase of credits from an approved mitigation bank, or through an in-lieu fee program, if available. The actual level of mitigation may vary depending on the sensitivity of the species, its prevalence in the area, and the current state of knowledge about overall population trends and threats to its survival. The final mitigation strategy for directly impacted plant species shall be determined by the CDFW and the USFWS through the mitigation plan approval process.
3. Any special-status plant species that are identified adjacent to the study area, but not proposed to be disturbed by the project, shall be protected by barrier fencing to ensure that construction activities and material stockpiles do not impact any special-status plant species. These avoidance areas shall be identified on project plans.

Implementation of Mitigation Measure MM 3.3.1 would mitigate the impact to a level that is less than significant.

Southern SOI Amendment

The Southern SOI Amendment would expand the SOI by approximately 30 acres in the northeast and revise the land use designations within the project area. As evaluated in the 2014 SOI EIR, this could result in development that would include ground disturbance, grading, and vegetation removal during construction of project elements (e.g., buildings, underground utilities). Implementation of Adopted Mitigation Measure MM 3.3.1 would reduce impacts on special-status plants associated with future development proposals within the project area by requiring rare plant surveys, avoidance of special-status plants detected during the surveys or permitting and compensation for direct impacts on special-status plants detected during the surveys. Thus, there would be no new significant effects or more severe impacts than identified in the 2014 SOI EIR. This impact would be **less than significant** with mitigation.

Residential Development Area

The residential development would include ground disturbance, grading, and vegetation removal during installation of underground utilities and construction of buildings. A special-status plant survey was conducted within the residential development area in 2008, and while no special-status plants were observed (EcoSynthesis 2008), these species may have become established in the area in the many years following the survey. As required in Adopted Mitigation Measure MM 3.3.1, rare plant surveys would be conducted, and special-status plants detected during the surveys would be avoided or the project applicant would obtain permitting and compensate for unavoidable direct impacts on these plants. With implementation of this mitigation, the residential development project would not result in significant impacts on special-status plants. No new impacts would result from development of the residential area. Therefore, the impact would not be more severe than identified in the 2014 SOI EIR. The impact would be **less than significant** with mitigation.

Mitigation Measures

No new mitigation is required.

Impact 3.2-2: Result in a Substantial Adverse Effect on Coast Horned Lizard

The 2014 SOI EIR determined that subsequent development projects could result in adverse effects on coast horned lizard if present within the project area. Implementation of Adopted Mitigation Measure MM 3.3.2 would reduce impacts on coast horned lizard by requiring a habitat assessment for the species, a focused survey if habitat suitable for the species is present, preconstruction surveys if coast horned lizards are detected during the focused surveys, and relocation of any coast horned lizards present in the work area by a qualified biologist. This mitigation would also address the potential for development in the amended SOI and residential development area to adversely affect coast horned lizard. Thus, implementation of the amendments and residential development would not result in a new significant effect and the impact on coast horned lizard would not be more severe than the impact identified in the 2014 SOI EIR. This impact would be **less than significant** with mitigation.

Impact 3.3.2 of the 2014 SOI EIR (page 3.3-30) evaluated the potential for impacts on coast horned lizard associated with theoretical buildout of the project area and concluded that this impact would be potentially significant. Implementation of Adopted Mitigation Measure MM 3.3.2 would reduce impacts on coast horned lizard by requiring a habitat assessment for the species, a focused survey if habitat suitable for the species is present, and preconstruction surveys if coast horned lizards are detected during the focused surveys. Habitat suitable for coast horned lizard includes grassland with scattered shrubs and shrubland. The measure also requires a qualified biologist to move any coast horned lizards present in the work area.

> **Adopted MM 3.3.2:** Project applicants for each future development project proposed within the project area shall retain qualified biologists to determine if suitable habitat for this species occurs within 250 feet of the proposed impact area, including construction access routes, as part of submittals of tentative maps and /or improvement plans. If suitable habitat exists, development agreements will require preconstruction surveys to be performed by a qualified biologist in a manner to maximize detection of coast horned lizards (i.e., during warm weather, walking slowly) prior to any grading activity. If any coast horned lizards are discovered within the work areas, they shall be actively moved or passively encouraged to leave the work area. Workers shall drive slowly when driving overland, within suitable habitat areas, to allow any lizards to move out of the way of the vehicles.

Implementation of Adopted Mitigation Measure MM 3.3.2 would mitigate the impact to a level that is less than significant.

Southern SOI Amendment

The Southern SOI Amendment would expand the SOI by approximately 30 acres in the northeast and revise the land use designations within the project area. As evaluated in the 2014 SOI EIR, this could result in development that would include ground disturbance, grading, and vegetation removal during construction of project elements (e.g., buildings, underground utilities). Implementation of Adopted Mitigation Measure MM 3.3.2 would reduce impacts on coast horned lizard associated with future development proposals within the project area by requiring a habitat assessment for the species, preconstruction surveys if habitat suitable for coast horned lizards is present, and relocation of any coast horned lizards present in the work area by a qualified biologist. Thus, there would be no new significant effects or more severe impacts than identified in the 2014 SOI EIR. This impact would be **less than significant** with mitigation.

Residential Development Area

The residential development would include ground disturbance, grading, and vegetation removal during installation of underground utilities and construction of buildings. Habitat potentially suitable for this species is present in the residential development area in rocky areas interspersed with grassland habitat (SCO Planning, Engineering & Surveying 2018). As required in Adopted Mitigation Measure MM 3.3.2, a habitat assessment, focused survey, and preconstruction surveys for coast horned lizard would be required prior to implementation of

construction activities. With implementation of this mitigation, the residential development project would not result in significant impacts on coast horned lizard. No new impacts would result from development of the residential area. Therefore, the impact would not be more severe than identified in the 2014 SOI EIR. The impact would be **less than significant** with mitigation.

Mitigation Measures

No new mitigation is required.

Impact 3.2-3: Result in Loss of Populations or Essential Habitat for California Black Rail, Other Special-Status Birds, and Raptors

The 2014 SOI EIR determined that subsequent development projects could result in adverse effects on California black rail and other migratory birds and raptors protected under the Migratory Bird Treaty Act and California Fish and Game Code. Implementation of Adopted Mitigation Measures MM 3.3.3a and MM 3.3.3b would reduce impacts on special-status birds and migratory birds by requiring a nesting bird survey, and implementation of a limited operating period and protective buffer if active nests are detected during the survey. This mitigation would also address the potential for development in the amended SOI and residential development area to adversely affect special-status and migratory birds. Thus, implementation of the amendments and residential development would not result in a new significant effect and the impact on California black rail and other migratory birds and raptors would not be more severe than the impact identified in the 2014 SOI EIR. This impact would be **less than significant** with mitigation.

Impact 3.3.3 of the 2014 SOI EIR (pages 3.3-30 and 3.3-31) evaluated the potential for impacts on California black rail and other migratory birds and raptors protected under the Migratory Bird Treaty Act associated with theoretical buildout of the project area and concluded that this impact would be potentially significant. Implementation of Adopted Mitigation Measures MM 3.3.3a and MM 3.3.3b would reduce impacts on special-status and migratory birds by requiring a nesting bird survey, and implementation of a limited operating period and protective buffer if active nests are detected during the survey.

> **Adopted MM 3.3.3a:** If clearing and/or construction activities for future development projects within the project area will occur during the migratory bird nesting season (April 15–August 15), reconstruction surveys to identify active migratory bird nests shall be conducted by a qualified biologist within 14 days of construction initiation. Focused surveys must be performed by a qualified biologist for the purposes of determining presence/absence of active nest sites within the proposed impact area, including construction access routes and a 200-foot buffer (if feasible).
>
> If active nest sites are identified within 200 feet of project activities, the applicant shall impose a limited operating period (LOP) for all active nest sites prior to commencement of any project construction activities to avoid construction or access-related disturbances to migratory bird nesting activities. An LOP constitutes a period during which project-related activities (i.e., vegetation removal, earth moving, and construction) will not occur, and will be imposed within 100 feet of any active nest sites until the nest is deemed inactive. Activities permitted within and the size (i.e., 100 feet) of LOPs may be adjusted through consultation with the CDFW and/or the City.
>
> **Adopted MM 3.3.3b:** If clearing and/or construction activities for future development projects will occur during the raptor nesting season (January 15–August 15), preconstruction surveys to identify active raptor nests shall be conducted by a qualified biologist within 14 days of construction initiation. Focused surveys must be performed by a qualified biologist for the purposes of determining presence/absence of active nest sites within the proposed impact area, including construction access routes and a 500-foot buffer (if feasible). If active nest sites are identified within 500 feet of project activities, the applicant shall impose an LOP for all active nest sites prior to commencement of any project construction activities to avoid construction or access-related disturbances to nesting raptors. An LOP constitutes a period during which project-related activities (i.e., vegetation removal, earth moving, and construction) will not occur, and will be imposed within 250 feet of any active nest sites until the nest is deemed inactive. Activities permitted within and the size (i.e., 250 feet) of LOPs may be adjusted through consultation with the CDFW and/or the City.

Implementation of Adopted Mitigation Measures MM 3.3.3a and MM 3.3.3b would mitigate the impact to a level that is less than significant.

Southern SOI Amendment

The Southern SOI Amendment would expand the SOI by approximately 30 acres in the northeast and revise the land use designations within the project area. As evaluated in the 2014 SOI EIR, this could result in development that would include ground disturbance, grading, and vegetation removal (including tree removal) during construction of project elements (e.g., buildings, underground utilities). Implementation of Adopted Mitigation Measures MM 3.3.3a and MM 3.3.3b would reduce impacts on California black rail, and other special-status migratory birds and raptors associated with future development proposals within the project area by requiring nesting bird surveys and implementation of limited operating periods and protective buffers if active nests are detected. Thus, there would be no new significant effects or more severe impacts than identified in the 2014 SOI EIR. This impact would be **less than significant** with mitigation.

Residential Development Area

The residential development would include ground disturbance, grading, and vegetation removal during installation of underground utilities and construction of buildings. As required in Adopted Mitigation Measures MM 3.3.3a and MM 3.3.3b, a nesting bird survey would be required prior to implementation of construction activities and limited operating periods and protective buffers would be implemented if active nests are detected during the survey. With implementation of this mitigation, the residential development project would not result in significant impacts on California black rail, and other special-status or migratory birds and raptors. No new impacts would result from development of the residential area. Therefore, the impact would not be more severe than identified in the 2014 SOI EIR. The impact would be **less than significant** with mitigation.

Mitigation Measures

No new mitigation is required.

Impact 3.2-4: Result in Disturbance, Degradation, or Removal of Riparian Habitat or Other Sensitive Natural Communities

The 2014 SOI EIR determined that subsequent development projects could result in adverse effects on riparian habitat within the project area. Implementation of Adopted Mitigation Measure MM 3.3.4 would reduce impacts on riparian habitat that cannot be avoided by requiring permitting and compensation (e.g., on-site restoration, purchase of mitigation credits) such that there is no net loss of this habitat. This mitigation would also address the potential for development in the amended SOI and residential development area to adversely affect riparian habitat. Thus, implementation of the amendments and residential development would not result in a new significant effect and the impact on riparian habitat would not be more severe than the impact identified in the 2014 SOI EIR. This impact would be **less than significant** with mitigation.

Impact 3.3.4 of the 2014 SOI EIR (page 3.3-32) evaluated the potential for impacts on riparian habitat associated with theoretical buildout of the project area and concluded that this impact would be potentially significant. Implementation of Adopted Mitigation Measure MM 3.3.4 would reduce impacts on riparian habitat that cannot be avoided during project construction by requiring permitting and compensation (e.g., on-site restoration, purchase of mitigation credits) such that there is no net loss of this habitat.

> **Adopted MM 3.3.4:** The project applicant for each future development project proposed within the project area shall ensure that the there is no net loss of riparian vegetation. Mitigation can include on-site restoration or purchase of mitigation credits at a USACE-approved mitigation bank. Mitigation as required in regulatory permits issued through the CDFW, the USACE, or the RWQCB may be applied to satisfy this measure.

Evidence of compliance with this mitigation measure shall be provided to the appropriate agencies prior to construction and grading activities for future development in the project area.

Implementation of Adopted Mitigation Measure MM 3.3.4 would mitigate the impact to a level that is less than significant.

Southern SOI Amendment

The Southern SOI Amendment would expand the SOI by approximately 30 acres in the northeast and revise the land use designations within the project area. As evaluated in the 2014 SOI EIR, this could result in development that would include ground disturbance, grading, and vegetation removal during construction of project elements (e.g., buildings, underground utilities). Implementation of Adopted Mitigation Measure MM 3.3.4 would reduce impacts on riparian habitat associated with future development proposals within the project area by requiring permitting and compensation for loss of this habitat that cannot be avoided such that there is no net loss. Thus, there would be no new significant effects or more severe impacts than identified in the 2014 SOI EIR. This impact would be **less than significant** with mitigation.

Residential Development Area

The residential development would include ground disturbance, grading, and vegetation removal during installation of underground utilities and construction of buildings. Several riparian corridors are present within the residential development area (SCO Planning, Engineering & Surveying 2018; SCO Planning, Engineering & Surveying 2014). Development would be set back 100 feet from these riparian corridors. If full avoidance of the riparian corridors is not feasible, as required in Adopted Mitigation Measure MM 3.3.4, impacts on riparian habitat that cannot be avoided would be mitigated by obtaining permits and providing compensation for loss of this habitat such that there is no net loss. With implementation of this mitigation, the residential development project would not result in significant impacts on riparian habitat. No new impacts would result from development of the residential area. Therefore, the impact would not be more severe than identified in the 2014 SOI EIR. The impact would be **less than significant** with mitigation.

Mitigation Measures

No new mitigation is required.

Impact 3.2-5: Result in Loss, Disturbance, or Degradation of Jurisdictional Waters of the United States, and Waters of the State, Including Wetlands

The 2014 SOI EIR determined that subsequent development projects could result in loss, disturbance, or degradation of wetlands and other waters of the United States identified in the project area. Implementation of Adopted Mitigation Measure MM 3.3.5 would reduce impacts on these resources by requiring permitting (e.g., Clean Water Act Section 404 and 401 and/or Porter-Cologne Water Quality Control Act), and no net loss of wetlands and other waters of the United States through impact avoidance, impact minimization, and compensatory mitigation. This mitigation would also address the potential for development in the amended SOI and residential development area to adversely affect wetlands and other waters of the United States. Thus, implementation of the amendments and residential development would not result in a new significant effect and the impact on wetlands and other waters of the United States would not be more severe than the impact identified in the 2014 SOI EIR.

However, since certification of the 2014 SOI EIR, this threshold has been changed to include waters of the state, some of which may be waters that have been disclaimed by U.S. Army Corps of Engineers and are no longer under federal jurisdiction. As a result, waters of the state would not be included in Adopted Mitigation Measure MM 3.3.5, and this impact was not addressed in the 2014 SOI EIR. Impacts on waters of the state would be **potentially significant**, even with existing mitigation.

Impact 3.3.5 of the 2014 SOI EIR (pages 3.3-32 and 3.3-33) evaluated the potential for impacts on wetlands and other waters of the United States or state associated with theoretical buildout of the project area and concluded that this impact would be potentially significant. Implementation of Adopted Mitigation Measure MM 3.3.5 would reduce impacts on these resources by requiring permitting (e.g., Clean Water Act Section 404 and 401 and/or 1602 Streambed Alteration Agreement), and no net loss of wetlands and other waters of the United States or state through impact avoidance, impact minimization, and compensatory mitigation.

> Adopted MM 3.3.5: The City shall ensure that the project will result in no net loss of federally protected waters through impact avoidance, impact minimization, and/or compensatory mitigation, as determined in CWA Section 404 and 401 permits and/or 1602 Streambed Alteration Agreement. Evidence of compliance with this mitigation measure shall be provided prior to construction and grading activities for the proposed project.

Implementation of Adopted Mitigation Measure MM 3.3.5 would mitigate impacts on waters of the United States to a level that is less than significant; however, the measure does not address waters of the state and wetlands under the jurisdiction of the state.

Southern SOI Amendment

The Southern SOI Amendment would expand the SOI by approximately 30 acres in the northeast and revise the land use designations within the project area. As evaluated in the 2014 SOI EIR, this could result in development that would include ground disturbance, grading, and vegetation removal during construction of project elements (e.g., buildings, underground utilities). Implementation of Adopted Mitigation Measure MM 3.3.5 would reduce impacts on wetlands and other waters of the United States associated with future development proposals within the project area by requiring permitting (e.g., Clean Water Act Section 404 and 401 and/or 1602 Streambed Alteration Agreement), and no net loss of wetlands and other waters of the United States through impact avoidance, impact minimization, and compensatory mitigation. However, since certification of the 2014 SOI EIR, this threshold has been changed to include waters of the state, some of which may be waters that have been disclaimed by U.S. Army Corps of Engineers and are no longer under federal jurisdiction. As a result, waters of the state would not be included in Adopted Mitigation Measure MM 3.3.5, and this impact was not addressed in the 2014 SOI EIR. This impact would be **potentially significant**.

Residential Development Area

The residential development would include ground disturbance, grading, and vegetation removal during installation of underground utilities and construction of buildings. Wetlands and other waters of the United States or state have been identified within the residential development area (SCO Planning, Engineering & Surveying 2014). Implementation of Adopted Mitigation Measure MM 3.3.5 would reduce impacts on wetlands and other waters of the United States associated with future development proposals within the project area by requiring permitting (e.g., Clean Water Act Section 404 and 401 and/or 1602 Streambed Alteration Agreement), and no net loss of wetlands and other waters of the United States through impact avoidance, impact minimization, and compensatory mitigation. With implementation of this mitigation, the residential development project would not result in significant impacts on wetlands and other waters of the United States. However, since certification of the 2014 SOI EIR, this threshold has been changed to include waters of the state, some of which may be waters that have been disclaimed by U.S. Army Corps of Engineers and are no longer under federal jurisdiction. As a result, waters of the state would not be included in Adopted Mitigation Measure MM 3.3.5, and this impact was not addressed in the 2014 SOI EIR. Therefore, the impact would not be more severe than identified in the 2014 SOI EIR. The impact would be **potentially significant**.

Mitigation Measures

Mitigation Measure 3.2-5: No Net Loss of Waters of the State

If aquatic resources will be affected that are disclaimed by USACE (i.e., are not within federal jurisdiction), the City shall require the project applicants to submit a delineation of these aquatic resources to the Central Valley Regional Water Quality Control Board (RWQCB) along with an application for Waste Discharge Requirements. The delineation and

application will conform to the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*. If project activities will result in permanent loss of waters of the state that cannot be practicably avoided, the project applicant will provide compensatory mitigation resulting in no net loss of the overall abundance, diversity, and condition of aquatic resources in the affected watershed (or another watershed if permitted by RWQCB). Compensatory mitigation may be provided through restoration, enhancement, establishment, preservation, or a combination thereof and may include purchase of mitigation credits as approved by the City and RWQCB. Compensation for wetland or stream losses will be at a minimum one-to-one mitigation ratio (i.e., 1 acre of compensatory mitigation for 1 acre of wetland or waters loss) but will be determined on a project-by-project basis in accordance with State Supplemental Dredge or Fill Guidelines, Section 230.93(f).

Significance after Mitigation

Implementation of Adopted Mitigation Measure MM 3.3.5 and new Mitigation Measure 3.2-5 would reduce potentially significant impacts on wetlands and other waters of the United States or state to a **less-than-significant** level by requiring permitting (e.g., Clean Water Act Section 404 and 401 and/or Porter-Cologne Water Quality Control Act), and no net loss of wetlands and other waters of the United States or state through delineation of these resources, impact avoidance, impact minimization, and compensatory mitigation.

3.3 GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

This section presents a summary of the current state of climate change science and greenhouse gas (GHG) emissions sources in California; a summary of applicable regulations; quantification of GHG emissions and discussion of the potential contribution to global climate change. Where impacts are found to be potentially significant, mitigation is recommended.

Section 3.4, "Climate Change and Greenhouse Gases," of the 2014 SOI EIR evaluated the Adopted Southern SOI Project's contribution to global climate change. The 2014 SOI EIR concluded that GHG emissions associated with implementation of the Adopted Southern SOI Project would have a significant effect on the environment. Mitigation Measure 3.4.1 was recommended to reduce emissions; however, mitigation was not sufficient to reduce impacts to a less-than-significant level and climate change impacts were concluded to be significant and unavoidable.

For the purposes of this analysis, GHG emissions are measured as metric tons of carbon dioxide equivalent ($MTCO_2e$). The atmospheric impact of a GHG is based on the global warming potential (GWP) of that gas. GWP is a measure of the heat trapping ability of one unit of a gas over a certain timeframe relative to one unit of carbon dioxide (CO_2). The GWP of CO_2 is one (IPCC 2014). Consistent with the methodology used by the California Air Resources Board (CARB) in estimating statewide GHG emissions, this analysis uses GWP values from the Fourth Assessment Report Values by the Intergovernmental Panel on Climate Change (IPCC) (Greenhouse Gas Protocol No Date).

No comments pertaining to GHGs and climate change were received in response to the notice of preparation.

3.3.1 Regulatory Setting

The 2014 SOI EIR included a summary of the relevant regulations and programs that address GHG emissions and climate change resiliency in effect at that time. That discussion is hereby incorporated by reference. Where appropriate, new or updated regulatory development since certification of the 2014 SOIR EIR, as well as other pertinent information omitted in the 2014 SOI EIR, are summarized below.

FEDERAL

In *Massachusetts et al. v. Environmental Protection Agency et al.,* 549 U.S. 497 (2007), the Supreme Court of the United States ruled that CO_2 is an air pollutant as defined under the federal Clean Air Act (CAA) and that the U.S. Environmental Protection Agency (EPA) has the authority to regulate GHG emissions. In 2010, EPA started to address GHG emissions from stationary sources through its New Source Review permitting program, including operating permits for "major sources" issued under Title V of the CAA.

In October 2012, EPA and the National Highway Traffic Safety Administration, on behalf of the U.S. Department of Transportation, issued final rules to further reduce GHG emissions and improve corporate average fuel economy (CAFE) standards for light-duty vehicles for model years 2017 and beyond (77 *Federal Register* [FR] 62624). These rules would increase fuel economy to the equivalent of 54.5 miles per gallon, limiting vehicle emissions to 163 grams of CO_2 per mile for the fleet of cars and light-duty trucks by model year 2025 (77 FR 62630).

On April 2, 2018, however, the EPA administrator announced a final determination that the current standards should be revised. On that date, the U.S. Department of Transportation and EPA proposed the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE Rule), which would amend existing CAFE standards for passenger cars and light-duty trucks by increasing the stringency of the standards by 1.5 percent per year from models 2021 through 2026 (NHTSA 2020). With a change in federal administrations in early 2021, the SAFE Rule is now being reconsidered. On April 26, 2021, as directed in Executive Order 13990, "Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis," EPA announced plans to reconsider Part One of the SAFE Rule. At the time of preparing this Draft EIR, EPA is seeking public input on its reconsideration of the action. Public comments to the Notice of Reconsideration closed on June 6, 2021 and a public hearing was held on June 2, 2021 (EPA 2021).

Nevertheless, at the time this Draft EIR was prepared, the SAFE Rule Part One is in place and it is unclear whether the SAFE Rule Part One will be revoked by EPA.

The CAA grants California the ability to enact and enforce more strict fuel economy standards through the acquisition of an EPA-issued waiver. Each time California adopts a new vehicle emission standard, the state applies to EPA for a preemption waiver for those standards. However, Part One of the SAFE Rule, which became effective on November 26, 2019, revokes California's existing waiver to implement its own vehicle emission standard and also established a standard to be adopted and enforced nationwide (84 Federal Register [FR] 51310). At the time of preparing this SEIR, the implications of the SAFE Rule on California's future emissions are contingent upon a variety of unknown factors, including legal challenges by California and other states to the revocation of California's waiver, direction provided by federal leadership, and future cabinet and bureaucratic appointments.

In June 2019, EPA, under the authority of the CAA section 111(d), issued the Affordable Clean Energy rule which provides guidance to states on establishing emissions performance standards for coal-fired electric generating units (EGUs). Under this rule, states are required to submit plans to EPA which demonstrate the use of specifically listed retrofit technologies and operating practices to achieve CO_2 emission reductions though heat rate improvement (HRI). HRI is a measurement of power plant efficiency that EPA determined as part of this rulemaking to be the best system of emission reductions for CO_2 generated from coal-fired EGUs.

STATE

Statewide GHG Emission Targets and Climate Change Scoping Plan

Recent GHG emission targets established by the State legislature include reducing GHG emissions to 40 percent below 1990 levels by 2030 (Senate Bill [SB] 32 of 2016). In addition, Executive Order S-3-05 calls for statewide GHG emissions to be reduced to 80 percent below 1990 levels by 2050. Executive Order B-55-18 calls for California to achieve carbon neutrality by 2045 and achieve and maintain net negative GHG emissions thereafter. These targets are in line with the scientifically established levels of GHG emissions reductions needed in the U.S. to limit the rise in global temperature to no more than 2 degrees Celsius, the warming threshold at which major climate disruptions, such as super droughts and rising sea levels, are projected; these targets also pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius (United Nations 2015).

California's 2017 Climate Change Scoping Plan (2017 Scoping Plan), prepared by CARB, outlines the main strategies California will implement to achieve the legislated GHG emission target for 2030 and "substantially advance toward our 2050 climate goals" (CARB 2017). It identifies the reductions needed by each GHG emission sector (e.g., transportation, industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste). CARB and other state agencies also released the *January 2019 Draft California 2030 Natural and Working Lands Climate Change Implementation Plan* consistent with the carbon neutrality goal of Executive Order B-55-18 (California Environmental Protection Agency et al. 2019).

The State has also passed more detailed legislation addressing GHG emissions associated with transportation, electricity generation, and energy consumption, as summarized below.

Transportation-Related Standards and Regulations

As part of its Advanced Clean Cars program, CARB established more stringent GHG emission standards and fuel efficiency standards for fossil fuel–powered on-road vehicles than EPA. In addition, the program's zero-emission vehicle (ZEV) regulation requires battery, fuel cell, and plug-in hybrid electric vehicles (EVs) to account for up to 15 percent of California's new vehicle sales by 2025 (CARB 2018a). When the rules are fully implemented by 2025, GHG emissions from the statewide fleet of new cars and light-duty trucks will be reduced by 34 percent and cars will emit 75 percent less smog-forming pollution than the statewide fleet in 2016 (CARB 2016).

Executive Order B-48-18, signed into law in January 2018, requires all State entities to work with the private sector to have at least 5 million ZEVs on the road by 2030, as well as 200 hydrogen-fueling stations and 250,000 EV-charging stations installed by 2025. It specifies that 10,000 of these charging stations must be direct-current fast chargers.

The CAA requires that a waiver be provided by EPA for states to enact more stringent emissions standards for new cars, which was granted to CARB by EPA on June 14, 2011; however, in addition to the SAFE Rule, but as a separate action, on September 19, 2019, EPA issued a final action entitled the "One National Program Rule" which would institute a nationwide, uniform fuel economy and GHG standard for all automobiles and light-duty trucks (EPA 2019). The action would include the revocation of California's waiver under the CAA, which would affect the enforceability of CARB's ZEV programs. While EPA has issued an action to revoke the waiver, the outcome of any related lawsuits and how such lawsuits could delay or affect the SAFE Rule implementation or CARB's ZEV programs is unknown at this time.

Legislation Associated with Electricity Generation

The State has passed legislation requiring the increasing use of renewables to produce electricity for consumers. Pursuant to SB 100 of 2018, California utilities are required to generate 52 of their electricity from renewables percent by 2027; 60 percent by 2030; and 100 percent by 2045.

Building Energy Efficiency Standards (Title 24, Part 6)

The energy consumption of new residential and nonresidential buildings in California is regulated by the California Code of Regulations Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). The California Energy Commission (CEC) updates the California Energy Code every 3 years with more stringent design requirements for reduced energy consumption, which results in the generation of fewer GHG emissions. The current California Energy Code requires builders to use more energy-efficient building technologies for compliance with increased restrictions on allowable energy use. CEC estimates that the combination of required energy-efficiency features and mandatory solar panels in the 2019 California Energy Code will result in new residential buildings that use 53 percent less energy than those designed to meet the 2016 California Energy Code. CEC also estimates that the 2019 California Energy Code will result in new commercial buildings that use 30 percent less energy than those designed to meet the 2016 standards, primarily through the transition to high-efficacy lighting (CEC 2018).

LOCAL

Northern Sierra Air Quality Management District

The project is under the jurisdiction of the Northern Sierra Air Quality Management District (NSAQMD), which regulates air quality according to the standards established in the Clean Air Acts and amendments to those acts. NSAQMD comprises three contiguous, mountainous, rural counties in northeastern California (Nevada, Sierra, and Plumas counties) and regulates air quality through its permitting authority and through air quality–related planning and review activities over most types of stationary emission sources.

The NSAQMD has not yet established significance thresholds for GHG emissions from project operations.

3.3.2 Environmental Setting

The environmental setting provided on pages 3.4-1 through 3.4-5 of the 2014 SOI EIR is relevant to understanding the science of climate change and the current state of the earth's climate and the physical changes that have occurred from anthropogenic climate change. This information is hereby incorporated by reference. The following information provides an update of information from the 2014 SOI EIR and reflects the current environmental setting.

GREENHOUSE GAS EMISSION SOURCES

GHG emissions are attributable in large part to human activities. The total GHG inventory for California in 2017 was 424 $MMTCO_2e$ (CARB 2019). This is less than the 2020 target of 431 $MMTCO_2e$ mandated by AB 32 (CARB 2019).

Table 3.3-1 Statewide GHG Emissions by Economic Sector

Sector	Percent
Transportation	41
Industrial	24
Electricity generation (in state)	9
Agriculture	8
Residential	7
Electricity generation (imports)	6
Commercial	5

Source: CARB 2019

As shown in Table 3.3-1, the transportation and industrial sectors are the largest GHG emission sectors in the state.

Emissions of CO_2 are byproducts of fossil fuel combustion. Methane, a highly potent GHG, primarily results from off-gassing (i.e., the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices, landfills, and forest fires. Nitrous oxide is also largely attributable to agricultural practices and soil management. CO_2 sinks, or reservoirs, include vegetation and the ocean, which absorb CO_2 through sequestration and dissolution (i.e., CO_2 dissolving into the water) and are two of the most common processes for removing CO_2 from the atmosphere.

EFFECTS OF CLIMATE CHANGE ON THE ENVIRONMENT

According to IPCC, which was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme, global average temperature will increase by 3.3 to 4.8 degrees Celsius (°C) (6.7 to 8.6 degrees Fahrenheit [°F]) by the end of the century unless additional efforts to reduce GHG emissions are made (IPCC 2014:10). According to *California's Fourth Climate Change Assessment*, with global GHGs reduced at a moderate rate California will experience average daily high temperatures that are warmer than the historic average by 2.5 °F from 2006 to 2039, by 4.4 °F from 2040 to 2069, and by 5.6 °F from 2070 to 2100; and if GHG emissions continue at current rates then California will experience average daily high temperatures that are warmer than the historic average by 2.7 °F from 2006 to 2039, by 5.8 °F from 2040 to 2069, and by 8.8 °F from 2070 to 2100 (OPR et al. 2018).

Since its previous climate change assessment in 2012, California has experienced several of the most extreme natural events in its recorded history: a severe drought from 2012–2016, an almost non-existent Sierra Nevada winter snowpack in 2014–2015, increasingly large and severe wildfires, and back-to-back years of the warmest average temperatures (OPR et al. 2018). According to California Natural Resource Agency's *Safeguarding California Plan: 2018 Update*, California experienced the driest 4-year statewide precipitation on record from 2012 through 2015; the warmest years on average in 2014, 2015, and 2016; and the smallest and second smallest Sierra snowpack on record in 2015 and 2014 (CNRA 2018). According to the National Oceanic and Atmospheric Administration and the National Aeronautics and Space Administration, 2016, 2017, and 2018 were the hottest recorded years in history (NOAA 2019). In contrast, the northern Sierra Nevada experienced one of its wettest years on record during the 2016-2017 water year (CNRA 2018). The changes in precipitation exacerbate wildfires throughout California through a cycle of high vegetative growth coupled with dry, hot periods which lower the moisture content of fuel loads. As a result, the frequency, size, and devastation of forest fires has increased. In November 2018, the Camp Fire completely destroyed the town of Paradise in Butte County and caused 85 fatalities, becoming the state's deadliest fire in recorded history, and the largest fires in the state's history have occurred in the 2018–2020 period. Moreover, changes in the intensity of precipitation events following wildfires can also result in devastating landslides. In January 2018, following the Thomas Fire, 0.5 inch of rain fell in 5 minutes in Santa Barbara causing destructive mudslides formed from the debris and loose soil left behind by the fire. These mudslides resulted in 21 deaths. The reader is referred to Section 3.10, "Wildfire," for a further discussion of wildfire hazards in the project area.

As temperatures increase, the amount of precipitation falling as rain rather than snow also increases, which could lead to increased flooding because water that would normally be held in the snowpack of the Sierra Nevada and Cascade Range until spring would flow into the Central Valley during winter rainstorm events. This scenario would place more pressure on California's levee/flood control system (CNRA 2018

Temperature increases and changes to historical precipitation patterns will likely affect ecological productivity and stability. Existing habitats may migrate from climatic changes where possible, and those habitats and species that lack the ability to retreat will be severely threatened. Altered climate conditions will also facilitate the movement of invasive species to new habitats thus outcompeting native species. Altered climatic conditions dramatically endanger the survival of arthropods (e.g., insects, spiders) which could have cascading effects throughout ecosystems (Lister and Garcia 2018). Conversely, a warming climate may support the populations of other insects such as ticks and mosquitos, which transmit diseases harmful to human health such as the Zika virus, West Nile virus, and Lyme disease (European Commission Joint Research Centre 2018).

Changes in temperature, precipitation patterns, extreme weather events, wildfires, and sea-level rise have the potential to threaten transportation and energy infrastructure, crop production, forests and rangelands, and public health (CNRA 2018; OPR et al. 2018). The effects of climate change will also have an indirect adverse impact on the economy as more severe natural disasters cause expensive, physical damage to communities and the state.

3.3.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

The following impact analysis is based primarily on review of the information and analysis presented in 2014 SOI EIR compared to project-related modeling performed for the proposed Southern SOI Amendment.

Where appropriate, impacts related to the Southern SOI Amendment and Residential Development Area are grouped together due to the characteristic of air pollution. Emissions of criteria air pollutions affects air quality on a regional level, therefore construction- and operational-generated emissions of criteria air pollutants and ozone precursors associated with Southern SOI Amendment and Residential Development Area are evaluated concurrently.

The analysis below determines if the Southern SOI Amendment would result in a substantially new severe impact to global climate change as compared to the Adopted Southern SOI Project. The issue of global climate change is inherently a cumulative issue because the GHG emissions of individual projects cannot be shown to have any material effect on global climate. Thus, the project's impact on climate change is addressed only as a cumulative impact.

GHG emissions associated with the Southern SOI Amendment would be generated during construction and operation. Short-term construction-generated and long-term operation-related GHG emissions were calculated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2, as recommended by NSAQMD and other air districts in California (CAPCOA 2017). Modeling was based on project-specific information (e.g., acreage, land uses, construction duration) where available; assumptions based on typical construction activities; and default values in CalEEMod that are based on the project's location and land use type. Construction for both the Adopted Southern SOI Project and the Southern SOI Amendment were assumed to occur over an 8-year period commencing in 2014 and ending in 2021. As described above, emissions are generally expected to decrease over time in response to regulatory requirements; therefore, use of the 2014 to 2021 construction period may result in higher modeled emissions than using a 2021 to 2028 period for the subsequent analysis. This is the construction scheduling used in the 2014 SOI EIR and is consistent with the approach taken in Section 3.1, "Air Quality."

NSAQMD does not provide guidance for assessing the significance of GHG emissions; however, the South Coast Air Quality Management District (SCAQMD) recommends that construction emissions be amortized over a 30-year period and then incorporated into a project's total GHG emissions (SCAQMD 2008). Construction-emissions are treated in accordance with SCAQMD recommendations and included in the project's summed total emissions in 2040.

The first year of full buildout of the Southern SOI Amendment was projected to be 2040 when all proposed development would be fully constructed and operational. This year is consistent with the first year of operation use to evaluated air quality impacts in Section 3.1, "Air Quality," and vehicle miles traveled (VMT) impacts in Section 3.6, "Transportation and Circulation" which utilizes the Nevada County Transportation Commission's western Nevada Regional Travel Demand Model for 2040. Because project-specific VMT was available for 2040, a comparative analysis of the Southern SOI Amendment and the Adopted Southern SOI Project in 2040 was performed.

Notably, as land uses are constructed over the lifetime of the Southern SOI Amendment, land uses will incrementally become operational as construction unfolds. It would be expected that residences, commercial, and industrial spaces would be occupied and operational as construction occurs simultaneously. Nonetheless, to better characterize total operational emissions associated with the project, operational emissions were calculated for 2040.

To provide a comparative analysis that accounts for the current regulatory environment and updates to the Title 24 California Building Code, construction and operational emissions of the Adopted Southern SOI Project have been modeled and evaluated against the GHG emissions associated with the Southern SOI Amendment. CalEEMod default energy values were amended to reflect compliance with the 2019 California Energy Code. Notably, the California Energy Code is updated triennially, therefore, residential and nonresidential buildings constructed throughout the lifespan of the Southern SOI Amendment would likely be more energy efficient and indirectly emit fewer GHGs than is assumed in this analysis as the Title 24 California Building Code continues to decarbonize (i.e., limit on-site natural gas combustion associated with water heaters and stoves) and improve its efficiency. It is therefore foreseeable that emissions estimates associated with energy consumption disclosed in this analysis are more conservative than the actual emissions that would be generated from the energy sector as buildings are constructed in accordance with future iterations of the Title 24 California Building Code. However, it is unknown at this time what level of improved efficiency would be achieved from code updates to Parts 6 (California Energy Code) and 11 (California Green Building Standards Code). For instance, as discussed in Section 3.3.1, "Regulatory Setting," the 2019 California Energy Code accomplished a 53 and 30 percent improved energy efficiency for residential and nonresidential development, respectively, from the 2016 California Energy Code. The percent improved efficiency between the 2019 and 2022 versions of the California Energy Code (and other future triennial updates) are unknown at this time, and this analysis does not claim emissions reductions associated with improved energy efficiency that may occur as a result of adherence to future versions of the Title 24 California Building Code. Emissions associated with energy consumption are, therefore, inherently conservative.

GHG emissions associated with solid waste disposal, water consumption, wastewater generation, and landscaping activity were derived using CalEEMod default values.

Detailed model assumptions and inputs for these calculations are presented in Appendix B.

THRESHOLDS OF SIGNIFICANCE

The significance criteria used to evaluate project impacts on climate change under CEQA are based on Section 15064 of the CEQA statute and relevant portions of Appendix G of the State CEQA Guidelines, which recommend that a lead agency consider a project's consistency with relevant, adopted plans and discuss any inconsistencies with applicable regional plans, including plans to reduce GHG emissions. Implementation of a project would result in a cumulatively considerable contribution to climate change if it would:

- generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment or
- conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

With respect to GHG emissions, the CEQA Guidelines Section 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's GHG emissions or rely on a "qualitative analysis or performance-based standards" (Section 15064.4[a]). A lead agency may use a "model or methodology" to estimate GHG emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change" (Section 15064.4[c]). The CEQA Guidelines provide that the lead

agency should consider the following when determining the significance of impacts from GHG emissions on the environment (Section 15064.4[b]):

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

CEQA Guidelines Appendix G is a sample Initial Study checklist that includes a number of factual inquiries related to the subject of climate change, as it does on a whole series of additional environmental topics. Notably, lead agencies are under no obligation to use these inquiries in fashioning thresholds of significance on these subjects, or indeed on any subject addressed in the checklist. Even so, it is a common practice for lead agencies to take the language from the inquiries set forth in Appendix G and to use that language in fashioning thresholds. The City has done so here.

Efficiency Metric Development

As previously stated, significance thresholds for GHG emissions resulting from land use development projects have not been established in Grass Valley or Nevada County (as previously mentioned, NSAQMD has not yet established significance thresholds for GHG emissions from project operations). The 2014 SOI EIR used an efficiency metric developed by the Bay Area Air Quality Management District (BAAQMD) in 2010 of 4.6 metric tons of carbon dioxide equivalent per service population ($MTCO_2e/SP$). Since the certification of the 2014 SOI EIR, BAAQMD no longer supports the use of this threshold. Therefore, for this analysis the City has produced an efficiency metric measured in $MTCO_2/SP$ (residents plus employees) for 2040 in consideration of recent legislative development and legal guidance (e.g., *Center for Biological Diversity v. California Department of Fish and Wildlife* (2015) 224 Cal.App.,4th 1105). In this context, service population encompasses both residents and employees within a geographic area. Because the Southern SOI Amendment's first year of full buildout was assumed to be 2040, an efficiency metric for 2040 was derived in light of the state's trajectory to meeting statewide GHG reduction targets established by SB 32 (i.e., a 40 percent reduction from 1990 GHG levels by 2030) and directed by Executive Order S-3-05 (i.e., an 80 percent reduction from 1990 GHG levels by 2050), then adjusted based on the land use types/economic sectors supported by the Southern SOI Amendment. Although no legislative mandate exists for a GHG reduction target by 2040, a GHG reduction goal of 60 percent from 1990 GHG levels can be linearly extrapolated. An efficiency metric may be used to represent a project's consistency with the state's long-term reduction targets and thus evaluate a project's cumulative contribution to global climate change.

The statewide efficiency metric for 2040 was calculated by dividing statewide GHG emissions by the sum of statewide jobs and residents (referred to in sum as "service population or SP"); however, not all statewide emission sources are present in the project area. Accordingly, the statewide inventory was adjusted to exclude emissions sources not applicable to the Southern SOI Amendment (i.e., the agricultural and forestry sectors). Following the removal of these sectors, GHG emissions in 1990 for the state totaled 318 $MMTCO_2e$. Assuming the state will continue to meet its long-term climate change goals in 2040, a 60 percent reduction from 1990 levels was applied resulting in a 2040 GHG inventory of 127 $MMTCO_2e$.

Service population for 2040 was estimated from population projections coupled with a modified employment projection (California Department of Finance 2020; Employment Development Department 2020). Total employment in the state was adjusted by removing jobs within the agricultural, forestry, mining, and logging sectors from the total estimate as land uses within the project area would not support these industries. A growth rate of 10 percent derived from the projected population growth between 2020 and 2040 was applied to 2020 employment data to produce estimates of statewide employees in 2040. Using this 2040 service population and the 2040 GHG inventory adjusted in consideration of statewide GHG reduction goals, an efficiency metric of 2.74 $MTCO_2e/SP$ for 2040 was developed. See Appendix B for detailed modeling assumptions and calculations.

Notably, in light of this newly developed threshold of significance, the significance of the Adopted Southern SOI Project is evaluated against this efficiency metric of 2.74 $MTCO_2/SP$ in 2040. Then, to evaluate whether the Southern SOI Amendment would result in a substantially more severe impact as compared to the Adopted Southern SOI

Project, the Southern SOI Amendment would have to generate emissions greater than that of the Adopted Southern SOI Project measured as an efficiency metric.

ISSUES NOT DISCUSSED FURTHER

All topics related to climate change are evaluated in this section.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.3-1: Generate Greenhouse Gas Emissions That May Have a Significant Impact on the Environment

The 2014 SOI EIR determined that implementation of the Adopted Southern SOI Project would result in GHG emissions that would result in a significant and unavoidable impact (Impact 3.4.1). Construction of the Adopted Southern SOI Project and Southern SOI Amendment would generate a total of 60,238 and 35,528 $MTCO_2e$ over the 8-year construction period, respectively. Amortized over a 30-year project lifetime, these emissions would be 2,008 and 1,184 $MTCO_2e$, respectively. Operational emissions associated with the Adopted Southern SOI Project and Southern SOI Amendment would result in GHG emissions associated with transportation, electricity and natural gas combustion, water consumption, and wastewater and solid waste generation. Operation of the Adopted Southern SOI Project would generate approximately 6.64 $MTCO_2e$/year/SP in 2040. The Southern SOI Amendment would generate approximately 7.55 $MTCO_2e$/year/SP in 2040. These levels of emissions are greater than 2.74 $MTCO_2e$/year/SP. Because the emissions per service population associated with the Southern SOI Amendment would be greater than that under the Adopted Southern SOI Project, this impact would be more severe than the impact identified in the 2014 SOI EIR. This impact would be **significant**.

Impact 3.4.1 of the 2014 SOI EIR quantified construction and operational GHG emissions and concluded that the Adopted Southern SOI Project's GHG emissions would be potentially significant because emissions would exceed the 4.6 $MTCO_2e$ efficiency metric in use at that time. To reduce emissions, Mitigation Measure MM 3.4.1 was recommended. However, while climate change impacts would be lessened through implementation of Adopted Mitigation Measure MM 3.4.1, impacts were found to be significant and unavoidable.

> **Adopted MM 3.4.1:** Subsequent development projects within the Southern Sphere of Influence Planning and Annexation project area shall submit to the City of Grass Valley and receive approval for a GHG Emissions Reduction Plan prior to issuance of building permits for the development project in question. The GHG Emissions Reduction Plan shall demonstrate adherence to the following measures or alternative measures equaling the same or greater emission reduction values.
>
> - Indoor water conservation measures shall be incorporated, such as use of low-flow toilets, showers, and faucets (kitchen and bathroom), in each residential unit.
> - The proposed project shall be designed to exceed state energy efficiency standards- by 15 percent (to Tier 1 Title 24 Standards) as directed by Appendix A5 of the 2010 California Green Building Standards (CBSC 2011). This measure helps to reduce emissions associated with energy consumption.
> - Low-water-use landscaping (i.e., drought-tolerant plants and drip irrigation) shall be installed. At least 75 percent of all landscaping plants shall be drought-tolerant as determined by a licensed landscape architect or contractor.
> - The installation of wood-burning fireplaces shall be prohibited in all new residential units.

Southern SOI Amendment/Residential Development Area

Construction-related activities would generate GHG emissions from the use of heavy-duty off-road equipment, materials transport, and worker commute. Based on modeling conducted of the Adopted Southern SOI Project and the Southern SOI Amendment, construction is estimated to generate a total of 60,238 and 35,528 $MTCO_2e$,

respectively, for the duration of construction activities (2014–2021). As stated previously, NSAQMD does not provide guidance for assessing the significance of GHG emissions; however, SCAQMD recommends that construction emissions be amortized over a 30-year period and then incorporated into a project's total GHG emissions (SCAQMD 2008). Using this guidance, the Adopted Southern SOI Project and the Southern SOI Amendment would generate construction emissions totaling 2,008 and 1,184 $MTCO_2e$ when amortized over a 30-year project lifespan.

Refer to Appendix B for detailed input parameters and assumptions.

Operation of the Adopted Southern SOI Project and the Southern SOI Amendment would directly generate GHG emissions from vehicle movement to and from the project site, on-site natural gas consumption (e.g., stoves, fireplaces, water heaters), and use of landscaping equipment. GHGs would be indirectly emitted from electricity consumption, solid waste disposal at landfills, and water and wastewater treatment. Table 3.3-2 summarizes the anticipated level of emissions for the Adopted Southern SOI Project and the Southern SOI Amendment by emissions sector. Refer to Appendix B for detailed input parameters and assumptions.

Table 3.3-2 Greenhouse Gas Emissions of the Adopted Southern SOI Project and the Southern SOI Amendment

Emissions Sector	$MTCO_2e$
Adopted Southern SOI Project	
Mobile Source	15,630
Energy Consumption[2]	3,004
Solid Waste Generation	982
Area Sources	812
Water Consumption and Wastewater Treatment	731
Amortized Construction Emissions[2]	2,007
Total Operational GHG Emissions	**23,167**
Service Population[3]	3,486
Efficiency Metric ($MTCO_2e$/year/SP)	**6.64**
Southern SOI Amendment	
Mobile Source[1]	16,095
Energy Consumption[2]	3,463
Solid Waste Generation	1,248
Area Sources	787
Water Consumption and Wastewater Treatment	872
Amortized Construction Emissions[2]	1,184
Total Operational GHG Emissions	**23,649**
Service Population[3]	3,131
Efficiency Metric ($MTCO_2e$/year/SP)	**7.55**
Net Change in Efficiency Metric ($MTCO_2e$/year/SP) vs Adopted Southern SOI Project	**+0.91**
2040 Efficiency Metric ($MTCO_2$/year/SP)	**2.74**
Exceeds Metric	**Yes**

Notes: Totals may not add due to rounding.

$MTCO_2e$ = metric tons of carbon dioxide equivalent, $MTCO_2e$/year/SP = metric tons of carbon dioxide equivalent per year per service population.

[1] Energy was estimated in accordance with the 2019 California Energy Code (Part 6 of the Title 24 California Building Code). The California Energy Code is updates triennially and expected to enhance the energy efficiency and decarbonization of future development. With a construction period of 8 years, it is expected that energy consumption would decrease as buildings become more energy efficient and feature minimal or no on-site natural gas use.

[2] Construction emissions were amortized over a 30-year period.

[5] Service population represents both residents and employees of the Previously Approved Project and Southern SOI Amendment.

See Appendix B for detailed input parameters and modeling results.

Source: Modeled by Ascent Environmental in 2021

As shown in Table 3.3-2, operation of the Adopted Southern SOI Project and the Southern SOI Amendment would generate approximately 23,100 and 23,600 and $MTCO_2e$, respectively, in 2040. Not only would the Southern SOI Amendment generate greater total emissions than the Adopted Southern SOI Project, the Southern SOI Amendment would have greater emissions when expressed as an efficiency metric (7.55 $MTCO_2e$/year/SP compared to 6.64 $MTCO_2e$/year/SP).

This increase in emissions is largely attributable to a combination of higher VMT associated with the land uses proposed under the Southern SOI Amendment and a decrease in the number of residents that would be supported by the Southern SOI Amendment as compared to the Adopted Southern SOI Project. As discussed in Section 3.9, "Transportation and Circulation," the total number of vehicle trips under the Southern SOI Amendment would actually be less; however, the average trip length associated with the land uses under the Southern SOI Amendment would be greater. VMT is a metric defined by number of trips multiplied by trip length, and as such, VMT would be higher under the Southern SOI Amendment (see Appendix D for detailed information regarding VMT analysis).

The Southern SOI Amendment would result in an additional 926,000 square feet of land zoned for manufacturing. The CalEEMod computer program assumes that this land use, as compared to residential or commercial land uses, would generate more solid waste and wastewater, require more natural gas and electricity, and would consume more water to perform manufacturing-related tasks. It is unknown what type of manufacturing activity would occur within these zoning areas; however, CalEEMod uses default values that produce conservative estimates (CAPCOA 2017).

In summary, the Southern SOI Amendment would generate operational emissions in exceedance of the 2.74 $MTCO_2e$/year/SP efficiency metric, consistent with findings of the 2014 SOI EIR (although notably the efficiency metric used in the 2014 SOI EIR was 4.6 $MTCO_2e$/year/SP); however, the GHG emissions would be greater under the Southern SOI Amendment as compared to the Adopted Southern SOI Project. Because the emissions associated with the Adopted Southern SOI Project would already exceed the efficiency metric by 3.9 $MTCO_2e$/year/SP, which can be interpreted as a considerable exceedance of this threshold of significance, the additional 0.91 $MTCO_2e$/year/SP over the 2.74 $MTCO_2e$/year/SP would be substantially more severe than an already significant impact.

Therefore, the impact is substantially more severe than the impact identified in the 2014 SOI EIR. This impact would be **significant**.

Adopted Mitigation Measure MM 3.4.1 of the 2014 SOI EIR (as modified and updated below) would continue to apply to the Southern SOI Amendment. Additional mitigation is also recommended.

Mitigation Measures

Mitigation Measure 3.3-1: Modified 2014 SOI MM 3.4.1

Mitigation Measure 3.1-2: Modified 2014 SOI MM 3.4.1

Modified MM 3.4.1: Subsequent development projects within the Southern Sphere of Influence Planning and Annexation project area shall submit to the City of Grass Valley and receive approval for a GHG Emissions Reduction Plan prior to issuance of building permits for the development project in question. The GHG Emissions Reduction Plan shall demonstrate adherence to the following measures or alternative measures ~~equaling the same or greater emission reduction values~~ to reduce GHG emissions.

- Prior to the issuance of building permits for residential and commercial development the project developer or its designee shall submit a Zero Net Energy Confirmation Report (ZNE Report) prepared by a qualified building energy efficiency and design consultant to the City for review and approval. For residential and commercial development within the project area, the ZNE Report shall demonstrate that the most recent version of the

California Energy Code has been applied. Residential and commercial development shall be designed and shall be constructed to achieve ZNE, as defined by CEC in its 2015 Integrated Energy Policy Report, or otherwise achieve an equivalent level of energy efficiency, renewable energy generation, or GHG emissions savings. If the ZNE Report determines that attainment of ZNE is not feasible, it shall substantiate this conclusion and will identify the maximum building energy efficiency that is attainable.

- All buildings shall include rooftop solar photovoltaic systems to supply electricity to the buildings. Alternatively, solar photovoltaic systems can be installed on canopies that also shade parking areas. The project applicant shall provide pre-wired solar for residential garage/parking structures as a design feature.
- Any household appliances included in the original sale of the residential units shall be electric and certified Energy Star-certified (including clothes washers, dish washers, fans, and refrigerators, but not including tankless water heaters).
- Indoor water conservation measures shall be incorporated, such as use of low-flow toilets, showers, and faucets (kitchen and bathroom), in each residential unit.
- All buildings shall be designed to include cool roofs consistent with requirements established by Tier 2 of the CALGreen Code.
- The proposed project shall be designed to exceed ~~state energy efficiency standards~~ the California Energy Code in effect at the time of construction by 15 percent ~~(to Tier 1 Title 24 Standards) as directed by Appendix A5 of the 2010 California Green Building Standards (CBSC 2011). This measure helps to reduce emissions associated with energy consumption~~.
- Low-water-use landscaping (i.e., drought-tolerant plants and drip irrigation) shall be installed. At least 75 percent of all landscaping plants shall be drought-tolerant as determined by a licensed landscape architect or contractor.
- The installation of wood-burning fireplaces shall be prohibited in all new residential units.
- The project applicant shall provide a minimum of one single-port electric vehicle charging station at each new single-family housing unit that achieves similar or better functionality as a Level 2 charging station (referring to the voltage that the electric vehicle charger uses). The project applicant shall also provide Level 2 electric vehicle charging stations at a minimum of 10 percent of parking spaces that serve multi-family residential buildings.
- Parking lots serving non-residential buildings shall have at least 12.5 percent of parking spaces served by electric vehicle charging stations that achieves similar or better functionality as a Level 2 charging station.

Mitigation Measure 3.3-2: Implement On-Site Greenhouse Gas Reduction Measures to Reduce Construction Emissions

Subsequent development within the project area shall implement all feasible measures to reduce construction-related GHG emissions associated with the Southern SOI Amendment, including, but not limited to, the construction-related measures listed below. A mitigation measure may be deemed infeasible if the project applicant provides rationale, based on substantial evidence, to the City that substantiates why the measure is infeasible. The GHG reductions achieved by the implementation of measures listed below shall be estimated by a qualified third-party selected by the City. All GHG reduction estimates shall be supported by substantial evidence. Mitigation measures should be implemented even if it is reasonable that their implementation would result in a GHG reduction but a reliable quantification of the reduction cannot be substantiated.

- The project applicant shall require its contractors to enforce idling of on- and off-road diesel equipment for no more than 5 minutes while on site.
- The project applicant shall implement waste, disposal, and recycling strategies in accordance with Sections 4.408 and 5.408 of the 2016 California Green Building Standards Code (CALGreen Code), or in accordance with any update to these requirements in future iterations of the CALGreen Code in place at the time of project construction.
- Project construction shall achieve or exceed the enhanced Tier 2 targets for recycling or reusing construction waste of 75 percent for residential land uses as contained in Sections A4.408 and A5.408 of the CALGreen Code.

- All diesel-powered, off-road construction equipment shall meet EPA's Tier 4 emissions standards as defined in 40 Code of Federal Regulation (CFR) 1039 and comply with the exhaust emission test procedures and provisions of 40 CFR Parts 1065 and 1068. This measure can also be achieved by using battery-electric off-road equipment as it becomes available.
- The project applicant shall implement a program that incentivizes construction workers to carpool, use public transit, or EVs to commute to and from the project site.

Mitigation Measure 3.3-3: Purchase Real, Quantifiable, Permanent, Verifiable, Enforceable, and Additional Carbon Offsets

If, following the application of all feasible on-site GHG reduction measures listed under Mitigation Measures 3.3-1 and 3.3-2, the Southern SOI Amendment would continue to generate GHG emissions exceeding 2.74 $MTCO_2e$/year/SP, the project applicant for subsequent development in the project area shall offset the remaining GHG emissions to meet 2.74 $MTCO_2e$/year/SP in 2040 by funding activities that directly reduce or sequester GHG emissions or by purchasing and retiring carbon credits.

To the degree that a project relies on GHG mitigation measures, the City of Grass Valley, NSAQMD, and CARB recommend that lead agencies prioritize on-site design features, such as those listed under Mitigation Measures 3.3-1 and 3.3-2, and direct investments in GHG reductions within the vicinity of the project site to provide potential air quality and economic co-benefits locally. While emissions of GHGs and their contribution to climate change is a global problem, emissions of air pollutants, which have an adverse localized effect, are often emitted from similar activities that generate GHG emissions (i.e., mobile, energy, and area sources). For example, direct investment in a local building retrofit program could pay for cool roofs, solar panels, solar water heaters, smart meters, energy efficient lighting, energy efficient appliances, energy efficient windows, insulation, and water conservation measures for subsequent development within the geographic area of the Southern SOI Amendment. Other examples of local direct investments include financing installation of regional electric vehicle charging stations, paying for electrification of public school buses, and investing in local urban forests. These investments would not only achieve GHG reductions, but would also directly improve regional and local ambient air quality. However, to adequately mitigate GHG emissions to 2.74 $MTCO_2e$/year/SP, it is critical that any such investments in actions to reduce GHG emissions meet the criteria of being real, quantifiable, permanent, verifiable, enforceable, and additional, consistent with the standards set forth in Health and Safety Code section 38562, subdivisions (d)(1) and (d)(2). Such credits shall be based on protocols approved by the California Air Resources Board (CARB), consistent with Section 95972 of Title 17 of the California Code of Regulations. Project applicants shall not use offset projects originating outside of California, except to the extent that the quality of the offsets, and their sufficiency under the standards set forth herein, can be verified by the City of Grass Valley, NSAQMD, or CARB. Such credits must be purchased through one of the following: (i) a CARB-approved registry, such as the Climate Action Reserve, the American Carbon Registry, and the Verified Carbon Standard; (ii) any registry approved by CARB to act as a registry under the California Cap and Trade program; or (iii) through the California Air Pollution Control Officers Association's GHG Rx and NSAQMD.

Prior to issuing building permits for subsequent development projects in the Southern SOI Amendment area, the City shall confirm that the project applicant or its designee has fully offset the project's remaining (i.e., post implementation of GHG reduction measures pursuant to Mitigation Measure 3.3-1 and 3.3-2) GHG emissions by relying upon one of the following compliance options, or a combination thereof:

- demonstrate that the project applicant has directly undertaken or funded activities that reduce or sequester GHG emissions that are estimated to result in GHG reduction credits (if such programs are available), and retire such GHG reduction credits in a quantity equal to the project's remaining GHG emissions;
- provide a guarantee that it shall retire carbon credits issued in connection with direct investments (if such programs exist at the time of building permit issuance) in a quantity equal to the subsequent project's GHG emissions;
- undertake or fund direct investments (if such programs exist at the time of building permit issuance) and retire the associated carbon credits in a quantity equal to the subsequent project's remaining GHG emissions; or

- if it is impracticable to fully offset GHG emissions through direct investments or quantifiable and verifiable programs do not exist, the project applicant or its designee may purchase and retire carbon credits that have been issued by a recognized and reputable, accredited carbon registry in a quantity equal to the subsequent project's remaining GHG Emissions.

Significance after Mitigation

Implementation of Mitigation Measures 3.3-1, 3.3-2, and 3.3-3 would help ensure that the Southern SOI Amendment would reach the 2040 2.74 $MTCO_2e$/year/SP target through the application of all feasible, on-site GHG reduction measures and purchase of carbon offsets, which would demonstrate consistency with the state's long-term climate change goals. If these measures are feasible, the Southern SOI Amendment would not conflict with CARB's 2017 Scoping Plan or any established statewide GHG reduction targets (i.e., Executive Order S-3-05). However, it cannot be assured, at this time, that all mitigation is feasible. For instance, the cost or availability of offsets that meet the criteria of being real, quantifiable, permanent, verifiable, enforceable, and additional is unknown. It may also not be possible for all future subsequent development to attain zero net energy in their design due to their specific use (e.g., nonresidential land uses that involve sustained electrical demands such as cloud/data server sites). Thus, the Southern SOI Amendment's contribution to climate change, while it may be reduced to a less-than-significant level, is considered **significant and unavoidable** due to these uncertainties.

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3.4 CULTURAL AND PALEONTOLOGICAL RESOURCES

This section analyzes and evaluates the potential impacts of the project on known and unknown cultural resources. Cultural resources include districts, sites, buildings, structures, or objects generally older than 50 years and considered to be important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. They include prehistoric resources, historic-period resources, and "tribal cultural resources" (the latter as defined by Assembly Bill (AB) 52, Statutes of 2014, in Public Resources Code [PRC] Section 21074).

Archaeological resources are locations where human activity has measurably altered the earth or left deposits of prehistoric or historic-period physical remains (e.g., stone tools, bottles, former roads, house foundations). Historical (or built-environment) resources include standing buildings (e.g., houses, barns, outbuildings, cabins) and intact structures (e.g., dams, bridges, roads, districts), or landscapes. A cultural landscape is defined as a geographic area (including both cultural and natural resources and the wildlife therein), associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values. Tribal cultural resources are sites, features, places, cultural landscapes, sacred places and objects, with cultural value to a tribe.

One comment letter regarding cultural resources was received in response to the notice of preparation (see Appendix A). The Native American Heritage Commission (NAHC) requested AB 52 and SB 18 compliance information; while SB 18 does apply to the project because there is a General Plan amendment associated with the project (which is the trigger for SB 18 compliance), SB 18 is not a CEQA requirement and therefore is not discussed in this section. AB 52 compliance is described below.

3.4.1 Regulatory Setting

The regulatory setting provided in the 2014 SOI EIR remains applicable to this analysis. The regulatory information provided on pages 3.5-5 through 3.5-7 of the 2014 SOI EIR provides a description of the National Historic Preservation Act, the California Environmental Quality Act (CEQA), and the City of Grass Valley General Plan. The following discussion supplements the regulatory summary in the 2014 EIR and provides context for the impact evaluation that follows.

FEDERAL

National Register of Historic Places

The National Register of Historic Places (NRHP) is the nation's master inventory of known historic properties. It is administered by the National Park Service and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level.

The formal criteria (36 CFR 60.4) for determining NRHP eligibility are as follows:

1. The property is at least 50 years old (however, properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP);
2. It retains integrity of location, design, setting, materials, workmanship, feeling, and associations; and
3. It possesses at least one of the following characteristics:

   Criterion A Is associated with events that have made a significant contribution to the broad patterns of history (events).

   Criterion B Is associated with the lives of persons significant in the past (persons).

Criterion C Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant, distinguishable entity whose components may lack individual distinction (architecture).

Criterion D Has yielded, or may be likely to yield, information important in prehistory or history (information potential).

Listing in the NRHP does not entail specific protection or assistance for a property but it does guarantee recognition in planning for federal or federally assisted projects, eligibility for federal tax benefits, and qualification for federal historic preservation assistance. Additionally, project effects on properties listed in the NRHP must be evaluated under CEQA.

The National Register Bulletin also provides guidance in the evaluation of archaeological site significance. If a heritage property cannot be placed within a particular theme or time period, and thereby lacks "focus," it is considered not eligible for listing in the NRHP. In further expanding upon the generalized NRHP criteria, evaluation standards for linear features (such as roads, trails, fence lines, railroads, ditches, and flumes) are considered in terms of four related criteria that account for specific elements that define engineering and construction methods of linear features: (1) size and length, (2) presence of distinctive engineering features and associated properties, (3) structural integrity, and (4) setting. The highest probability for NRHP eligibility exists in the intact, longer segments, where multiple criteria coincide.

STATE

California Register of Historical Resources

All properties in California that are listed in or formally determined eligible for listing in the NRHP are eligible for listing in the California Register of Historical Resources (CRHR). The CRHR is a listing of State of California resources that are significant in the context of California's history. It is a Statewide program with a scope and with criteria for inclusion similar to those used for the NRHP. In addition, properties designated under municipal or county ordinances are also eligible for listing in the CRHR.

A historic resource must be significant at the local, state, or national level under one or more of the criteria defined in the California Code of Regulations Title 15, Chapter 11.5, Section 4850 to be included in the CRHR. The CRHR criteria are tied to CEQA because any resource that meets the criteria below is considered a significant historical resource under CEQA. As noted above, all resources listed in or formally determined eligible for listing in the NRHP are automatically listed in the CRHR.

The CRHR uses four evaluation criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
2. Is associated with the lives of persons important to local, California, or national history.
3. Embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of a master; or possesses high artistic values.
4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

Similar to the NRHP, a resource must meet one of the above criteria and retain integrity to be listed in the CRHR. The CRHR uses the same seven aspects of integrity used by the NRHP.

California Environmental Quality Act

CEQA requires public agencies to consider the effects of their actions on "historical resources," "unique archaeological resources," and "tribal cultural resources." Pursuant to PRC Section 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect

on the environment." Section 21083.2 requires agencies to determine whether projects would have effects on unique archaeological resources. PRC Section 21084.2 establishes that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment."

Historical Resources

"Historical resource" is a term with a defined statutory meaning (PRC Section 21084.1; State CEQA Guidelines Sections 15064.5[a] and [b]). Under State CEQA Guidelines Section 15064.5(a), historical resources include the following:

1) A resource listed in, or determined to be eligible by the State Historical Resources Commission for listing in, the CRHR (PRC Section 5024.1).
2) 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), will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3) 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 may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be historically significant if the resource meets the criteria for listing in the CRHR (PRC Section 5024.1).
4) The fact that a resource is not listed in or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to PRC Section 5020.1[k]), or identified in a historical resources survey (meeting the criteria in PRC Section 5024.1[g]) does not preclude a lead agency from determining that the resource may be a historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

Unique Archaeological Resources

CEQA also requires lead agencies to consider whether projects will affect unique archaeological resources. PRC Section 21083.2(g) states that "unique archaeological resource" means 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 one or more of the following criteria:

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

Tribal Cultural Resources

CEQA also requires lead agencies to consider whether projects will affect tribal cultural resources. PRC, Section 21074 states:

a) "Tribal cultural resources" are either of the following:
    1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
        A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.
        B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
    2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in

subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

California Native American Historical, Cultural, and Sacred Sites Act

The California Native American Historical, Cultural, and Sacred Sites Act (PRC Section 5097.9) applies to both State and private lands. The act requires, upon discovery of human remains, that construction or excavation activity cease and that the county coroner be notified. If the remains are those of a Native American, the coroner must notify the NAHC, which notifies and has the authority to designate the most likely descendant of the deceased. The act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

Health and Safety Code, Section 7050.5

Section 7050.5 of the Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If they are determined to be those of a Native American, the coroner must contact NAHC.

Public Resources Code, Section 5097

PRC Section 5097 specifies the procedures to be followed if human remains are unexpectedly discovered on nonfederal land. The disposition of Native American burial falls within the jurisdiction of NAHC. Section 5097.5 of the code states:

> No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

Public Resources Code Section 21080.3

AB 52, signed by the California Governor in September of 2014, established a new class of resources under CEQA: "tribal cultural resources," defined in PRC Section 21074. Pursuant to PRC Sections 21080.3.1, 21080.3.2, and 21082.3, lead agencies undertaking CEQA review must, upon written request of a California Native American Tribe, begin consultation before the release of an EIR, negative declaration, or mitigated negative declaration.

PRC Section 21080.3.2 states:

> Within 14 days of determining that a project application is complete, or to undertake a project, the lead agency must provide formal notification, in writing, to the tribes that have requested notification of proposed projects in the lead agency's jurisdiction. If it wishes to engage in consultation on the project, the tribe must respond to the lead agency within 30 days of receipt of the formal notification. The lead agency must begin the consultation process with the tribes that have requested consultation within 30 days of receiving the request for consultation. Consultation concludes when either: 1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource, or 2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.

If the lead agency determines that a project may cause a substantial adverse change to a tribal cultural resource, and measures are not otherwise identified in the consultation process, provisions under PRC Section 21084.3 (b) describe mitigation measures that may avoid or minimize the significant adverse impacts. Examples include:

(1) Avoidance and preservation of the resources in place, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

(2) Treating the resource with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

(A) Protecting the cultural character and integrity of the resource
(B) Protecting the traditional use of the resource
(C) Protecting the confidentiality of the resource.

(3) Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

(4) Protecting the resource.

3.4.2 Environmental Setting

All setting information in the 2014 SOI EIR remains applicable to this analysis. The information provided on pages 3.5-1 through 3.5-3 of the 2014 SOI EIR consists of descriptions of the prehistory, ethnography, historic period, and paleontological setting for the project area.

RECORDS SEARCHES, SURVEYS, AND CONSULTATION

On October 1, 2020, a record search of the project area and a 0.25-mile radius was conducted at the North Central Information Center (NCIC), at California State University, Sacramento. The following information was reviewed as part of the records search:

- NRHP: listed properties
- CRHR: listed resources
- Archaeological Determinations of Eligibility
- California Inventory of Historical Resources
- California Historical Landmarks
- California Points of Historical Interest
- BLM GLO Land Plat Maps for 1867 and 1870

The NCIC records search indicates that eight prior cultural resource studies have been completed within the project area and 11 additional studies have been completed within the 0.25-mile search radius. The NCIC records search also indicates that three cultural resources have been previously recorded within or immediately adjacent to the project area, and that 72 additional resources have been recorded outside the project area but within the 0.25-mile search radius.

Archaeological Sites and Historic Features

A previously recorded earthen berm dam (P-29-001483) within the project area is an isolated resource. An isolated resource is, by definition, found outside of an interpretable archaeological context which is constituted of groups of contemporary and associated artifacts, features, and/or sites. Because they have no historical context, isolates are generally not eligible for listing in the CRHR and, therefore, are not evaluated for significance. As such, P-29-001483 is not a resource under CEQA and is not discussed further in this Draft EIR.

A previously recorded multicomponent site, consisting of both prehistoric and historic-period features, is located within the residential development area of the project (P-29-002745/H). The prehistoric component of the site

contains bedrock mortars, midden, and a scatter of lithic debitage. The historic component is made up of the remains of a former dairy ranch, including a residence, barn, nine outbuildings, unpaved roads, orchards, and grassy fields. Past evaluations of the historic component of the site have concluded that it is ineligible for listing in the NRHP/CRHR given its lack of material integrity and historical significance. Therefore, the historic component of P-29-002745/H is not a resource under CEQA. The prehistoric component has not been evaluated for NRHP/CRHR eligibility.

The Empire Mine Historic District (District; P-29-003144) is a historic-period archaeological site located immediately north and east of the SOI addition boundary. The District is a gold mining landscape composed of 493 contributing resources; it is listed in the NRHP, CRHR, and is a California Historical Landmark. The 855-acre District encompasses portions of Ophir, Osborne, and Union hills, which are separated by Little Wolf Creek and Woodpecker Ravine. Empire Mine was first established in 1850 and became one of the most successful lode mines of the area, combining with many surrounding ventures over time and eventually obtaining mineral rights to almost 4,000 acres. The District contains infrastructural remains of 67 individual mining operations, with hundreds of individual prospects dotting the landscape.

Tribal Cultural Resources

On September 1, 2020, the City of Grass Valley (City) sent AB 52 notification letters to three Native American Tribes: United Auburn Indian Community of the Auburn Rancheria (UAIC), Tsi Akim Maidu, and Colfax-Todds Valley Consolidated Tribe. No responses were received from the Tsi Akim Maidu or Colfax-Todds Valley Consolidated Tribe.

On September 29, 2020, UAIC responded to the City and requested to consult under AB 52. The Tribe stated that they are aware of tribal cultural resources in the project area and would like to discuss protection of these resources with the City. UAIC also requested to review the cultural report. The specific details of the consultations are confidential pursuant to California law, however, the City met with UAIC for a site visit of the tribal cultural resource of concern and to discuss preservation options. Consultation was concluded in April 2021.

The NAHC was contacted to request a search of their Sacred Lands database. A response was received from the NAHC on August 31, 2020, stating that there are no known sacred sites within the project area.

Paleontological Resources

The project area is underlain by a complex mix of Mesozoic granitic rocks and Jurassic to Triassic metavolcanics. The Mesozoic-aged (252 to 66 million years ago) plutonic rocks underlying the residential development area to the west are comprised of quartz diorite, tonalite, trondhjemite, and quartz monzonite. The Jurassic to Triassic (252 to 145 million years ago) metavolcanic rocks underlying the SOI addition to the east are made up of andesite and rhyolite flow rocks, greenstone, volcanic breccia and other pyroclastic rocks which are in part strongly metamorphosed. These include volcanic rocks of Franciscan Complex such as basaltic pillow lava, diabase, greenstone, and minor pyroclastic rocks (NIC 2020).

A search of the paleontological records maintained by the University of California Museum of Paleontology (UCMP) was conducted on October 1, 2020. The UCMP database indicates that 62 fossil localities have been recorded within Nevada County. Of these, only two are known to contain vertebrate fossil remains. The first is the *Russel Valley* locality which yielded a single fossil specimen of a Clarendonian-aged (13.6 to 10.3 million years ago) mastodon *(†Miomastodon* sp.). The *Boca Reservoir W* locality yielded three fossil specimens, including one from an extinct species of horse (*Equus* sp.) and another from a mastodon (*†Miomastodon* sp.); all three were of Blancan age (4.8 to 1.8 million years ago) (NIC 2020).

None of the geologic units known to contain fossils in Nevada County, including the Truckee Formation and *Boca Reservoir W* locality, have been mapped within the project area. The Mesozoic plutonic rocks and Jurassic to Triassic metavolcanics underlying the project area are considered to have low paleontological resource potential. Plutonic rocks, such as those underlying the residential development portion of the project area crystallized at great depths beneath the earth's surface from many different batches of magma slowly cooling and solidifying. Because the high temperature/high pressure processes involved in their formation are too destructive to preserve identifiable fossil remains, plutonic rocks do not contain fossils and so are considered to have zero sensitivity for paleontological resources. Similarly, metamorphic rocks such as the metavolcanics underlying the SOI addition

portion of the project area, are not likely to have preserved the remains of fossils given the high temperatures necessary for their formation (NIC 2020).

3.4.3 Impacts and Mitigation Measures

METHODOLOGY

The impact analysis for archaeological, historical, and paleontological resources is based on the findings and recommendations of the *Cultural Resources Assessment for the Southern Sphere of Influence Planning and Annexation Project, City of Grass Valley, Nevada County, California* (NIC 2020). The analysis is also informed by the provisions and requirements of federal, state, and local laws and regulations that apply to cultural resources.

PRC Section 21083.2(g) defines a "unique archaeological resource" as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one or more of the following CRHR-related criteria: (1) that it contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; (2) that it as a special and particular quality, such as being the oldest of its type or the best available example of its type; or (3) that it is directly associated with a scientifically recognized important prehistoric or historic event or person. An impact on a resource that is not unique is not a significant environmental impact under CEQA (State CEQA Guidelines Section 15064.5[c][4]). If an archaeological resource qualifies as a resource under CRHR criteria, then the resource is treated as a unique archaeological resource for the purposes of CEQA.

PRC Section 21074 defines "tribal cultural resources" as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" that are listed or determined eligible for listing in the CRHR, listed in a local register of historical resources, or otherwise determined by the lead agency to be a tribal cultural resource.

For the purposes of the impact discussion, "historical resource" is used to describe built-environment historic-period resources. Archaeological resources (both prehistoric and historic-period), which may qualify as "historical resources" pursuant to CEQA, are analyzed separately from built-environment historical resources.

The following subsequent analysis compares the effects of the Adopted Southern SOI Project disclosed in the 2014 SOI EIR to the anticipated effects of the Southern SOI Amendment. Previously adopted mitigation is detailed and the potential for a new or substantially more severe impacts are evaluated assuming implementation of these mitigation measures, unless otherwise indicated

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, the project would result in a significant impact on cultural resources if it would:

- cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5 of the State CEQA Guidelines;
- cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the State CEQA Guidelines;
- cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe;
- disturb any human remains, including those interred outside of dedicated cemeteries; or
- directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

ISSUES NOT DISCUSSED FURTHER

As discussed previously, no fossils and no unique geologic features have been recorded within the project area. The underlying plutonic and metavolcanic rocks mapped in the project area are unlikely to contain fossilized remains, because the high temperature/high pressure processes involved in their formation are too destructive to preserve identifiable fossil remains. Therefore, implementation of the Southern SOI Amendment would have no impact on paleontological resources. This issue is not analyzed further.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.4-1: Cause a Substantial Adverse Change in the Significance of a Historical Resource

Future development of the Southern SOI Amendment area could be located on lands that contain, or are nearby, historic resources. This could result in damage to or destruction of a historic building or structure, thereby resulting in a substantial adverse change in the significance of a historical resource as defined in Section 15064.5. Implementation of the amendments and residential development would not result in a new significant effect and the impact is not more severe than the impact identified in the 2014 SOI EIR. The impact would be **less than significant** with mitigation. Because there are no historical resources in the Residential Development Area, development the area would have **no impact** on historical resources.

Impact 3.5.1 of the 2014 SOI EIR discussed the potential disturbance of undiscovered cultural resources, including historical resources. This impact was determined to be potentially significant, but implementation of Adopted Mitigation Measure 3.5.1b would reduce the impact to a less-than-significant level. Adopted Mitigation Measure 3.5.1b would ensure that cultural resource studies are prepared for developments in areas that have not had previous studies prepared and that remain timely and accurate.

> **Adopted MM 3.5.1b:** When a proposal affects a previously undeveloped parcel in an area identified as having high or moderate cultural sensitivity in the General Plan, a cultural resource study shall be prepared as part of the CEQA analysis. If the proposal affects an area addressed in previous cultural studies, the City shall review the report(s) to confirm whether conditions documented in the previously prepared study have changed and if the recommendations (if any) required by the study are still applicable and appropriate for the future proposed project. If the City determines that conditions have changed from the previous study, the City will require that an appropriate updated to the analysis or a new analysis be prepared.

Southern SOI Amendment

Historical (or built-environment) resources include standing buildings (e.g., houses, barns, cabins) and intact structures (e.g., dams, bridges, water conveyance systems). The NCIC records search identified no historic resources within the Southern SOI Amendment area. As with the 2014 SOI EIR, there are a number of historic-age (over 45 years old) buildings and structures that have not been evaluated for potential NRHP- or CRHR-eligibility. Although the project does not include proposed construction activities in this area, prezoning for commercial, industrial, and residential uses would remove obstacles to future development of the Southern SOI Amendment area. Development of the area could result in damage to or destruction of a building or structure that has not yet been evaluated for historical significance.

Adopted Mitigation Measure 3.5.1b would continue to be implemented for the Southern SOI Amendment. With implementation of Adopted Mitigation Measure MM 3.5.1b, studies to evaluate potential for historical resources are required for development where previously prepared resource studies that remain accurate are not available. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. This impact would remain **less than significant** with mitigation**,** as identified in the 2014 SOI EIR.

Residential Development Area

As described previously, no built-environment historical resources were identified in the Residential Development Area as a result of the NCIC records search or the pedestrian survey. Past evaluations of the historic component of P-29-002745/H have concluded that it is ineligible for listing in the NRHP/CRHR given its lack of material integrity and historical significance. Therefore, it is not a resource under CEQA. Because there are no historical resources in the Residential Development Area, development the area would have **no impact** on historical resources.

Mitigation Measures

No new mitigation is required.

Impact 3.4-2: Cause a Substantial Adverse Change in the Significance of Unique Archaeological Resources

Future development of the project area could be located on properties that contain known or unknown archaeological resources and ground-disturbing activities could result in discovery or damage of yet undiscovered archaeological resources as defined in CEQA Guidelines Section 15064.5. Implementation of the amendments and residential development would not result in a new significant effect and the impact is not more severe than the impact identified in the 2014 SOI EIR. The impact would be **less than significant** with mitigation.

Impact 3.5.1 of the 2014 SOI EIR discussed the potential disturbance of undiscovered cultural resources, including archaeological resources. This impact was determined to be potentially significant, but implementation of Adopted Mitigation Measures 3.5.1b, 3.5.1c, and 3.5.1d would reduce the impact to a less-than-significant level. Adopted Mitigation Measure 3.5.1b would ensure that cultural resource studies are prepared for developments in areas that have not had previous studies prepared and previously prepared cultural studies remain accurate. Adopted Mitigation Measure 3.5.1c would reduce potential impacts on undiscovered resources by requiring that construction activities stop if archaeological artifacts are discovered during construction, and would require a qualified archaeologist to conduct a field survey to recommend mitigation deemed necessary for the protection or recovery of any archaeological resources.

> **Adopted MM 3.5.1b:** When a proposal affects a previously undeveloped parcel in an area identified as having high or moderate cultural sensitivity in the General Plan, a cultural resource study shall be prepared as part of the CEQA analysis. If the proposal affects an area addressed in previous cultural studies, the City shall review the report(s) to confirm whether conditions documented in the previously prepared study have changed and if the recommendations (if any) required by the study are still applicable and appropriate for the future proposed project. If the City determines that conditions have changed from the previous study, the City will require that an appropriate updated to the analysis or a new analysis be prepared.
>
> **Adopted MM 3.5.1c:** If, during the course of construction of future projects within the project area, cultural resources (i.e., prehistoric sites, historic sites, and isolated artifacts and features) are discovered, work shall be halted immediately within 50 feet of the discovery, and the City of Grass Valley Community Development Department shall be notified. A qualified archaeologist (that meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology) shall be retained to determine the significance of the discovery. Based on the significance of the discovery, the professional archaeologist shall present options to the City and project applicant for protecting the resources.
>
> The City and the project applicant shall consider mitigation recommendations presented by a qualified archaeologist (as described) for any unanticipated discoveries. The City and the project applicant shall consult and agree upon implementation of a measure or measures that the City and the project applicant deem feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. The project applicant shall be required to implement any mitigation necessary for the protection of cultural resources.

Southern SOI Amendment

The NCIC records search identified one historic-period archaeological resource, the Empire Mine Historic District. Because the District is outside the Southern SOI Amendment area boundaries and the project does not include proposed construction activities in this area, there would be no impact to this resource. However, it is possible that mining-related resources with the potential to contribute to the District's significance do extend further south into the Southern SOI Amendment area. Additionally, prezoning for commercial, industrial, and residential uses would remove obstacles to future development of the Southern SOI Amendment area. Development of the Southern SOI Amendment area could encounter previously undiscovered or unrecorded archaeological sites and materials during preconstruction or construction-related ground disturbing activities, as described in the 2014 SOI EIR. Adopted Mitigation Measures 3.5.1b and 3.5.1c would continue to be implemented for the Southern SOI Amendment area. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. This impact would remain **less than significant** with mitigation, as identified in the 2014 SOI EIR.

Residential Development Area

As a result of the NCIC records search and the pedestrian survey of the Residential Development Area, one prehistoric archaeological site was identified. The Residential Development Area portion of the project has been designed to avoid the archaeological site and a 30-foot buffer. Because the archaeological site will be avoided there will be no impact to known archaeological resources. Nonetheless, project construction related to the development of the Residential Development Area could encounter previously undiscovered or unrecorded archaeological sites and materials during preconstruction or construction-related ground disturbing activities, as described in the 2014 SOI EIR. Adopted Mitigation Measure 3.5.1c would continue to be implemented for the Residential Development Area. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. This impact would remain **less than significant** with mitigation, as identified in the 2014 SOI EIR.

Mitigation Measures

No new mitigation is required.

Impact 3.4-3: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource

Consultation with UAIC resulted in the identification of no tribal cultural resources in the Southern SOI Amendment area and one tribal cultural resource in the Residential Development Area. It is possible that tribal cultural resources could be identified during analysis of subsequent projects. Although the impact was not specifically identified in the 2014 SOI EIR, implementation of the amendments and residential development would not result in a new significant effect and compliance with PRC Section 21080.3.2 and Section 21084.3 (a) and Adopted Mitigation Measure 3.5.1d would make this impact **less than significant** with mitigation.

As part of the 2013/2014 legislative session, AB 52 established a new class of resources under CEQA—tribal cultural resources—and requires that CEQA lead agencies, upon written request of a California Native American Tribe per PRC 21080.3.1 (b)(1), notify those requesting tribes of projects once the lead agency determines that the application for the project is complete per PRC 21080.3.1. Once notified, tribes may request consultation with the lead agency. Because the 2014 SOI EIR was certified prior to this legislation being enacted, impacts to tribal cultural resources were not analyzed in that document. However, Adopted Mitigation Measure 3.5.1d requires notification and coordination with Native American Tribes upon unanticipated discovery of Native American artifacts.

> **Adopted MM 3.5.1d:** The Native American community will be notified of any unanticipated and accidental discoveries of prehistoric or historic Native American cultural resources and will monitor activities associated with determining the significance of any discoveries as agreed to by the City of Grass Valley in consultation with the Native American community.

Southern SOI Amendment

A letter was sent to the NAHC requesting a search of the Sacred Lands File database for the project area. A response was received on August 31, 2020, stating that there are no known sacred sites within the project area. As detailed above, the City sent notification letters to the three California Native American Tribes, consistent with PRC 21080.3.1(b). Consultation with UAIC did not result in the identification of tribal cultural resources in this area; however, the Tribe did state that the area was sensitive and asked that UAIC be notified of any resources encountered during future project-related construction.

Subsequent discretionary projects may be required to prepare site-specific project-level analysis to fulfill CEQA requirements, which may include additional AB 52 consultation that could lead to the identification of tribal cultural resources. Although no resources within the Southern SOI Amendment area have been identified as meeting any of the PRC Section 5024.1(c) criteria, it is possible that tribal cultural resources could be identified during analysis of subsequent projects. Compliance with PRC Section 21080.3.2 and Section 21084.3 (a) would provide for consultation with Native American tribes to develop and implement measures that would avoid or minimize the disturbance of tribal cultural resources, and to appropriately treat any remains that are discovered. Additionally, Adopted Mitigation Measure 3.5.1d would continue to be implemented for the Southern SOI Amendment area. Therefore, although not specifically identified in the 2014 SOI EIR, there is no new significant impact. This impact would be **less than significant** with mitigation.

Residential Development Area

The City received a response from UAIC to notification letters sent consistent with PRC 21080.3.1(b). Subsequent consultation resulted in the identification of one tribal cultural resource. The Residential Development Area portion of the project has been designed to avoid the tribal cultural resource and a 30-foot buffer. Additionally, Adopted Mitigation Measure 3.5.1d would continue to be implemented for the Residential Development area. Therefore, although not specifically identified in the 2014 SOI EIR, there is no new significant impact. Avoidance of the known tribal cultural resource and implementation of Adopted Mitigation Measure 3.5.1d would result in a **less than significant** with mitigation.

Mitigation Measures

No new mitigation is required.

Impact 3.4-4: Disturb Human Remains

The 2014 SOI EIR evaluated the potential for discovery or damage of previously unknown human remains. Based on documentary research, no evidence suggests that any prehistoric or historic-period marked or un-marked human interments are present within or in the immediate vicinity of the project area. However, ground-disturbing construction activities could uncover previously unknown human remains. This would be a **potentially significant** impact. The proposed amendments would not change the potential to encounter previously unknown human remains. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. This impact would remain **less than significant with mitigation**, as identified in the 2014 SOI EIR.

Impact 3.5.1 of the 2014 SOI EIR discussed the potential disturbance of undiscovered cultural resources, including human remains. This impact was determined to be potentially significant, but implementation of Adopted Mitigation Measure 3.5.1e would reduce the impact to a less-than-significant level. Adopted Mitigation Measure 3.5.1e requires the halting of ground-disturbing activities and compliance with California Health and Safety Code Section 7050.5 and PRC Section 5097.

> **Adopted MM 3.5.1e:** If human remains are discovered, all work shall be halted immediately within 50 feet of the discovery, the City of Grass Valley Community Development Department shall be notified, and the Nevada County Coroner must be notified, according to Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.

Southern SOI Amendment

Based on documentary research, no evidence suggests that any prehistoric or historic period marked, or un-marked human interments are present within or in the immediate vicinity of the Southern SOI Amendment area. However, as with the 2014 SOI EIR, the location of grave sites and Native American or other graves could be present within the project area and could be uncovered by project-related construction activities. Adopted Mitigation Measure 3.5.1e would continue to be implemented for the Southern SOI Amendment portion of the project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. This impact would remain **less than significant** with mitigation, as identified in the 2014 SOI EIR.

Residential Development Area

Based on documentary research, no evidence suggests that any prehistoric or historic period marked, or un-marked human interments are present within or in the immediate vicinity of the Residential Development Area. However, as with the 2014 SOI EIR, the location of grave sites and Native American or other graves could be present within the project area and could be uncovered by project-related construction activities. Adopted Mitigation Measure 3.5.1e would continue to be implemented for the Residential Development Area portion of the project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. This impact would remain **less than significant** with mitigation, as identified in the 2014 SOI EIR.

Mitigation Measures

No new mitigation is required.

3.5 HAZARDS AND HAZARDOUS MATERIALS

This section describes the potential impacts of the proposed amendments to the Southern Sphere of Influence Planning and Annexation Project related to hazardous materials and public health. The evaluation provided in this section is based on review of various agency lists and available documents, including hazard mitigation and cleanup plans. For analysis related to wildfire risk and exposure, please refer to Section 3.10, "Wildfire."

The 2014 SOI EIR included Section 3.7, "Hazards and Hazardous Materials," which evaluated the potential effects of the Adopted Southern SOI Project. The 2014 SOI EIR concluded that no impacts related to safety hazards near schools or private and public airports would occur and no impacts related to wildfire exposure would occur. The 2014 SOI EIR also determined that there would be less-than-significant impacts related to the transport, handling, use, and disposal of hazardous materials (Impact 3.7.1) and interference with emergency plans (Impact 3.7.3). Potential impacts related to significant public and environmental hazards were determined to be less-than-significant through incorporation of mitigation measures MM 3.7.2a, MM 3.7.2b, and MM 3.7.2c, which would require site cleanup and adherence to Phase I Environmental Site Assessment recommendations prior to project construction activities.

No comment letters were received in response to the notice of preparation that express concerns related to hazards and hazardous materials.

3.5.1 Regulatory Setting

The regulatory information provided on pages 3.7-10 through 3.7-13 of the 2014 SOI EIR provides a description of the Environmental Protection Agency, Occupational Safety and Health Administration, Department of Transportation, California Environmental Protection Agency, as well as other state agencies that have authority over hazards and hazardous materials management. Though the regulatory setting provided in the 2014 SOI EIR remains applicable to this analysis, additional regulatory information is provided below to support the analysis of hazards and hazardous materials.

MANAGEMENT OF HAZARDOUS MATERIALS

Various federal laws address the proper handling, use, storage, and disposal of hazardous materials, as well as require measures to prevent or mitigate injury to health or the environment if such materials are accidentally released. The U.S. Environmental Protection Agency (EPA) is the agency primarily responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials. Applicable federal regulations pertaining to hazardous materials are primarily contained in 29, 40, and 49 CFR. Hazardous materials, as defined in the CFR, are listed in 49 CFR 172.101. Management of hazardous materials is governed by the following laws:

- The Toxic Substances Control Act of 1976 (15 U.S. Code [USC] Section 2601 et seq.) regulates the manufacturing, inventory, and disposition of industrial chemicals, including hazardous materials. Section 403 of the Toxic Substances Control Act establishes standards for lead-based paint (LBP) hazards in paint, dust, and soil.
- The Resource Conservation and Recovery Act of 1976 (42 USC 6901 et seq.) (RCRA) is the law under which EPA regulates hazardous waste from the time the waste is generated until its final disposal ("cradle to grave").
- The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (also called the Superfund Act or CERCLA) (42 USC 9601 et seq.) gives EPA authority to seek out parties responsible for releases of hazardous substances and ensure their cooperation in site remediation.
- The Superfund Amendments and Reauthorization Act of 1986 (Public Law 99-499; 42 USC, Chapter 116), also known as SARA Title III or the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), imposes planning requirements regarding hazardous materials to help protect local communities in the event of accidental release.

- The Spill Prevention, Control, and Countermeasure (SPCC) rule includes requirements for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines. The rule requires specific facilities to prepare, amend, and implement SPCC plans. The SPCC rule is part of the Oil Pollution Prevention regulation, which also includes the Facility Response Plan rule.

Management of Hazardous Materials

In California, both federal and state community right-to-know laws are coordinated through the Governor's Office of Emergency Services. The federal law, SARA Title III or EPCRA, described above, encourages and supports emergency planning efforts at the state and local levels and to provide local governments and the public with information about potential chemical hazards in their communities. Because of the community right-to-know laws, information is collected from facilities that handle (e.g., produce, use, store) hazardous materials above certain quantities. The provisions of EPCRA apply to four major categories:

- emergency planning,
- emergency release notification,
- reporting of hazardous chemical storage, and
- inventory of toxic chemical releases.

The corresponding state law is Chapter 6.95 of the California Health and Safety Code (Hazardous Materials Release Response Plans and Inventory). Under this law, qualifying businesses are required to prepare a Hazardous Materials Business Plan, which would include hazardous materials and hazardous waste management procedures and emergency response procedures, including emergency spill cleanup supplies and equipment. At such time as the applicant begins to use hazardous materials at levels that reach applicable state and/or federal thresholds, the plan is submitted to the administering agency.

The California Department of Toxic Substances Control (DTSC), a division of the California Environmental Protection Agency, has primary regulatory responsibility over hazardous materials in California, working in conjunction with EPA to enforce and implement hazardous materials laws and regulations. As required by Section 65962.5 of the California Government Code, DTSC maintains a hazardous waste and substances site list for the state, known as the Cortese List. Individual regional water quality control boards (RWQCBs) are the lead agencies responsible for identifying, monitoring, and cleaning up leaking underground storage tanks.

Transport of Hazardous Materials and Hazardous Materials Emergency Response Plan

The State of California has adopted U.S. Department of Transportation regulations for the movement of hazardous materials originating within the state and passing through the state; State regulations are contained in 26 CCR. State agencies with primary responsibility for enforcing State regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and the California Department of Transportation (Caltrans). Together, these agencies determine container types used and license hazardous waste haulers to transport hazardous waste on public roads.

California has developed an emergency response plan to coordinate emergency services provided by federal, State, and local governments and private agencies. Response to hazardous materials incidents is one part of the plan. The plan is managed by the Governor's Office of Emergency Services, which coordinates the responses of other agencies in the project area.

Management of Construction Activities

Through the Porter-Cologne Water Quality Act and the National Pollution Discharge Elimination System (NPDES) program, RWQCBs have the authority to require proper management of hazardous materials during project construction. For a detailed description of the Porter-Cologne Water Quality Act, the NPDES program, and the role of the Central Valley RWQCB, see Section 3.8, "Hydrology and Water Quality," Of the 2014 SOI EIR.

The State Water Board adopted the statewide NPDES General Permit in August 1999. The state requires that projects disturbing more than 1 acre of land during construction file a Notice of Intent with the RWQCB to be covered under this permit. Construction activities subject to the General Permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce non-stormwater discharges to storm sewer systems and other waters. A stormwater pollution prevention plan (SWPPP) must be developed and implemented for each site covered by the permit. The SWPPP must include best management plans (BMPs) designed to prevent construction pollutants from contacting stormwater and keep products of erosion from moving off-site into receiving waters throughout the construction and life of the project; the BMPs must address source control and, if necessary, pollutant control.

Worker Safety

The California Occupational Safety and Health Administration (Cal/OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations within the state. Cal/OSHA standards are typically more stringent than federal OSHA regulations and are presented in 8 CCR. Cal/OSHA conducts on-site evaluations and issues notices of violation to enforce necessary improvements to health and safety practices.

Title 8 of the CCR also includes regulations that provide for worker safety when blasting and explosives are used during construction activities. These regulations identify licensing, safety, storage, and transportation requirements related to the use of explosives during construction.

LOCAL

Nevada County Evacuation Plan

Nevada County Office of Emergency Services released Draft 1.4 of the County's evacuation plan, the Nevada Operational Area Evacuation Annex, in April of 2020. The purpose of plan is to provide mass evacuation strategies for response to emergencies that involve the evacuation of people from an impacted area. This involves coordination and support for the safe and effective evacuation of the population, including people with disabilities and access and functional needs, whom may need additional support to evacuate. Primary evacuation routes in Nevada County consist of the major interstates, highways, and prime arterials.

Nevada County Emergency Operations Plan

The Emergency Operations Plan (EOP) delineates responsibilities for emergency response and recovery from the effects of natural disasters and manmade emergency incidents in unincorporated Nevada County. The plan also establishes the Nevada County Emergency Services Organization to support initial and extended response as well as direct recovery from emergencies affecting unincorporated areas of the county of the county operational area.

3.5.2 Environmental Setting

The environmental setting provided on pages 3.7-1 through 3.7-10 of the 2014 SOI EIR is relevant to understanding the potential hazardous materials and public health impacts of the Southern SOI Amendment. The setting provides information related to known hazardous materials sites within and surrounding the project area, including site location, case type, potential contaminants of concern, and cleanup status of the various sites. The following information provides an update of information from the 2014 SOI EIR and reflects the current environmental setting.

LA BARR MEADOWS NORTH SITE

In April 2020, a Phase I Environmental Site Assessment (ESA) was prepared for the La Barr Meadows North property. This Phase I ESA covered the area, at the northeast corner of the SOI adjacent to Empire Mine State Park. The subject property is located within an historical gold mining district. While evidence of shallow historical mineral prospecting was observed on the property, no evidence of economic mining, ore processing or tailings from ore processing were identified. Inert debris, including an old automobile body, tires and household debris, were observed on portions of the property; however, these debris are not considered to pose a substantial hazard. Further, the bedrock underlying

the subject property is not considered likely to contain naturally-occurring asbestos. Overall, the Phase I ESA revealed no evidence of RECs in connection with the property (NV5 2020).

BERRIMAN RANCH PROPERTY

As described on page 3.7-9 of the 2014 SOI EIR, a portion of the Berriman Ranch Property was previously used primarily as a residence, dairy, and orchard in the first half of the twentieth century. A Phase I ESA prepared in 2007 identified several RECs, including placer and hard rock mining excavations and associated stockpiles of spoils, the potential use of pesticides in the area of the former orchard and pastures, and a layer of white surface soil over a large portion of the site. As of November 24, 2020, a Standard Voluntary Agreement (SVA) has been entered into by DTSC and the City of Grass Valley. The purpose of the SVA is to investigate, remediate, and/or evaluate a release, a threatened release, or a potential release of any hazardous substance at or from the Berriman Ranch Property under the oversight of DTSC (DTSC 2020a, DTSC 2020e). Because the white surface soil layer contains elevated concentrations of heavy metals (such as arsenic, lead and mercury), the proposed mitigation provided in the SVA includes removal of the surface layer from the proposed development areas and consolidation of the material at a location that will be subject to a land use covenant to restrict future disturbance of the material and to establish procedures for monitoring and maintenance. Portions of the property where the white surface soil layer is to remain in place may remain open space under a land use covenant restricting soil disturbance.

BEAR RIVER MILL SITE EAST (HANSEN BROS. ENTERPRISES)

In June 2018, a Phase I/II ESA was prepared for properties located at 11871, 12003, 12287, and 12289 La Barr Meadows Road, which comprise the eastern portion of the former Bear River Saw Mill Site on the east side of La Barr Meadows Road (NV5 2018). This area was the subject of a Remedial Action Workplan approved by DTSC in 2005 and discussed in the SOI EIR. However, the site was sold before the remedial design and implementation plan was submitted, and removal design and investigation activities ceased.

Environmental concerns at the property center on waste rock piles that are present at several locations as a result of historical underground gold mining. Gold ore processing and lumber milling operations were performed on adjacent property down slope to the west of La Barr Meadows Road (see the Rare Earth Landscape Materials property below), and no industrial processing operations were documented on the Hansen Bros. Enterprises property on La Barr Meadows Road.

Findings of the Phase I/II ESA conducted in association with property transfer indicated that historical mining activity and had resulted in waste materials that are considered a recognized environmental condition (REC). Soil and rock samples were performed as well, indicating arsenic concentrations that exceed typical background soil arsenic concentrations for the area and exceed the Total Threshold Limit Concentration (i.e., categorized as hazardous). Household and concrete debris were also observed at the site; however, these debris appeared to be inert and are not considered to pose a substantial hazard. Because of the RECs identified at the subject properties, local and state regulations must be satisfied regarding the mine waste on the subject property prior to development. These regulations will likely require additional characterization of the mine waste piles, development of a detailed cleanup plan, regulatory review and approval by the DTSC and RWQCB, and public notification and review pursuant to the California Environmental Quality Act (NV5 2018).

The City of Grass Valley entered into a SVA for the former Bear River Saw Mill parcels located east of La Barr Meadows Road in July 2020 (DTSC 2020). The purpose of the SVA is to investigate, remediate, and/or evaluate a release, a threatened release, or a potential release of any hazardous substance at or from the Bear River Mill Site East under the oversight of DTSC (DTSC 2020b, DTSC 2020f). The proposed remediation in the SVA includes consolidation of the mine waste rock piles as engineered fill beneath a future paved parking lot. A land use covenant is to be established for the parking lot to restrict future disturbance of the mine waste rock and to establish procedures for monitoring and maintenance of the pavement cap.

RARE EARTH LANDSCAPE MATERIALS

The Rare Earth Landscape Materials site consists of 45.2 acres associated with the western portion of the former Bear River Mill site. Environmental concerns at the Rare Earth Landscape Materials property center on operation and waste disposal activities from historical underground gold mining and lumber milling activities. Environmental investigations and remediation activities have been ongoing since the 1980s mainly at the former lumber and wood products facilities. On February 16, 2017, a Voluntary Cleanup Agreement (VCA) was executed between the City and DTSC. Similar to a SVA, the purpose of the VCA is to remediate a release or threatened release of hazardous substances at or from the Rare Earth Landscape Materials site under the oversight of the DTSC. Since 2017, several remedial actions have occurred at the Rare Earth Landscape Materials site, including preparation of a Remedial Design and Implementation Plan for disposition of hazardous substances, well monitoring, and groundwater monitoring for potential arsenic contamination associated with manufacturing and mining activities. DTSC has approved the mitigation described in the Remedial Design and Implementation Plan, which includes the consolidation of mine waste beneath a pavement cap, and a land use covenant to restrict future disturbance of the mine waste and to establish procedures for monitoring and maintenance of the pavement cap.

CHRISETTA CORP LA BARR MEADOWS ROAD PROPERTY

As described on page 3.7-9 of the 2014 SOI EIR, the Chrisetta Corp. La Barr Meadows Road property (11085La Barr Meadows Road) was previously the site of hard rock gold mining and currently contains mine waste stockpiles, former mine works, and a solid waste disposal area. Soil sampling completed in the area detected arsenic and lead at concentrations of potential concern. On August 26, 2004, a VCA was executed between the property owner and DTSC. The purpose of the VCA is to remediate a release or threatened release of hazardous substances at or from the La Barr Meadow Roads Property under the oversight of the DTSC. A Removal Action Workplan (RAW) was approved for the site in 2008 and included recommendations to excavate and dispose contaminated soils at an off-site disposal facility, and consolidate the remaining mine waste and impacted soil on the property under a land use covenant. A CEQA Notice of Exemption was approved for implementation of the RAW on August 18, 2008. As of October 31, 2008, no cleanup actions have taken place. Review of the DTSC database on November 25, 2020, indicated that the La Barr Meadow Roads Property site remains inactive (DTSC 2020d, DTSC 2004, DTSC 2008).

3.5.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

The following reports and data sources document potentially hazardous conditions at the project site and were reviewed for this analysis:

- relevant California Environmental Protection Agency databases and documents(i.e., DTSC EnviroStor and SWRCB Geotracker);
- available literature, including documents published by federal, State, county, and city agencies; and
- applicable elements from the Nevada County General Plan and City of Grass Valley General Plan.

The following subsequent analysis compares the effects of the Adopted Southern SOI Project disclosed in the 2014 SOI EIR to the anticipated effects of the Southern SOI Amendment. Activities proposed as part of the project were evaluated against the hazardous materials information gathered from these sources to determine whether any risks to public health and safety or other conflicts would occur that would be new impacts or substantially more severe than those impacts identified in the 2014 SOI EIR. Previously adopted mitigation is detailed and the potential for a new or substantially more severe impacts are evaluated assuming implementation of these mitigation measures, unless otherwise indicated.

THRESHOLDS OF SIGNIFICANCE

An impact related to hazards and hazardous materials is considered significant if implementation of the project would do any of the following:

- 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/or accident conditions involving the release of hazardous materials into the environment;
- emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school;
- be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- for a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area; and/or
- impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

ISSUES NOT DISCUSSED FURTHER

The 2014 SOI EIR determined that because no schools are located within 0.25 mile of the project site, no impacts related to emissions or handling of hazardous materials within 0.25 mile of an existing school would occur. There are two schools in the project vicinity, however, both are located over 1.25 miles southwest and northeast of the project site. There would be no new significant effects or more severe impacts than identified in the 2014 SOI EIR.

The 2014 SOI EIR concluded that because the project area is not located within 2 miles of a public or private airport, no impacts related to safety hazards within the vicinity of an airport would occur. The nearest airport is located approximately 3 miles northeast of the project area. There would be no new significant effects or more severe impacts than identified in the 2014 SOI EIR.

As described above, for analysis related to wildfire risk and exposure, please refer to Section 3.10, "Wildfire."

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.5-1: Create a Significant Hazard through the Routine Transport, Use, Disposal, or Release of Hazardous Materials

The 2014 SOI EIR evaluated the potential for hazardous materials to create a significant hazard to the public. The storage, use, transportation, and disposal of hazardous materials is regulated by local, state, and federal regulations. Compliance with all applicable local, state, and federal regulations regarding hazardous materials is required for all development of future land uses, including buildout of the Residential Development Area. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. This impact would remain **less than significant** as identified in the 2014 SOI EIR.

Impact 3.7.1 of 2014 SOI EIR (page 3.7-14) evaluated whether the storage, use, and transportation of hazardous materials at the River Islands project site could create a significant hazard to the public. The analysis states that any use, storage, and transportation of hazardous materials during construction and operation subsequent development projects would occur in compliance with local, state, and federal regulations. Therefore, impacts would be less than significant.

Southern SOI Amendment

The Southern SOI Amendment would change the General Plan designations to include a range of residential, commercial, and manufacturing land uses. Though the proposed project itself would not result in the transport, handling, use, and disposal of hazardous materials, new land uses established under the project could result in activities (i.e., construction of manufacturing/industrial uses) that could introduce significant hazards to the public.

Development under the Southern SOI Amendment would be required to use, store, and transport hazardous materials in accordance with local, state, and federal regulations in a manner to protect public health as discussed in Section 3.5.1, "Regulatory Setting." This includes implementation of SWPPP BMPs to address hazardous source control and, if necessary, pollutant control, as well as Cal/OSHA standards in Title 8 of the CCR to conduct on-site evaluations and issue notices of violations to enforce necessary improvements to health and safety practices and DTSC requirements under the RCRA to implement permitting, inspection, compliance, and corrective action programs to ensure that people who manage hazardous waste follow state and federal requirements. These regulations would minimize the potential for accidental releases from construction. Transportation of hazardous materials on area roadways is regulated by CHP and Caltrans to ensure protection of public health from accidental releases.

Because the Southern SOI Amendment would comply with existing regulations related to the transport, use, handling, and disposal of hazardous materials, there would be no new significant effects or more severe impacts than identified in the 2014 SOI EIR. This impact would be **less than significant**.

Residential Development Area

As described above, all construction and operational activities would be subject to local, state, and federal regulations concerning the use, transportation, storage, and disposal of hazardous materials. Compliance with all local, state, and federal regulations related to the transport, use, disposal, and accidental release of hazardous materials during construction would reduce the risk of significant hazards to the public. Future residential development of the area would not create a hazardous material land use operation. Therefore, there is no new significant impact, and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. This impact would be **less than significant**.

Mitigation Measures

No new mitigation is required.

Impact 3.5-2: Conflict with Known Hazardous Materials Sites

The 2014 SOI EIR evaluated the potential for future developed to create significant hazards to the public or environment due to the location of multiple known hazardous materials release sites in the project area. Though hazardous materials sites are located within the project area, compliance with mitigation measures provided in the 2014 SOI EIR as well as compliance with standards identified through the SVAs and VCAs executed for Berriman Ranch Property, Bear River Mill Site East, Rare Earth Landscape Materials, and Chrisetta Corp. La Barr Meadows Road Property sites would ensure that any identified hazards be appropriately remediated such that no significant hazards to the public or environment occur. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. This impact would remain **less than significant** as identified in the 2014 SOI EIR.

Impact 3.7.2 of the 2014 SOI EIR (page 3.7-15) evaluated the potential for future developed to create significant hazards to the public or environment due to the location of multiple known hazardous materials release sites in the project area. The analysis indicated that because remediation and implementation of measures to mitigate recognized environmental conditions at the La Barr Meadows Road Property and the Berriman Ranch Property had not yet occurred, impacts would be potentially significant. Implementation of Adopted Mitigation Measure MM 3.7.2a, MM 3.7.2b, and MM 3.7.2c would reduce potential impacts to a less-than-significant level by preventing release of hazardous materials at their respective sites and therefore eliminating potential safety hazards.

Adopted MM 3.7.2a: Prior to issuance of any grading plans or improvement permits for construction of roads, structures, or infrastructure on the Bear River Mill Site portion of the project area (APNs 22-160-04, -05, -06, -07, -09, -12, and -33), a certification of cleanup shall be obtained.

Adopted MM 3.7.2b: Prior to issuance of any grading permit or improvement permits for construction of roads, structures, or infrastructure on the La Barr Meadows Road property portion of the project area (APNs 09-620-10 and -12, 22-150-23 and -30, and 29-290-09), a certification of cleanup shall be obtained.

Adopted MM 3.7.2c: All recommendations contained in the Phase I Environmental Site Assessment prepared for the Berriman Ranch property (APNs 22-140-03 and 22-160-03) dated August 7, 2007, shall be implemented prior to issuance of grading permits or improvement permits for construction of roads, structures, or infrastructure in this portion of the project area.

Southern SOI Amendment

The Southern SOI Amendment would expand the SOI by approximately 30 acres in the northeast and revise the land use designations within the project area. As evaluated in the 2014 SOI EIR, this future development under the project could create significant hazards by being sited on known locations of hazardous materials. As described above under Section 3.5.2, "Environmental Setting," a Phase I/II ESA was prepared in 2018 indicating the presence of RECs within the proposed manufacturing/industrial use areas of the Southern SOI Amendment. Because of the presence of RECs, local and state regulations related to hazardous material abatement and cleanup must be satisfied prior to site development (NV5 2018). The Phase I ESA prepared in 2020, which covered the approximately 30-acre expansion of the SOI, did not indicate the presence of any RECs (NV5 2020). Implementation of Adopted Mitigation Measures MM 3.7.2a, MM 3.7.2b, and MM 3.7.2c would reduce potential public health impacts by requiring certification of cleanup and implementing recommendations for cleanup at known hazardous materials sites. These actions would ensure that the release of hazardous materials at identified sites does not occur. In addition to implementation of Adopted Mitigation Measures MM 3.7.2a, MM 3.7.2b, and MM 3.7.2c, the City is contracted under a SVA with DTSC to investigate and remediate hazards identified at the Berriman Ranch Property and Bear River Mill Site East, and is under contract through a VCA to remediate hazards identified at the Rare Earth Landscape Materials and La Barr Meadow Roads Property sites. Compliance with 2014 SOI EIR mitigation measures, in addition to compliance with the requirements of the executed SVAs and VCAs would address the potential for hazards to the public or environment on known hazardous materials releases. Thus, there would be no new significant effects or more severe impacts than identified in the 2014 SOI EIR. Impacts would be **less than significant** with modifications to the adopted mitigation measures (shown in <u>underline</u> and ~~strikeout~~ below).

Residential Development Area

The proposed Residential Development Area includes development of 60 duplex lots and approximately 68 condominium units located within the Berriman Ranch property. As previously described, the Berriman Ranch Property is currently subject to a SVA between the City and DTSC for remediation of contaminated soils. The City is required to comply with the remediation and clean-up recommendations and actions identified under the oversight of the DTSC, per conditions provided in the SVA (DTSC 2020e). Once the site has been remediated, a Remedial Action Certification will be issued. Compliance with Adopted Mitigation Measure MM 3.7.2c, as well as compliance with the standards established under the SVA between the City and DTSC, would ensure that hazardous materials at the site are remediated appropriately and that no significant hazards to the public or environment occur. Thus, there would be no new significant effects or more severe impacts than identified in the 2014 SOI EIR. Impacts would be **less than significant.** The following modifications to the adopted mitigation measures (shown in <u>underline</u> and ~~strikeout~~ below) are proposed.

Mitigation Measures

Mitigation Measure 3.5-2a: Modified 2014 SOI MM 3.7.2a

Prior to issuance of any grading plans or improvement permits for construction of roads, structures, or infrastructure on the former Bear River Mill Site portion of the project area<u>, including the Hansen Bros. La Barr Meadows property (APNs</u>

022-200-036, -037, -066; 022-230-010, -052; and 022-160-005) and the Rare Earth Landscape Materials property (APNs 022-160-004, -006, and -033), a certification of cleanup shall be obtained.

Mitigation Measure 3.5-2b: Modified 2014 SOI MM 3.7.2b

Prior to issuance of any grading permit or improvement permits for construction of roads, structures, or infrastructure on the Chrisetta Corp. La Barr Meadows Road property portion of the project area (APNs 009-620-010 and -012, 022-150-023 and -030, and ~~29-290-09~~029-350-012), a certification of cleanup shall be obtained.

Mitigation Measure 3.5-2c: Modified 2014 SOI MM 3.7.2c

All recommendations contained in the Phase I Environmental Site Assessment prepared for the Berriman Ranch property (APNs ~~22-140-03~~022-140-053, 022-140-057, and 022-160-003) dated August 7, 2007, shall be implemented prior to issuance of grading permits or improvement permits for construction of roads, structures, or infrastructure in this portion of the project area. Additionally, all recommendations and required actions identified in the DTSC's RAW shall be implemented prior to site development.

Significance after Mitigation

Because the Southern SOI Amendment would not result in greater impacts related to hazards to the public or environment on known hazardous materials releases, this impact is not more severe than the impact identified in the 2014 SOI EIR. Implementation of Adopted Mitigation Measures 3.7.2a, 3.7.2b, and 3.7.2c, as modified through Mitigation Measures 3.5-2a, 3.5-2b, and 3.5-2c above, would continue to reduce impacts related to hazards to the public or environment on known hazardous materials releases by requiring compliance with applicable cleanup and remediation plans; therefore preventing release of hazardous materials at their respective sites and therefore eliminating potential safety hazards.

Impact 3.5-3: Interfere with Emergency Plans

The 2014 SOI EIR evaluated the potential for the project to interfere with adopted emergency response or evacuation plans. Alternative routes would be provided (if necessary) during construction and evacuation routes would be maintained through standard practices identified in the Nevada County EOP. There is no new significant impact and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. This impact would remain **less than significant** as identified in the 2014 SOI EIR.

SR 49, a designated evacuation route, bisects the southern SOI. Future development of the southern SOI could include roadway improvements along SR 49 and/or connecting roadways, which could result in temporary slowing of traffic or closure of traffic lanes. Should construction activities require temporary closure of all or part of SR 49 or other roadways, alternative routes would, as standard practice, be established for both regular traffic and emergency response vehicles. Once operational, development of the project area would not interfere with emergency response or evacuation plans. As explained in Impact 3.13.3 of the 2014 SOI EIR, future development within the project area may contribute more traffic to the main evacuation routes in the area (SR 49 and La Barr Meadows Road, and farther away, SR 20) in the event evacuations are ordered in the vicinity of the project area. However, all future development within the project area would be required to comply with City requirements for emergency access. This would result in the creation of new additional roadway accesses to the SOI area as compared to existing conditions.

Impact 3.7.3 of 2014 SOI EIR (page 3.7-20) evaluated whether the Adopted Southern SOI would interfere with adopted emergency response or evacuation plans. The analysis states that construction activities associated with future development of the project area could result in temporary slowing of traffic, however, it is unlikely that this would substantially interfere with emergency response or evacuation plans. Further, Nevada County's EOP includes plans to handle traffic bottlenecks or blockages during a mass evacuation. Impacts were determined to be less than significant.

Southern SOI Amendment

Amending the southern SOI to modify land use designations and adding approximately 30 acres to the northeast would not affect the potential for the project to physically interfere with implementation of an adopted emergency response or evacuation plans. As discussed in the 2014 SOI EIR, if construction activities require temporary closure of all or part of SR 49 or other roadways, alternative routes would, as standard practice, be established for both regular traffic and emergency response vehicles. Further, as described in Appendix C, the amendment would result in less intense land uses that generate fewer trips when compared to the potential development analyzed in the 2014 SOI EIR. This would result in less degradation of the existing level of service at area intersections and could reduce the potential for the Adopted Southern SOI Project to impair emergency access and response. Similar to the Adopted Southern SOI Project, new development under the Southern SOI Amendment would result in the creation of new additional roadway accesses to the SOI area as compared to existing conditions.

Additionally, the Nevada County EOP includes measures for establishing traffic control points and identifying bottlenecks and road failures, such as construction sites, as well as maintaining county roads to provide additional evacuation routes (Nevada County 2011). Fire officials take roadway capacity into account in determining potential effects on evacuation planning. Therefore, the potential for interference with an emergency response or evacuation plan would not be more severe than identified in the 2014 SOI EIR. No new impacts would occur and impacts would be **less than significant**.

Residential Development Area

Implementation of the Residential Development Area would also be required establish alternative routes for both regular traffic and emergency response vehicles, should construction activities require temporary closure of roadways. Additionally, measures included in the Nevada County EOP would ensure that evacuation routes be maintained in the event of an emergency or evacuation event. Development of this would also create additional roadway access points that would improve emergency access and evacuation for the site (see Figure 2-7). Therefore, there is no new significant impact, and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. This impact would be **less than significant**.

Mitigation Measures

No new mitigation is required.

3.6 HYDROLOGY AND WATER QUALITY

This section identifies the regulatory context and policies related to hydrology and water quality, describes the existing hydrologic conditions in the project area, and evaluates potential hydrology and receiving water quality impacts of the amended southern SOI and the residential development area. Potential effects on the capacity of City of Grass Valley's water-supply, sewer/wastewater, and drainage/stormwater facilities are addressed in Section 3.8, "Public Utilities and Energy."

The 2014 SOI EIR included Section 3.8, "Hydrology and Water Quality," which evaluated the potential effects of the Southern Sphere of Influence Planning and Annexation Project. The 2014 SOI EIR concluded that there would be less-than-significant impacts related to surface water quality (Impact 3.8-1); drainage patterns, surface runoff, and localized flooding (Impact 3.8-3); stormwater drainage capacity (Impact 3.8-4); flood hazards (Impact 3.8-5); and levee or dam failure, seiche, tsunami, or mudflow (Impact 3.8-5). Potential impacts to groundwater quality were found less than significant with the incorporation of mitigation (MM 3.8.2) that would address the potential for underground utilities, detention ponds, and structural foundations associated with future development to encounter shallow groundwater and impair water quality.

The City received a letter from the Central Valley Regional Water Quality Control Board (RWQCB) in response to the notice of preparation that reiterates the regulatory framework through which Central Valley RWQCB protects the quality of surface and groundwater in the state (see Appendix A).

3.6.1 Regulatory Setting

The regulatory setting provided in the 2014 SOI EIR remains applicable to this analysis. The regulatory information provided on pages 3.8-7 through 3.8-13 of the 2014 SOI EIR provides a description of the Clean Water Act, including the National Pollutant Discharge Elimination System (NPDES) and total maximum daily loads for impaired waterbodies; the Porter-Cologne Water Quality Control Act; and the City's general plan, improvement standards, and development code. The framework also described the oversight roles of the Federal Emergency Management Agency, the State Water Resources Control Board and the Central Valley Regional Water Quality Control Board, and the California Department of Fish and Wildlife.

Grass Valley is located within the boundaries of the Central Valley RWQCB, which is the agency responsible for establishing water quality standards and objectives to protect the beneficial uses of surface water and groundwater within the project area. RWQCBs are responsible for protecting surface water and groundwater from both point and non-point sources of pollution. The Central Valley RWQCB's 2011 Water Quality Control Plan covers all the drainage basin areas for the Sacramento and San Joaquin rivers. This plan describes beneficial uses to be protected in these waterways, water quality objectives to protect those uses, and implementation measures to make sure those objectives are achieved. Self-monitoring by municipalities and water companies is required to ensure water quality standards are being met. Data from monitoring is compiled into reports and filed with the RWQCB. The RWQCB also maintains stormwater quality as it relates to construction activities through a NPDES permitting process. As of July 1, 2013, the City of Grass Valley waste discharge requirements are regulated by the Phase II Small Municipal Separate Storm Sewer System (MS4) permit (State Water Resources Control Board Water Quality Order NO. 2013-0001-DWQ).

The Central Valley RWQCB issues permits for activities that could cause impacts to surface water and groundwater in the vicinity of any project site during construction and operation activities. Construction activities that result in the disturbance of more than 1 acre would be required to submit a Notice of Intent and stormwater pollution prevention plan (SWPPP) to the State Water Resources Control Board for coverage under the NPDES State General Construction Permit.

3.6.2 Environmental Setting

The 2014 SOI EIR (pages 3.8-1 through 3.8-6) provides an overview of regional hydrology, surface water resources, groundwater, water quality, and flood zones that adequately describes the conditions within the project area. Surface water flows east to west in two minor drainages toward Wolf Creek, which abuts the southwestern portion of the project area approximately 2,200 feet west of State Route (SR) 49. Wolf Creek flows south approximately 14 miles to the Bear River, which flows into the Feather River, a major tributary to the Sacramento River. The area experiences seasonal soil saturation and standing water. Ponding has been influenced by historic alteration of area hydrology, particularly on the former Bear River Mill site east of SR 49 where there are two ponds created by earthen dams. The project area is not within a groundwater basin defined by the California Department of Water Resources (DWR). Where present, groundwater is confined to bedrock fractures and perched zones above a resistant rock type or impermeable soil.

3.6.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

Evaluation of potential hydrologic and water quality impacts is based on a review of existing documents and studies that address water resources in the vicinity of the project. Information obtained from these sources was reviewed and summarized to describe existing conditions and to identify potential environmental effects, based on the standards of significance presented in this section.

The following subsequent analysis compares the effects of the Southern Sphere of Influence and Annexation Project disclosed in the 2014 SOI EIR to the anticipated effects of the amended project. Previously adopted mitigation is detailed and the potential for new or substantially more severe impacts are evaluated assuming implementation of these mitigation measures, unless otherwise indicated.

THRESHOLDS OF SIGNIFICANCE

An impact on hydrology or water quality is considered significant if implementation of the amended southern SOI and the residential development area would do any of the following:

- violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water 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
  - result in substantial erosion or siltation on- or off-site;
  - result in flooding on-site or off-site;
  - 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;
  - impede or redirect flood flows;
- in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; and/or
- conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

ISSUES NOT DISCUSSED FURTHER

The potential for the amended southern SOI and the residential development area to substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project could impede sustainable groundwater management is not evaluated in detail because there is not a DWR-defined and actively managed groundwater basin in the project area. Furthermore, potable water to serve the residential development area west of SR 49 would be provided by Nevada Irrigation District. In this 10-acre area, the development has been designed to place impervious surfaces (i.e., residential units, roadways, and parking) in a manner that protects the natural, ephemeral drainages to the greatest extent possible. In general, these drainage areas are more likely to support groundwater recharge.

The 2014 SOI EIR evaluated the potential for future development to deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table in Impact 3.12.3. This impact was determined to be less than significant because annexed properties would be required to connect to either the existing water distribution managed by either the City or NID (depending on location) and neither of these systems employ groundwater wells. The analysis in the 2003 EIR for the City of Grass Valley General Plan similarly notes that annexations may decrease the regional draw of groundwater as properties are connected to surface water distribution systems rather than drawing groundwater from private wells.

As disclosed in the 2014 SOI EIR analysis, impervious surfaces associated with urban development reduce the area where groundwater recharge can occur. In general, groundwater recharge potential is greatest along streams and near wetlands. Recognizing that urban development reduces the area available for groundwater recharge, Grass Valley General Plan Policies 25-LUP and 2-COSG set out to protect wetland areas from development, thereby preserving those areas for their beneficial qualities, such as groundwater recharge. The proposed project includes the dedication of open space lands along Wolf Creek, which would ensure that although future development would create new impervious surfaces within the project area, the most vital groundwater recharge areas along the creek would be permanently protected from development of any kind. With the protection of open space areas along Wolf Creek and by relying on surface water supplies, future development within the project area would be unlikely to create a net deficit of groundwater supplies in the area.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.6-1: Substantially Degrade Surface Water Quality

The 2014 SOI EIR determined that subsequent development projects would be required to comply with State and local regulations that would minimize the potential for construction and operational water quality impacts. Construction and operation of the residential development area and subsequent development projects under the amended Southern Sphere of Influence Planning and Annexation Project would be required to comply with the same requirements and regulations. Thus, implementation of the amendments and residential development would not result in a new significant effect and the impact is not more severe than the impact identified in the 2014 SOI EIR. Compliance with existing State and local regulations would reduce potential construction and operational water quality impacts for the project and residential development to **less than significant**.

Impact 3.8.1 of the 2014 SOI EIR (page 3.8-15) evaluated the potential for construction and operational water quality impacts associated with theoretical buildout of project area, concluding that subsequent development projects would be required to comply with State and local regulations that would reduce the potential for water quality impacts to a less-than-significant level.

Southern SOI Amendment

If the project area is developed according to the proposed land use designations and pre-zoning, there is a potential for downstream sedimentation and surface water quality impacts to occur during construction and operation. Vegetation removal and grading could expose soils that are moderately susceptible to erosion; and fuels, lubricants,

and other materials commonly used during construction could be introduced into area surface waters. During operation, rainwater would flow over impervious surfaces, potentially picking up urban pollutants (e.g., motor oil, fertilized runoff, household chemicals) and sediment that is carried to local creeks that flow to the ocean.

As summarized in Impact 3.8-1 of the 2014 SOI EIR (page 3.8-15), the potential for these activities to result in a substantial degradation of surface water quality would be addressed through the application of established regulations, including the Construction Stormwater General Permit adopted by the State Water Resources Control Board, and the City's General Plan, Development Code, and Improvement Standards. For projects that are 1 acre or larger, these standard requirements include preparation of a SWPPP that specifies best management practices (BMPs) designed to prevent construction pollutants (including sediment, fuels, and lubricants) from entering waterways. City Improvement Standards also require developers to keep adjoining public streets free and clean of project dirt, mud, materials, and debris during the construction period. The City verifies compliance through the tentative map and development review process and through subsequent environmental review of specific projects.

The 2014 SOI EIR also evaluated the potential for future development to add impervious surfaces to the project area and introduce common urban pollutants (e.g., oils, grease, and metal by-products of combustion) after buildout. This could increase the amount and intensity of runoff and the potential for contamination of local surface waters. The 2014 SOI EIR concluded that compliance with the City's General Permit for the Discharge of Stormwater under the NPDES Stormwater Program would reduce the potential for development in the project area to result in substantial pollutant discharges. The City also requires the following stormwater system management practices to be implemented for new development in the City:

- biofiltration through the use of vegetation;
- permanent erosion control features at discharge points and drainage courses;
- on-site detention via ponds, vegetative swales, underground culverts; and
- treatment of runoff for all projects via oil/water separators.

The Southern SOI Amendment would add approximately 30 acres to the SOI and adjust the land use designations to reduce the open space east of SR 49, increasing the potential for construction of industrial uses upon annexation. Land use designation changes associated with the project would not substantially degrade water quality in violation of water quality standards. Although future development has the potential to adversely affect water quality at a project-specific level, future projects associated with land use development would adhere to existing regulations and would operate under the oversight of applicable regulatory agencies. Through these actions, it is anticipated that growth would occur without resulting in a violation of water quality standards. Thus, there would be no new significant effects or more severe impacts than identified in the 2014 SOI EIR. This impact would be **less than significant**.

Residential Development Area

As discussed above, the proposed residential development would comply with existing regulations that are protective of surface water quality. Prior to issuance of a grading permit, the applicant would be required to demonstrate coverage for project activities under the SWRCB's NPDES General Permit for Stormwater Discharges Associated with Construction Activities. To obtain coverage under the permit, the project applicant would submit a Notice of Intent with the required permit fee and prepare a SWPPP for review by the Central Valley RWQCB. The development would also be required to adhere to the best management practices established in Chapter 12 of the City's Code of Ordinances. Pursuant to the City's Code of Ordinances, appropriate erosion and sediment controls are determined in accordance with the guidance provided in the California Stormwater Quality Association Stormwater Best Management Practice Handbook and City improvement standards and may include site planning considerations, construction staging and timing, and installation of temporary detention ponds or other treatment facilities.

During operation, the City's stormwater system would comply with the requirements of the MS4 program, which regulates discharges of stormwater and authorized non-stormwater from the City's system. The City Code indicates that the public works director/city engineer may establish controls on the volume and rate of stormwater runoff from

new developments and redevelopment, as may be appropriate to minimize peak flows or total runoff volume. These controls may include limits on impervious surface areas or provisions for retention and retention of runoff on-site.

This development would be subject to the City's General Plan, Development Code, and Improvement Standards, which would address the potential for the construction or operation of future development in the project area to violate water quality standards, waste discharge requirements, or otherwise substantially degrade surface water quality. Therefore, the potential for degradation of surface water quality would not be more severe than identified in the 2014 SOI EIR. No new impacts would result from development of the residential area. The impact would be **less than significant**.

Mitigation Measures

No new mitigation is required.

Impact 3.6-2: Substantially Degrade Groundwater Quality

The 2014 SOI EIR determined that subsequent development projects could include subsurface elements that could encounter shallow groundwater. Implementation of Adopted Mitigation Measure MM 3.8.2 would reduce impacts to groundwater quality by requiring site-specific subsurface investigations and incorporation of best available water quality control features, subject to City drainage standards and approval, where facilities would be within 2 feet of the proposed bottom elevation. This mitigation would also address the potential for development in the amended SOI and residential development area to affect groundwater quality. Thus, implementation of the amendments and residential development would not result in a new significant effect and the impact is not more severe than the impact identified in the 2014 SOI EIR. This impact would be **less than significant** with mitigation.

The 2014 SOI EIR considered the potential for the Southern Sphere of Influence Planning and Annexation Project to degrade groundwater quality in Impact 3.8-2 (page 3.8-16). Because future development could include the construction of detention basins, which could encounter shallow groundwater, the 2014 SOI EIR concluded that this impact would be potentially significant. Implementation of Mitigation Measure MM 3.8.2 would reduce impacts to groundwater quality associated with future development proposals within the project area by not allowing the potential contamination of groundwater by underground utilities, urban runoff pollutants that would be captured in the detention ponds, or the construction of structural foundations.

> **Adopted MM 3.8.2:** As part of the final design of specific future development projects, soil borings shall be taken at representative locations within the future project footprint to analyze the subsurface soils that are present and the elevation of the subsurface water table. If these soil borings identify shallow groundwater within 2 feet of the proposed bottom elevation of underground utilities, detention ponds, and/or structure foundations, a liner and/or best available water quality control features (i.e., leachate management system) shall be incorporated into the design of proposed underground utilities, detention ponds, and foundations, subject to City drainage standards and approval.

Implementation of Mitigation Measure MM 3.8.2 would mitigate the impact to a level that is less than significant.

Southern SOI Amendment

The Southern SOI Amendment would expand the SOI by approximately 30 acres in the northeast and would revise the land use designations within the project area. As evaluated in the 2014 SOI EIR, this could result in development that includes subsurface underground utilities, detention ponds, and foundations. Implementation of Adopted Mitigation Measure MM 3.8.2 would reduce impacts to groundwater quality associated with future development proposals within the project area by requiring soil investigations to analyze the subsurface soils that are present and the elevation of the subsurface water table as part of the final design of specific future development projects within the project area. Thus, there would be no new significant effects or more severe impacts than identified in the 2014 SOI EIR. This impact would be **less than significant** with mitigation.

Residential Development Area

The residential development would include subsurface utilities and building foundations that could expose groundwater to contaminants. As required in Adopted Mitigation Measure MM 3.8.2, soil boring would be taken within the development area to analyze the subsurface soils that are present and the elevation of the subsurface water table. If these soil borings identify shallow groundwater within 2 feet of the proposed bottom elevation of underground utilities, detention ponds, and/or structure foundations, a liner and/or best available water quality control features (i.e., leachate management system) would be incorporated into the design of proposed underground utilities, detention ponds, and foundations, subject to City drainage standards and approval.

With this mitigation, the residential development project would not violate any water quality standards or otherwise degrade water quality. No new impacts would result from development of the residential area. Therefore, the impact would not be more severe than identified in the 2014 SOI EIR. The impact would be **less than significant** with mitigation.

Mitigation Measures

No new mitigation is required.

Impact 3.6-3: Substantially Alter the Existing Drainage Pattern of Project Area

The 2014 SOI EIR determined that subsequent development projects would be required to comply with State and local regulations that would minimize the potential for substantial alteration of the existing drainage pattern in the southern SOI. Construction and operation of the residential development area and subsequent development projects under the amended Southern Sphere of Influence Planning and Annexation Project would be required to comply with the same requirements and regulations. Thus, implementation of the amendments and residential development would not result in a new significant effect and the impact is not more severe than the impact identified in the 2014 SOI EIR. Compliance with existing State and local regulations would reduce potential construction and operational impacts on drainage patterns to a **less-than-significant** level.

As described in Impact 3.8.3 of the 2014 SOI EIR (page 3.8-18), construction and operation of future uses in the project area could affect existing drainage patterns, runoff rates, and flooding. Future development would result in the addition of new impervious surfaces that, if not designed properly, could impact drainage conditions both on- and off-site. The analysis determined that the City's Improvement Standards establish prescriptive requirements that would address runoff from specific, future development. Runoff would be treated and detained on-site through the implementation of detention systems, oil/water separators, and other filtration techniques. Through these established requirements, the City would ensure that subsequent projects do not substantially increase existing runoff rates and cause off-site flooding. Stormwater leaving the detention systems would be collected in either a public or private system, before flowing into Wolf Creek.

Impact 3.8-4 of the 2014 SOI EIR indicates that the City requires the preparation of drainage plans to provide stormwater management for all development proposals. City standards also require that development projects fully implement the recommendations made by the drainage plans to ensure that post-construction stormwater rates and intensities do not exceed predevelopment levels. The FEIR (page 2.0-2) clarifies that City requires the following stormwater system management practices to be implemented for new development in the City:

- Biofiltration through the use of vegetation.
- Permanent erosion control features at discharge points and drainage courses.
- On-site detention via ponds, vegetative swales, underground culverts.
- Treatment of runoff for all projects via oil/water separators.

Compliance with the City's General Plan, Development Code, and Improvement Standards, along with State of California regulations would be verified through the City's Tentative Map and/or Development Review processes,

which may include subsequent environmental review. Compliance with those standards would ensure that future development within the project area would have a less-than-significant impact.

Southern SOI Amendment

The Southern SOI Amendment would increase the potential for development in the SOI. As discussed in the 2014 SOI EIR, the potential volume and rate of stormwater runoff increases with the potential for urbanization of undeveloped land. The increased runoff could also discharge at a greater rate, leading to higher peak flows during storm events that could increase the potential for stormwater to cause flood conditions and to transport urban pollutants. However, drainage associated with future development would be addressed through compliance with the City's General Plan, Development Code, and Improvement Standards, along with federal and State of California regulations.

The City would require project sponsors to comply with federal and State water quality regulations for all projects that would alter existing drainage patterns. Erosion control measures would be consistent with NPDES General Construction Permit requirements, including preparation and implementation of a SWPPP, and final drainage plans would be consistent with the MS4 NPDES permit. Projects would also generally comply with the design guidelines established in the California Stormwater Best Management Practice Handbook for New Development and Redevelopment (CASQA 2003) to minimize both increases in the volume and rate of stormwater runoff, and the amount of pollutants entering the storm drain system. Once constructed, the NPDES Provision C.3 requirements for new development would include source control measures in site designs to address both soluble and insoluble stormwater runoff pollutant discharges. As established in the 2014 SOI EIR (FEIR page 2.0-2), stormwater system management practices required for new development in the City include: biofiltration through the use of vegetation; permanent erosion control features at discharge points and drainage courses; on-site detention via ponds, vegetative swales, underground culverts; and treatment of runoff for all projects via oil/water separators.

The City requires the preparation of drainage plans to provide stormwater management for all development proposals. City standards also require that development projects fully implement the recommendations made by the drainage plans to ensure that post-construction stormwater rates and intensities do not exceed predevelopment levels. Compliance would be verified through the City's Tentative Map and/or Development Review processes. These standards would ensure future development would not substantially alter the existing drainage pattern of the project area in a manner that could result in erosion or siltation on- or off-site; flooding on-site or off-site; runoff water that would exceed the capacity of existing or planned stormwater- drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows.

The federal, State, and local policies and regulations specified above are in place to provide preventative measures to limit or avoid substantial alteration of the existing drainage pattern of the Plan area. Because land use projects would comply with these requirements, implementation of the proposed amendment to the southern SOI would not be expected to increase the rate or amount of surface runoff in a manner that would result in on- or offsite flooding, or substantial erosion or siltation. Thus, there would not be a new significant effect and the impact would not be more severe than the identified in the 2014 SOI EIR. With implementation of established standards that require drainage plans be prepared to ensure that stormwater rates do not exceed pre-project levels, this impact would be **less than significant**.

Residential Development Area

Development of the residential area would be required to comply with the City's adopted standards that address the potential for projects to alter site hydrology in a manner that could result in substantial erosion or siltation on- or off-site; result in flooding on-site or off-site; 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 impede or redirect flood flows.

As described above, City standards require preparation of drainage plans and implementation of any recommendations to ensure that post-construction stormwater rates and intensities do not exceed predevelopment levels. The City requires that the project include a stormwater management plan that provides for sufficient onsite stormwater storage to ensure that runoff rates during the 2-year, 10-year, and 100-year storm do not increase

compared to the existing condition. Compliance would be verified through the City's Tentative Map and/or Development Review processes. These standards would address the potential for the residential development to substantially alter the existing drainage pattern of the project area in a manner that could result in erosion or siltation on- or off-site; flooding on-site or off-site; runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows. Thus, there would not be a new significant effect and the impact would not be more severe than the identified in the 2014 SOI EIR. With implementation of established standards that require preparation of drainage plans to ensure that stormwater rates do not exceed pre-project levels, this impact would be **less than significant**.

Mitigation Measures

No new mitigation is required.

Impact 3.6-4: Risk Release of Pollutants Due to Inundation of a Flood Hazard, Tsunami Zone, or Seiche Zone

The Southern Sphere of Influence Planning and Annexation Project is not within a mapped tsunami or seiche zone. FEMA has established a flood zone for Wolf Creek that partially abuts the western edge of the SOI. Because this area would be designated as Open Space and is not planned for future development, the 2014 SOI EIR concluded that there would be a less-than-significant impact. The residential development and amended SOI would not alter the designation of the land within the FEMA floodplain. Thus, implementation of the amendments and residential development would not result in a new significant effect and the impact is not more severe than the impact identified in the 2014 SOI EIR. This impact would be **less than significant**.

As described in Impact 3.8.5 of the 2014 SOI EIR (page 3.8-19), the project area is not subject to substantial threat of inundation due to flood, tsunami, or seiche. The project area is not within a mapped tsunami or seiche zone. FEMA has established a flood zone for Wolf Creek that partially abuts the western edge of the SOI. As illustrated in Figure 3.8-1 in the 2014 SOI EIR, less than 2 acres of the 100-year floodplain of Wolf Creek are within the SOI. Because this area would be designated as Open Space and is not planned for future development, the 2014 SOI EIR concluded that there would be a less-than-significant impact.

Southern SOI Amendment

The 30 acres proposed for addition to the Southern SOI are not within an established 100-year flood zone (see 2014 SOI EIR, Figure 3.8-1), and the area of the adopted SOI that is mapped as 100-year flood zone would remain in Open Space. Therefore, the potential for release of pollutants due to inundation of a flood hazard, tsunami zone, or seiche zone would not be more severe than identified in the 2014 SOI EIR. No new impacts would result from the amendment. The impact would be **less than significant**.

Residential Development Area

As discussed above, the proposed residential development area is not within an area subject to seiche or tsunami. This portion of the SOI is also outside, and upgradient of, the 100-year flood zone established for Wolf Creek. Therefore, the potential for release of pollutants due to inundation of a flood hazard, tsunami zone, or seiche zone would not be more severe than identified in the 2014 SOI EIR. No new impacts would result from development of the residential area. The impact would be **less than significant**.

Mitigation Measures

No new mitigation is required.

Impact 3.6-5: Conflict With or Obstruct Implementation of a Water Quality Control Plan or Sustainable Groundwater Management Plan

The 2014 SOI EIR determined that subsequent development projects would be required to comply with State and local regulations that would minimize the potential for construction and operational water quality impacts. Construction and operation of the residential development area and subsequent development projects under the amended Southern Sphere of Influence Planning and Annexation Project would be required to comply with the same requirements and regulations. Thus, implementation of the amendments and residential development would not result in a new significant effect and the impact is not more severe than the impact identified in the 2014 SOI EIR. Compliance with existing State and local regulations would reduce potential construction and operational water quality impacts for the project and residential development to **less than significant**.

Impact 3.8.1 of the 2014 SOI EIR (page 3.8-15) evaluated the potential for construction and operational water quality impacts associated with theoretical buildout of project area, concluding that subsequent development projects would be required to comply with State and local regulations that would reduce the potential for water quality impacts to a less than significant level. As indicated above, the project area is not within a groundwater basin recognized by DWR. As such, there is not an applicable Sustainable Groundwater Management Plan.

Southern SOI Amendment

Amending the southern SOI to modify land use designations and add approximately 30 acres to the northeast would not affect the potential for the project to conflict with or obstruct implementation of a water quality control plan. As discussed in the 2014 SOI EIR, all subsequent development would be required to comply with the Central Valley RWQCB's regulations that implement the Water Quality Control Plan. Therefore, the potential for conflict or obstruction of the water quality control plan would not be more severe than identified in the 2014 SOI EIR. No new impacts would result from the amendment. The impact would be **less than significant**.

Residential Development Area

Buildout of the residential development area would be required to comply with the State and local regulations described in Impact 3.6-1. This development would be subject to the City's General Plan, Development Code, and Improvement Standards, which would address the potential for the construction or operation of future development to conflict with or obstruct implementation of a water quality control plan. Therefore, the potential for degradation of surface water quality would not be more severe than identified in the 2014 SOI EIR. No new impacts would result from development of the residential area. The impact would be **less than significant**.

Mitigation Measures

No new mitigation is required.

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3.7 NOISE

This section evaluates potential changes in noise and groundborne vibration impacts of the project. This section includes a summary of acoustic fundamentals, a summary of applicable regulations related to noise and vibration, a description of the existing noise environment, and an analysis of potential noise and vibration impacts associated with the project. Additional data is provided in Appendix E, "Noise and Vibration Modeling Calculations."

The 2014 SOI EIR included Section 3.9, "Noise," which evaluated the potential for the Adopted Southern SOI Project to result in noise and vibration impacts. The 2014 SOI EIR included impact analyses evaluating construction noise (Impact 3.9.1), traffic noise (Impact 3.9.2), groundborne vibration (Impact 3.9.3), and stationary noise sources (Impact 3.9.4). Mitigation Measure 3.9.2 was included to reduce the traffic noise impact to a less-than-significant level, and all other impacts did not require mitigation (City of Grass Valley 2014).

No comments related to noise and groundborne vibration were received in response to the notice of preparation.

3.7.1 Acoustic Fundamentals

Prior to discussing noise setting for the project, background information about sound, noise, vibration, and common noise descriptors is needed to provide context and a better understanding of the technical terms referenced throughout this section. The 2014 SOI EIR includes a similar background on noise (City of Grass Valley 2014:3.9-1)

SOUND, NOISE, AND ACOUSTICS

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a human ear. Noise is defined as loud, unexpected, annoying, or unwanted sound. In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two.

SOUND PRESSURE LEVELS AND DECIBELS

The amplitude of pressure waves generated by a sound source determines the loudness of that source, also called the sound pressure level (SPL). SPL is most commonly described by using decibels (dB) because this logarithmic unit best corresponds to the way the human ear interprets sound pressures.

ADDITION OF DECIBELS

Because the dB is a logarithmic unit, SPLs expressed in dB cannot be added or subtracted through ordinary arithmetic. Under the dB scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness at the same time, the resulting sound level at a given distance would be 3 dB higher than if only one of the sound sources was producing sound under the same conditions. For example, if one idling truck generates an SPL of 70 dB, two trucks idling simultaneously would not produce 140 dB; rather, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together produce a sound level approximately 5 dB louder than one source.

A-WEIGHTED DECIBELS

The decibel scale alone does not adequately characterize how humans perceive noise. The frequency of a sound, which determines the pitch perceived by the human ear, has a substantial effect on the human response to sound. Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, people are most sensitive to the frequency range of 1,000–8,000 hertz (Hz) and perceive sounds within this

range better than sounds of the same amplitude with frequencies outside of this range. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an "A-weighted" sound level (expressed in units of A-weighted dB) can be computed based on this information.

The A-weighting approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgment correlates well with the A-scale sound levels of those sounds. Thus, noise levels are typically reported in terms of A-weighted dB. All sound levels discussed in this section are expressed in A-weighted dB. Table 3.7-1 describes typical A-weighted noise levels for various noise sources.

Table 3.7-1 Typical A-Weighted Noise Levels

Common Outdoor Activities	Noise Level (dB)	Common Indoor Activities
	— 110 —	Rock band
Jet fly-over at 1,000 feet	— 100 —	
Gas lawn mower at 3 feet	— 90 —	
Diesel truck at 50 feet at 50 miles per hour	— 80 —	Food blender at 3 feet, Garbage disposal at 3 feet
Noisy urban area, daytime, Gas lawn mower at 100 feet	— 70 —	Vacuum cleaner at 10 feet, Normal speech at 3 feet
Commercial area, Heavy traffic at 300 feet	— 60 —	
Quiet urban daytime	— 50 —	Large business office, Dishwasher next room
Quiet urban nighttime	— 40 —	Theater, large conference room (background)
Quiet suburban nighttime	— 30 —	Library, Bedroom at night
Quiet rural nighttime	— 20 —	
	— 10 —	Broadcast/recording studio
Lowest threshold of human hearing	— 0 —	Lowest threshold of human hearing

Source: Caltrans 2013a: Table 2-5.

HUMAN RESPONSE TO CHANGES IN NOISE LEVELS

As described above, the doubling of sound energy results in a 3-dB increase in the sound level. However, given a sound level change measured with precise instrumentation, the subjective human perception of a doubling of loudness will usually be different from what is measured.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear can discern 1-dB changes in sound levels when exposed to steady, single-frequency ("pure-tone") signals in the midfrequency (1,000–8,000 Hz) range. In general, the healthy human ear is most sensitive to sounds between 1,000 and 5,000 Hz and perceives both higher and lower frequency sounds of the same magnitude with less intensity (Caltrans 2013a:2-18). In typical noisy environments, changes in noise of 1–2 dB are generally not perceptible. However, it is widely accepted that people can begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5-dB increase is generally perceived as a distinctly noticeable increase, and a 10-dB increase is generally perceived as a doubling of loudness (Caltrans 2013a:2-10). Therefore, a doubling of sound energy (e.g., doubling the volume of traffic on a highway) that would result in a 3-dB increase in sound would generally be perceived as barely detectable.

COMMON NOISE TERMS AND DESCRIPTORS

Noise in our daily environment fluctuates over time. Various noise descriptors have been developed to describe time-varying noise levels. The following are the noise terms and descriptors used throughout this section.

- **Equivalent Continuous Sound Level (L_{eq}):** L_{eq} represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound level that occurs during the same period (Caltrans 2013a:2-48). For instance, the 1-hour equivalent sound level, also referred to as the hourly L_{eq}, is the energy average of sound levels occurring during a 1-hour period.
- **Maximum Sound Level (L_{max}):** L_{max} is the highest instantaneous sound level measured during a specified period (Caltrans 2013a:2-48; FTA 2018:207–208).
- **Day-Night Level (L_{dn}):** L_{dn} is the energy average of A-weighted sound levels occurring over a 24-hour period, with a 10-dB "penalty" applied to sound levels occurring during nighttime hours between 10 p.m. and 7 a.m. (Caltrans 2013a:2-48; FTA 2018:214).
- **Community Noise Equivalent Level (CNEL):** CNEL is the energy average of the A-weighted sound levels occurring over a 24-hour period, with a 10-dB penalty applied to sound levels occurring during the nighttime hours between 10 p.m. and 7 a.m. and a 5-dB penalty applied to sound levels occurring during evening hours between 7 p.m. and 10 p.m. (Caltrans 2013a:2-48).
- **Fixed Noise Source:** As used in the Grass Valley General Plan, a fixed noise source is "any fixed or mobile source not preempted from local control by federal or state regulations." The General Plan also provides a non-exhaustive list of example fixed noise sources that are usually of concern, including heavy equipment, transformers, fans, and boilers. The types of facilities that tend to have fixed noise sources, per the General Plan, include industrial facilities, fabricating shops, and trucking operations (City of Grass Valley 1999:6-2).

SOUND PROPAGATION

When sound propagates over a distance, it changes in level and frequency content. The manner in which a noise level decreases with distance depends on the following factors:

Geometric Spreading

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Noise from a line source (e.g., road) propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source.

Ground Absorption

The propagation path of noise from a source to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective wave–canceling provides additional attenuation associated with geometric spreading. Traditionally, this additional attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 feet. The majority of the project area is an acoustically absorptive or soft site (i.e., has an absorptive ground surface between the source and the receiver, such as soft dirt, grass, or scattered bushes and trees). Therefore, the project area has an additional ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the attenuation rate associated with cylindrical spreading, the additional ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance. This would hold true for point sources, resulting in an overall drop-off rate of up to 7.5 dB per doubling of distance.

Atmospheric Effects

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels, as wind can carry sound. Other factors such as air temperature, humidity, and turbulence can also affect sound attenuation.

Shielding by Natural or Human-Made Features

A large object or barrier in the path between a noise source and a receiver attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dB of noise reduction (Caltrans 2013a:2-41; FTA 2018:42). Barriers higher than the line of sight provide increased noise reduction (FTA 2018:16). Vegetation between the source and receiver is rarely effective in reducing noise because it does not create a solid barrier unless there are multiple rows of vegetation of sufficient height (FTA 2018:15, 104, 106).

GROUND VIBRATION

Vibration is the periodic oscillation of a medium or object with respect to a given reference point. Ground-borne vibration is vibration of and through the ground. Ground-borne vibration can range from levels that are imperceptible by humans to levels that can create substantial damage to buildings and structures.

Typical sources of human-induced, perceptible ground vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the resultant ground vibration is rarely perceptible. Certain construction activities, when occurring within close enough proximity to a receptor, can generate sufficient ground vibrations to pose a risk to nearby structures. Constant or transient sources of vibrations can weaken structures, crack facades, and disturb occupants (FTA 2018:113).

Ground vibration levels generated by construction activity can be transient, random, or continuous. Transient construction vibrations are generated by blasting, impact pile driving, and wrecking balls. Continuous vibrations are generated by vibratory pile drivers, large pumps, and compressors. Random vibration can result from jackhammers, pavement breakers, and heavy construction equipment.

Ground-borne vibration amplitudes are commonly expressed in peak particle velocity (PPV), which is normally described in inches per second (in/sec). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal.

3.7.2 Regulatory Setting

The regulatory setting for noise and vibration on pages on pages 3.9-5 through 3.9-10 of the 2014 SOI EIR remains applicable to the noise and vibration analysis, including descriptions of the California General Plan Guidelines, Title 24 of the California Code of Regulations, California Department of Transportation (Caltrans)-recommended vibration levels, the City of Grass Valley 2020 General Plan, and Chapter 8.28 of the City's Code of Ordinances. The following regulatory setting reiterates the specific noise and vibration standards included in the 2014 SOI EIR that are also used in this SEIR to analyze noise and vibration impacts.

STATE

California Department of Transportation

In 2013, Caltrans published the Transportation and Construction Vibration Manual (Caltrans 2013b). The manual provides general guidance on vibration issues associated with construction and operation of projects in relation to human perception and structural damage. The 2014 SOI EIR cited an earlier version of this document, published in 2004. However, the recommended vibration levels remain the same.

Table 3.7-2 presents the Caltrans-recommended criteria for evaluation of potential structural damage, based on building classification. Table 3.7-3 shows the Caltrans-recommended criteria relating to human annoyance, based on human response to differing levels of vibration.

Table 3.7-2 Structural Damage Potential to Buildings at Various Groundborne Vibration Levels

Structure and Condition	PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely Fragile Historic Buildings, Ruins, Ancient Monuments	0.12	0.08
Fragile Buildings	0.2	0.1
Historic and Some Old Buildings	0.5	0.25
Older Residential Structures	0.5	0.3
New Residential Structures	1.0	0.5
Modern Industrial/Commercial Buildings	2.0	0.5

Notes: PPV = Peak Particle Velocity; in/sec = inches per second

Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Source: Caltrans 2013b:38.

Table 3.7-3 Human Annoyance Potential at Various Groundborne Vibration Levels

Human Response	PPV (in/sec)	
	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

Notes: PPV = Peak Particle Velocity; in/sec = inches per second

Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Source: Caltrans 2013b:38.

LOCAL

City of Grass Valley 2020 General Plan

Chapter 6 of the *City of Grass Valley 2020 General Plan* (City of Grass Valley 1999) includes the following noise implementation actions and strategies that are applicable to the project:

- **3-NP**: Utilize noise contour data to determine land uses affected by transportation-related noise sources.
- **5-NP:** Utilize noise contour data to determine appropriate land use patterns in areas affected by stationary noise sources.
- **6-NP:** Locate sensitive land uses (residential neighborhoods, medical facilities, senior care facilities and schools) away from high noise areas.
- **1-NI:** Prohibit development of new noise-sensitive land uses where the noise level due to fixed noise sources will exceed the noise level standards of Table 6-5 [presented as Table 3.7-4 in this SEIR] (as measured immediately within the property line or within a designated outdoor activity area of the new development) unless effective noise mitigation measures have been incorporated into the development design to achieve the standards specified in Table 6-5.
- **2-NI:** Require that noise created by new development of fixed noise sources be mitigated so as not to exceed the noise level standards of Table 6-5 as measured immediately within the property line of lands designated for noise-sensitive land uses.
- **4-NI:** Require that an acoustical analysis be performed where new development of fixed noise sources, or modification of existing fixed noise sources, is likely to produce noise levels exceeding the performance standards of Table 6-5, and that noise mitigation be included in the project design.

- **5-NI:** Prohibit new development of noise-sensitive land uses in areas exposed to existing or projected future levels of noise from transportation noise sources which exceed the levels specified in Table 6-6 [presented as Table 3.7-5 in this SEIR] unless the project design includes effective mitigation measures to reduce exterior noise and noise levels in interior spaces to the levels specified in Table 6-6.
- **7-NI:** Adopt the following criteria applicable to roadway improvement projects:
  - Where the existing traffic noise level at the designated outdoor activity area of the affected noise sensitive use is 65 dB L_{dn} or less, noise created by a roadway improvement project shall be mitigated so as not to exceed the ambient noise level by more than 3 dB L_{dn}.
  - Where the existing traffic noise level at the designated outdoor activity area of the affected noise sensitive use exceeds 65 dB L_{dn}, noise created by roadway improvement project shall be mitigated so as not to exceed the ambient noise level by more than 1.5 dB L_{dn}.
- **9-NI:** Require an acoustical analysis and mitigation measures where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table 6-5 or Table 6-6.

Additionally, the General Plan states that noise due to operation of powered equipment for temporary construction activities is not subject to the standards in the Noise Element (City of Grass Valley 1999:6-2).

Table 3.7-4 Noise Level Performance Standards for Fixed Noise Sources

Noise Level Descriptor	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly L_{eq}, dB	55	50
Maximum Level, dB	75	65

Notes: L_{eq} = equivalent continuous sound level; dB = decibel

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 (e.g., humming sounds, outdoor speaker systems, shooting ranges). These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

Source: City of Grass Valley 1999, Table 6-5

Table 3.7-5 Maximum Allowable Noise Exposure by Land Use for Transportation Noise Sources

Land Use	L_{dn}/CNEL, dB, at Outdoor Activity Areas	Interior Spaces	
		L_{dn}/CNEL, dB	dB L_{eq}, dB[1]
Residential	60[2]	45	—
Transient Lodging	60[3]	45	—
Hospitals, Nursing Homes	60[2]	45	—
Theaters, Auditoriums, Music Halls	—	—	35
Churches, Meeting Halls	60[2]	—	40
Office Buildings	—	—	45
Schools, Libraries, Museums	—	—	45
Playgrounds, Neighborhood Parks	70	—	—

Notes: dB = decibel; L_{dn} = day-night level; CNEL = community noise equivalent level

[1] As determined for a typical worst-case hour during periods of use.

[2] Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn}/CNEL 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.

[3] In the case of hotel/motel facilities or other transient lodging, there may be no designated outdoor activity areas (e.g., pool areas). In such cases, only the interior noise level criterion will apply.

Source: City of Grass Valley 1999, Table 6-6.

Table 3.7-6 Land Use Compatibility Guidelines for Development

Land Use Category	Community Noise Exposure (L_{dn} or CNEL, dBA)					
	55	60	65	70	75	80
Residential, Theaters, Auditoriums, Meeting Halls, Churches						
Transient Lodging – Motels, Hotels						
Schools, Libraries, Hospitals, Child Care, Museums						
Playgrounds, Neighborhood Parks, Amphitheaters						
Office Buildings, Business Commercial and Professional						
Industrial, Utilities, Manufacturing, Agriculture						
Golf Courses, Riding Stables, Outdoor Spectator Sports						

Generally Acceptable No noise mitigation measures are required.

Conditionally Acceptable Use should be permitted only after careful study and inclusion of mitigation measures as needed to satisfy the policies of the Noise Element.

Generally Unacceptable Development is usually not acceptable.

Source: City of Grass Valley 1999, Table 6-8

City of Grass Valley Code of Ordinances

Chapter 8.28 of the City's Code of Ordinances includes regulations regarding the operation of noise sources to prohibit unnecessary, excessive, and annoying noise that could affect community residents. The Code of Ordinances does not contain any quantitative noise standards that are directly applicable to the project. However, Section 8.28.100 includes applicable provisions related to construction. Construction activities occurring within 500 feet of a residential zone are restricted to the daytime hours between 7 a.m. and 7 p.m., Monday through Saturday, and work done on Sundays and holidays is prohibited, unless prior permission has been granted by the Building Official in the interest of public convenience or necessity. No permit is required to perform emergency work, which is defined as work necessary to restore property to a safe condition following a public calamity or work required to protect persons or property from an imminent exposure to danger or work by private or public utilities when restoring utility services (City of Grass Valley 2017).

City of Grass Valley Development Code

While the City of Grass Valley Development Code was not included in the regulatory setting of the 2014 SOI EIR noise section, it was referenced in 2014 SOI EIR Impacts 3.9.3 and 3.9.4 and remains applicable to the project. The

Development Code was adopted to protect and promote the public health and safety of residents and businesses. It includes requirements regarding sources of vibration within the City, including:

- Section 17.30.070, Subsection F. Ground Vibration Performance Standards for All Development and Land Uses: No ground vibration shall be generated that is perceptible without instruments by a reasonable person at the property lines of the site, except for vibrations from temporary construction or demolition activities, and motor vehicle operations.

The Development Code also requires all development to comply with the provisions in the Noise Element in the General Plan and includes regulations regarding the installation and design of building mechanical equipment for various land uses.

3.7.3 Environmental Setting

Existing noise sources and noise-sensitive receptors within the SOI and surrounding area are discussed separately below for the program-level Southern SOI Amendment and the project-level residential development, respectively. Sensitive receptors and noise sources in the project area have not changed substantially since certification of the 2014 SOI EIR because land uses and their intensity of use have not changed. Existing sensitive receptors located inside the project area and within a 0.25 mile of the project area are identified in Figure 3.7-1.

Noise-sensitive land uses (i.e., sensitive receptors) are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels, and because of the potential for nighttime noise to result in sleep disruption. Vibration-sensitive land uses are those where vibration would interfere with operations within the building or cause human annoyance or sleep disturbance.

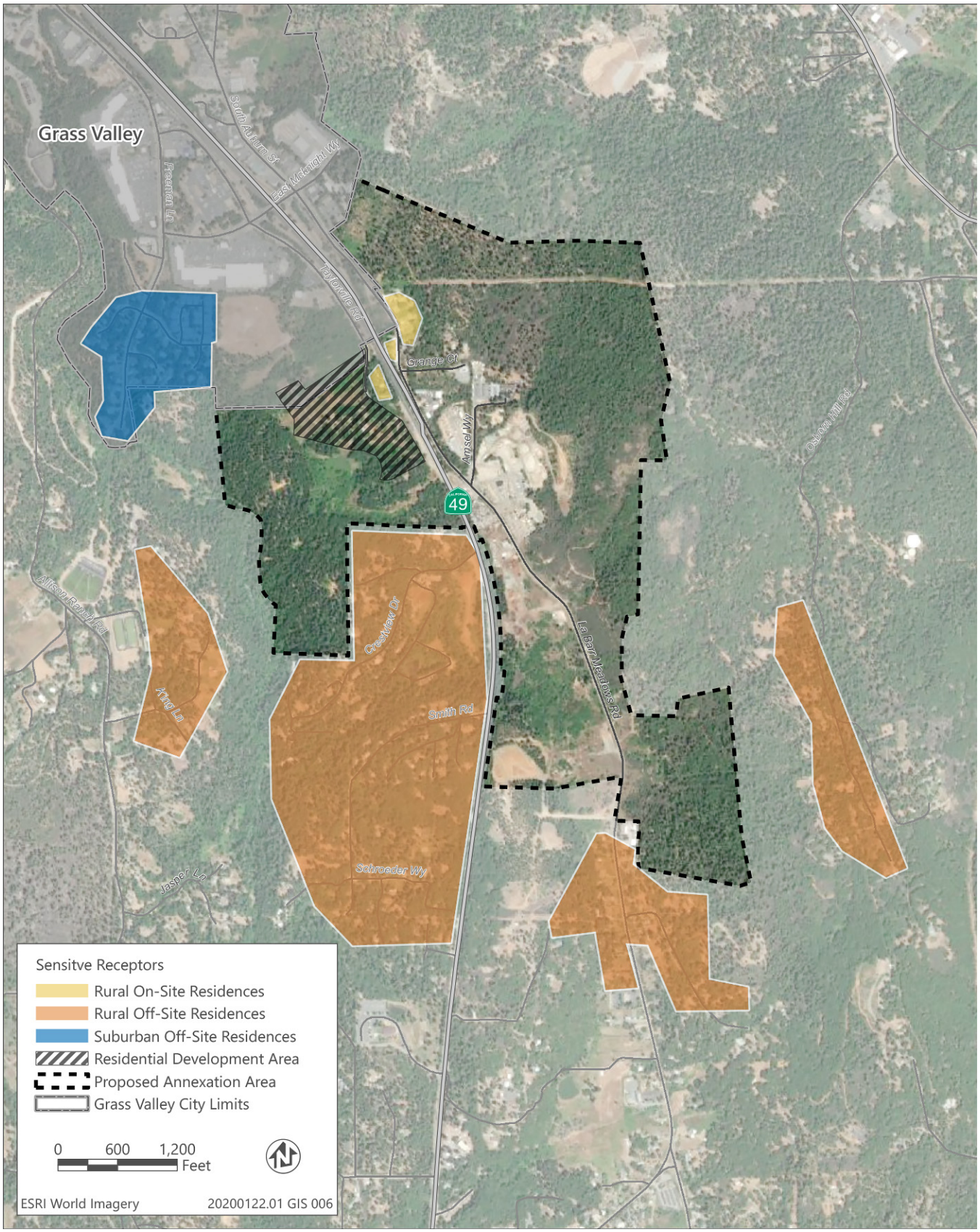
SOUTHERN SOI AMENDMENT

Sensitive Receptors

As shown in Figure 3.7-1, the only sensitive receptors located within the project area are a small number of rural residences located adjacent to State Route (SR) 49 and La Barr Meadows Road. Sensitive receptors in the surrounding area include rural residential uses to the east, south, and west, as well as a suburban residential community directly adjacent to the northwestern boundary of the project area. The rural residential receptors along the eastern boundary of the project area are located 600 feet or further from the nearest project area boundary and are separated from the project area by undeveloped forestland. The rural residential receptors along the western boundary of the project area are similarly distanced from the project area, with the nearest residences located at least 530 feet from the nearest project area boundary and separated from the project area by undeveloped forestland. There are existing rural residential uses immediately to the south, and the Alta Sierra Country Club and associated residential uses are located approximately 2 to 3 miles south of the project area.

Noise Sources

The majority of the project area and surrounding area is vacant, undeveloped land. Rural residential land uses within and around the project area as shown in Figure 3.7-1 are not associated with substantial noise generation. Existing ambient noise levels in the project area vary depending on proximity to nearby roadways and stationary noise sources. The largest, most-travelled roadways in the project area include SR 49 and La Barr Meadows Road. Smaller roadways within the project area, such as Grange Court and Amsel Way, have lower traffic volumes and, thus, generate lower noise levels. Based on the traffic noise data in the City of Grass Valley General Plan, noise levels generated by SR 49 range from 70 to 73 dB CNEL at 100 feet from the roadway, and noise levels generated by La Barr Meadows Road are approximately 59 dB CNEL at 100 feet from the roadway (City of Grass Valley 1999). The traffic noise levels presented in the General Plan are still representative of existing conditions. The 2014 SOI EIR



Sources: Data downloaded from Nevada County in 2020; adapted by Ascent Environmental in 2021

Figure 3.7-1 Noise-Sensitive Receptors

demonstrates that no substantial change in traffic volumes along SR 49 occurred after adoption of the General Plan (City of Grass Valley 2014:3.9-5). This was further confirmed through traffic volumes included in the traffic study prepared for the Southern SOI Amendment (see Appendix C), which suggest that no substantial change in traffic volumes has occurred since adoption of the General Plan or certification of the 2014 SOI EIR. With regard to stationary noise sources, commercial uses within the City of Grass Valley located directly north of the project area generate noise associated with commercial activities, such as parking lot activity, truck deliveries, and building equipment (e.g., heating, ventilation, and air conditioning (HVAC) units, generators). Stationary noise sources within the project area include commercial and industrial land uses concentrated on the eastern side of SR 49, which include sale and storage of landscaping materials, mini storage, a dismantling yard, a veterinary hospital, and a dog kennel.

RESIDENTIAL DEVELOPMENT AREA

Sensitive Receptors

The nearest noise-sensitive receptors to the residential development area are single-family homes. Three single-family homes located along Taylorville Road are located at a distance of 90 to 140 feet east of the nearest residential development area boundary. Additional rural residences are located further from the residential development area on the opposite side of SR 49; the closest of which being 215 feet from the nearest residential development area boundary. In addition, a rural residential community made up of single-family homes is located south of the residential development area, and the residences in this community are located 650 feet or further from the nearest residential development area boundary. Numerous structures also exist within the residential development area that have been identified as remnants of Berriman Ranch. These structures are no longer occupied or utilized and would be demolished as part of the project. Therefore, they are not considered sensitive receptors.

Noise Sources

As the residential development area is comprised of vacant land and the remnants of Berriman Ranch, there are no existing noise sources located within the residential development area. Residential activities at the three single-family homes located along Taylorville Road may generate low levels of noise associated with this type of rural residential land use, such as children playing, residential landscaping activities, and vehicles entering and exiting the property. However, given the residential development area's proximity to SR 49, this roadway is the most predominant noise source in the vicinity of the residential development area. Thus, on-site ambient noise levels are primarily associated with vehicular noise generated by SR 49. The boundary of the residential development area adjacent to SR 49 is approximately 100 feet from the SR 49 centerline. As discussed above, based on the traffic noise data in the City of Grass Valley General Plan, noise levels generated by SR 49 range from 70 to 73 dB CNEL at 100 feet from the roadway (City of Grass Valley 1999).

3.7.4 Environmental Impacts and Mitigation Measures

METHODOLOGY

The impact analysis is based primarily on review of the analysis presented in the 2014 SOI EIR and project-specific traffic volume data, provided in Appendix C. Anticipated noise levels due to future project-related construction activity, traffic volumes, and new stationary noise sources were compared to applicable City noise standards and the thresholds of significance discussed below.

The proposed residential development area would generate both short-term construction and long-term operational noise and vibration impacts. Operational sources of noise include stationary (i.e., fixed) and traffic-generated noise. To assess potential short-term construction-related noise and vibration impacts, sensitive receptors and their relative exposure were identified. Project-generated construction source noise and vibration levels were determined based on methodologies, reference emission levels, and usage factors from FTA's *Guide on Transit Noise and Vibration Impact Assessment* methodology (FTA 2018) and FHWA's *Roadway Construction Noise Model User's Guide* (FHWA 2006).

Reference levels for noise and vibration emissions for specific equipment or activity types are well documented and the usage thereof are common practice in the field of acoustics.

With respect to non-transportation noise sources (e.g., stationary) associated with project implementation, the assessment of long-term (operational-related) impacts was based on reconnaissance data, reference noise emission levels for equipment associated with project operation (e.g., building mechanical equipment), and standard attenuation rates and modeling techniques.

To assess potential long-term (operation-related) noise impacts due to project-generated increases in traffic, existing traffic noise levels at affected sensitive receptors were compared to future traffic noise levels at these receptors in order to determine if a substantial increase in traffic noise would occur. Existing traffic noise levels were calculated using traffic volumes obtained from Appendix 3.13-1 of the 2014 SOI EIR, and future traffic noise levels were calculated using anticipated daily trip rates associated with land uses proposed as part of the residential development and the number of units proposed for each type of land use. Traffic noise modeling was conducted consistent with the Federal Highway Administration's Traffic Noise Model Version 2.5 (FHWA 2004) and uses reference noise emission levels for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and ground attenuation factors. The traffic noise modeling conducted does not account for any natural or human-made shielding (e.g., the presence of walls or buildings) or reflection off building surfaces.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, a noise impact is considered significant if implementation of the project would result in any of the following:

- generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- generation of excessive groundborne vibration or noise levels;
- for a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, exposure of people residing or working in the project area to excessive noise levels.

Significant Changes in Ambient Noise Level

The 2014 SOI EIR determined that a significant increase in ambient noise level would occur if the incremental increase criteria specified by Implementation Action 7-NI in the City of Grass Valley General Plan is exceeded. Where the ambient noise level is 65 dB L_{dn} or less, a significant ambient increase in noise level would be 3 dB or more. Where the ambient noise level exceeds 65 dB L_{dn}, a significant ambient increase in noise level would be 1.5 dB or more. These incremental increase criteria are used in this SEIR because although Implementation Action 7-NI is meant to be applied specifically to roadway improvement projects, the General Plan does not provide any other incremental increase criteria.

These incremental increase criteria are not applicable to temporary increases in ambient noise level generated by construction activities, so long as the construction activity occurs during exempt daytime hours from 7 a.m. to 7 p.m., Monday through Saturday, pursuant to the City's Code of Ordinances.

Significant Community Noise Exposure Levels

As discussed in the 2014 SOI EIR, the General Plan provides several noise standards that, if exceeded, would result in a significant impact. The land use compatibility noise criteria presented in Table 3.7-6 are applicable to newly proposed land uses, and a significant impact would occur if the proposed land use would be exposed to "conditionally acceptable" or "generally unacceptable" noise levels, which vary per land use. The City has also adopted exterior and interior noise standards applicable to non-transportation and transportation noise sources,

which are presented in Tables 3.7-4 and 3.7-5, respectively. Project-generated noise levels that would exceed the City's non-transportation and transportation noise standards would be considered significant.

ISSUES NOT DISCUSSED FURTHER

Airport Noise

The 2014 SOI EIR concluded that there would be no impact related to airport-generated noise because the project area was not located within an airport land use plan, or within 2 miles of a public airport or private airstrip. The nearest airport, Nevada County Airport, is located approximately 2.4 miles northeast of the nearest boundary of the project area. The Nevada County Airport Land Use Compatibility Plan does not apply to the project area because the project is not located within the Airport Influence Area (Nevada County 2011). Therefore, the conclusions of the 2014 SOI EIR remain valid, and the Southern SOI Amendment would not result in noise impacts related to the exposure of people residing or working in the project area to excessive aircraft-related noise levels. This issue is not discussed further.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.7-1: Construction-Generated Noise

The 2014 SOI EIR concluded that with future developments' compliance with Section 8.28.100 of the City's Code of Ordinances, construction noise associated with future development in the SOI area would have a less-than-significant impact. No mitigation was proposed that would apply to the Southern SOI Amendment or the proposed residential development area. Development associated with the Southern SOI Amendment would involve similar types of construction activities as analyzed in the 2014 SOI EIR. Construction of the proposed residential development would generate noise through the use of heavy construction equipment. However, construction would be limited to the less sensitive daytime hours, as required by Section 8.28.100 of the City's Code of Ordinances. Therefore, implementation of the Southern SOI Amendment and construction of the proposed residential development area would not result in a new or substantially more severe construction noise-related impact than what was addressed in the 2014 SOI EIR, and this impact would be **less than significant**.

Construction-generated noise was analyzed under Impact 3.9.1 in the 2014 SOI EIR. The analysis determined that the impact would be potentially significant because construction noise associated with future development in the SOI area could result in a substantial increase in ambient noise levels at nearby noise-sensitive receptors. The 2014 SOI EIR explains that construction activities occurring during the more noise-sensitive evening and nighttime hours are of increased concern due to the potential to cause sleep disruption and increased annoyance to occupants of nearby residential dwellings. However, the 2014 SOI EIR concluded that future developments' compliance with construction activity limitations established in the City's Code of Ordinances would ensure that future construction activities would have a less-than-significant noise impact, and no mitigation would be required.

Southern SOI Amendment

The Southern SOI Amendment would involve revising the General Plan land use designations and associated zoning and would include low- to high-density residential, commercial, manufacturing/industrial, and open space land uses. Construction activities and equipment required to develop these types of land uses would be similar to the construction activities and equipment discussed in the 2014 SOI EIR. As discussed in the 2014 SOI EIR, construction noise in any particular area would occur temporarily and intermittently and would vary depending on the nature of construction activities being performed and the types of equipment used. The typical construction equipment noise levels presented in the 2014 SOI EIR remain applicable to the Southern SOI Amendment and demonstrate that operation of certain pieces of heavy construction equipment can generate high levels of noise within the vicinity of the activity. For example, as shown in Table 3.7-7, operation of a dozer generates approximately 85 dB L_{max} at 50 feet from the dozing activity as was disclosed in the 2014 SOI EIR (FHWA 2006). As discussed in the 2014 SOI EIR, the

General Plan exempts noise generated by construction activities, and any future development projects would be required to comply with Section 8.28.100 of the City's Code of Ordinances, which limits construction to daytime hours (7 a.m. to 7 p.m.), Monday through Friday, when occurring within 500 feet of a residential area. Implementation of the Southern SOI Amendment would not result in a new or substantially more severe construction noise-related impact than was addressed in the 2014 SOI EIR, and the impact of noise generated by the construction of land uses and facilities under the proposed amendment would be **less than significant**.

Residential Development Area

Construction of the proposed residential development would involve removal of existing on-site structures and vegetation, site preparation, grading, paving, installation of utility connections, and construction of buildings. These construction activities would require the operation of heavy equipment that would generate noise, such as trucks, excavators, pavers, and backhoes. Table 3.7-7 shows the noise levels generated by various types of construction equipment that would likely be used during construction of the project.

Table 3.7-7 Typical Construction Equipment Noise Levels

Equipment	Noise Level (dBA at 50 feet) L_{max}
Backhoes	80
Air Compressors	80
Concrete Pump Truck	82
Dozer	85
Dump Trucks	84
Excavator	85
Generator	82
Grader	85
Front End Loaders	80
Pneumatic Tools	85
Pumps	77
Rollers	85
Scrapers	85
Tractor	84

Source: FHWA 2006

As discussed in the 2014 SOI EIR, noise from construction is temporary and intermittent in nature. Construction-generated noise levels would fluctuate depending on the type, number, and duration of use of different pieces of equipment. The noise effects of construction largely depend on the type of construction activities being performed, noise levels generated by those activities, distances to noise-sensitive receptors, existing ambient noise levels, and the relative locations of noise-attenuating features such as vegetation and existing structures. Typically, the site preparation/grading phase generates the most noise because the heaviest, loudest equipment (e.g., graders, excavators, dozers, etc.) is used for these activities.

The nearest existing noise-sensitive receptors to the proposed residential development area are three rural, single-family residences located along Taylorville Road. Each residence ranges in distance from 90 to 140 feet east of the closest boundary of the residential development area. Based on construction noise modeling conducted, noise levels could reach 78 dB L_{eq} at the nearest of these three residences, and noise would attenuate to 73 dB L_{eq} at the farthest of the three residences. Refer to Appendix E for detailed calculations. These construction noise exposure levels are conservatively high because the construction modeling assumes simultaneous operation of three pieces of heavy construction equipment at the nearest boundary of the construction site. Due to this conservative approach, it is important to note that although construction noise levels could reach as high as 73 dB L_{eq} at the nearest residential

receptor, noise levels would fluctuate during the duration of construction and would rarely reach this level. In addition, sensitive receptors located further from construction activities would experience even lower noise levels due to attenuation by distance. As identified in 2014 SOI EIR Impact 3.9.1, construction equipment noise was identified to range from 74 dB to 88 dB for brief periods of time. Construction activities would be limited to the exempt hours specified in Section 8.28.100 of the City's Code of Ordinances, which limits construction to daytime hours from 7 a.m. to 7 p.m., Monday through Friday, when occurring within 500 feet of a residential area. Thus, adverse impacts to residents from construction noise during the more sensitive evening and nighttime hours would be avoided. Therefore, project construction would not result in a new or substantially more severe construction noise-related impact than was addressed in the 2014 SOI EIR, and the impact of noise generated by the construction of the proposed residential development area would be **less than significant**.

Mitigation Measures

No new mitigation is required.

Impact 3.7-2: Increases in Traffic Noise that Exceed City Standards

The 2014 SOI EIR concluded that traffic noise impacts would be significant and unavoidable. Adopted Mitigation Measure 3.9.2 was proposed and would apply to both the Southern SOI Amendment and the proposed residential development area. Vehicle trips generated by development under the Southern SOI Amendment would result in traffic noise increases that exceed the City's incremental noise increase criteria. Implementation of the Southern SOI Amendment would not result in a new or substantially more severe traffic noise impact than was addressed in the 2014 SOI EIR, and this impact remain significant and unavoidable. The proposed residential development would not result in a traffic noise increase that would exceed the City's incremental noise increase criteria. Additionally, the proposed residential development would be required to implement Adopted Mitigation Measure 3.9.2 to ensure that on-site noise levels comply with City standards. Therefore, buildout of the residential development area would have a **less-than-significant** impact.

Traffic noise levels from vehicle trips associated with operation of land uses developed under the Adopted Southern SOI Project were analyzed under Impact 3.9.2 in the 2014 SOI EIR. The analysis determined that the noise level increase along local roadways caused by project-related increases in traffic volumes would exceed the applicable City threshold of 1.5 dB, thus exposing existing residential uses along SR 49 and La Barr Meadows Road to a significant increase in noise level. In addition, the 2014 SOI EIR determined that future residential uses developed within the SOI area could be exposed to noise levels that exceed 60 dB L_{dn}, which is the City's 'generally acceptable' exterior noise level for residential land uses. For these reasons, the 2014 SOI EIR concluded that the impact would be potentially significant with regard to the exposure of both existing and future residential uses to traffic noise. The 2014 SOI EIR identified Adopted Mitigation Measure 3.9.2 to reduce the impact on future residential uses but concluded that the impact would remain significant and unavoidable regarding the impact on existing residential uses.

> **Adopted MM 3.9.2:** For any residential development proposed within 600 feet of State Route 49 or 100 feet of La Barr Meadows Road, an applicant shall submit an acoustical analysis for any tentative map. If the acoustic analysis shows any proposed outdoor activity area within the 60 dB L_{dn} or greater noise contour, the applicant shall mitigate the impact to a level that is less than 60 dB L_{dn}. Specific mitigation measures include, but are not limited to, (1) a redesign or reorientation of the lots (which allows the home to create a barrier between the outdoor area and noise source); (2) the addition of solid fencing or wall; (3) an increased setback; or (4) a redesign of the project to utilize the existing development or topography and vegetation to reduce the impact to an acceptable level.

Southern SOI Amendment

Implementation of the Southern SOI Amendment would support development that would result in new vehicle trips and increased traffic volumes along local roadways within the project area. This traffic would include passenger vehicles and delivery trucks. The total number of new vehicle trips projected to occur from implementation of the Southern SOI Amendment (16,288 daily trips) is less than the total number of new vehicle trips that was anticipated in

the 2014 SOI EIR (21,739 daily trips). Therefore, implementation of the Southern SOI Amendment would result in a net decrease in daily vehicle trips compared to the Adopted Southern SOI Project and, subsequently, reduced traffic noise levels. Nevertheless, the increase in traffic volumes resulting from implementation of the Southern SOI Amendment would still result in increased traffic noise along local roadways compared to existing conditions.

The 2014 SOI EIR determined that traffic volumes would increase from existing conditions by approximately 50 percent. Using this same existing condition baseline, which has not changed substantially since certification of the 2014 SOI EIR, implementation of the Southern SOI Amendment would increase traffic volumes by approximately 33 percent, which would result in a noise level increase that also exceeds the applicable incremental increase standard of 1.5 dB. Therefore, the conclusion in the 2014 SOI EIR regarding the exposure of existing residential uses to traffic noise would remain applicable to the Southern SOI Amendment. The 2014 SOI EIR acknowledged that sound walls may be installed along SR 49 at some point in the future, but this was not included as a mitigation measure. The 2014 SOI EIR determined that no mitigation is available that would ensure noise level reductions at existing residential areas to meet City standards (City of Grass Valley 2014:3.9-16). Therefore, no mitigation was provided to reduce this impact.

Future residential uses developed under the Southern SOI Amendment would also be exposed to noise generated by vehicle traffic along local roadways. The 2014 SOI EIR utilized the General Plan's noise contours to determine if future residential land uses could be exposed to noise levels that exceed the City's noise standards. The Southern SOI Amendment proposes locating some residentially zoned areas adjacent to SR 49 and La Barr Meadows Road. Using the same noise contours as the 2014 SOI EIR and considering the proposed locations of future residential land uses, implementation of the Southern SOI Amendment could result in the exposure of future residential land uses to traffic noise that exceeds City standards. However, implementation of Adopted Mitigation Measure 3.9.2 would reduce the impact to a less than significant level because it requires future residential development within 600 feet of SR 49 or 100 feet of La Barr Meadows Road to submit an acoustical analysis and provide mitigation as needed to reduce the noise level of all outdoor activity areas to 60 dB L_{dn} or less.

For the reasons listed above, implementation of the Southern SOI Amendment would not result in a new or substantially more severe traffic noise impact than was addressed in the 2014 SOI EIR, and the impact of traffic noise would remain significant and unavoidable. Thus, the proposed Southern SOI Amendment contribution would be **less than significant**.

Residential Development Area

The proposed residential development would result in increased traffic volumes primarily along SR 49 and Taylorville Road, which provide access to the residential development area. East of the residential development area, three single-family homes located along Taylorville Road could be affected by increases in traffic noise associated with project-related vehicle trips. Based on existing daily traffic volumes from the traffic study included in Appendix 3.13-1 of the 2014 SOI EIR, the residences along Taylorville Road are exposed to an existing traffic noise level of 66.5 dB L_{dn}. It is assumed that the traffic volumes used to model existing conditions in the 2014 SOI EIR have not changed substantially because the land uses in the project area have not undergone any major changes since certification of the 2014 SOI EIR. The traffic study included in Appendix C includes daily trip rates for medium- and high-density residential land uses, which are the types of land uses proposed within the residential development area. Based on these projected trip rates and the number of units proposed for each type of land use, the proposed residential development would result in an additional 1,059 daily trips along Taylorville Road and SR 49. Because the existing noise level exceeds 65 dB, the City's incremental increase threshold of 1.5 dB was used to determine impact significance. Conservatively assuming that all new project-related traffic would arrive and depart from the residential development area via Taylorville Road, the residences along Taylorville Road would be exposed to a combined noise level from both roadways of 66.8 dB L_{dn}, which is an increase of 0.3 dB from existing conditions. This traffic noise increase would not exceed the applicable City threshold of 1.5 dB. Therefore, traffic noise associated with operation of the proposed residential development would not result in a new or substantially more severe impact than was addressed in the 2014 SOI EIR.

The proposed residential development is located within 600 feet of SR 49. Using the same methodology applied for to the SOI, future residential land uses could be exposed to noise levels that exceed the City's noise standards. The

residential development would be required to implement Adopted Mitigation Measure 3.9.2 to ensure that on-site noise levels comply with the City's 'generally acceptable' exterior noise level for residential land uses of 60 dB L_{dn}.

Implementation of the proposed residential development would not result in a new or substantially more severe traffic noise impact than was addressed in the 2014 SOI EIR. The project-level impact of traffic noise would be **less than significant** with mitigation.

Mitigation Measures

No new mitigation is required.

Impact 3.7-3: Groundborne Vibration

The 2014 SOI EIR concluded that construction- and operation-generated groundborne vibration levels would not exceed commonly applied criteria for structural damage and human annoyance. No mitigation was proposed that would apply to the Southern SOI Amendment or the proposed residential development area. Because the amendment would involve similar types of construction and operational activities as analyzed in the 2014 SOI EIR, implementation of the Southern SOI Amendment would not result in a new or substantially more severe vibration impact than was addressed in the 2014 SOI EIR. The proposed residential development area would not involve the long-term operation of any substantial vibration-generating sources, and construction of the proposed residential development area would not expose nearby sensitive receptors to vibration levels that would cause structural damage or human annoyance. Therefore, implementation of the Southern SOI Amendment and construction and operation of the proposed residential development area would not result in a new or substantially more severe groundborne vibration impact than was addressed in the 2014 SOI EIR, and this impact would be **less than significant**.

Groundborne vibration generated during construction and operation was analyzed under Impact 3.9.3 in the 2014 SOI EIR. The analysis concluded that compliance with the City's Development Code would ensure that long-term (i.e., operational) vibration impacts would be less than significant. Regarding short-term (i.e., construction-related) vibration impacts, the 2014 SOI EIR concluded that the impact would be less than significant because vibration levels associated with the types of equipment likely to be used during construction of proposed land uses would not exceed the Caltrans-recommended standards for structural damage or human annoyance.

Southern SOI Amendment

The Southern SOI Amendment would involve revising the General Plan land use designations and zoning in the Southern SOI and would include commercial and manufacturing/industrial land uses. As discussed in the 2014 SOI EIR, long-term operational activities associated with commercial and industrial land uses are not anticipated to include the use of any equipment or processes that would generate substantial levels of groundborne vibration that could result in structural damage or human annoyance. Nevertheless, any projects proposed in the future that could generate substantial groundborne vibration would be subject to the City's development review and/or use permit process, including compliance with the City's Development Code, which requires a use permit for land uses typically associated with groundborne vibration (e.g., mining, heavy manufacturing). In addition, because the Southern SOI Amendment involves revising the General Plan land use designations and zoning to further separate residential areas from land uses most likely to contain sources of operational vibration (e.g., industrial/manufacturing land uses), implementation of the Southern SOI Amendment would result in overall lower levels of groundborne vibration at residential receptors, reducing the potential for human annoyance. Therefore, compliance with City requirements would ensure that operational activities associated with future development would not result in groundborne vibration levels that would have an adverse effect.

The types of land uses developed under the Southern SOI Amendment would be similar to those analyzed in the 2014 SOI EIR. Therefore, the types of construction activities and associated levels of groundborne vibration discussed in the 2014 SOI EIR remain applicable to the Southern SOI Amendment. As discussed in the 2014 SOI EIR, construction activities associated with future development would likely require the use of various tractors, trucks, bulldozers, and jackhammers, which generate vibration levels ranging from 0.003 to 0.089 in/sec PPV (FTA 2018).

Based on these vibration levels, exposure of nearby land uses to groundborne vibration would not be anticipated to exceed Caltrans criteria for structural damage or human annoyance (refer to Tables 3.7-2 and 3.7-3, respectively).

For the reasons listed above, implementation of the Southern SOI Amendment would not result in a new or substantially more severe groundborne vibration impact than was addressed in the 2014 SOI EIR, and the impact of groundborne vibration generated by the construction and operation of land uses under the proposed amendment would be **less than significant**.

Residential Development Area

Operation of the proposed residential development would not require the use of any vibration-generating equipment that would result in substantial long-term groundborne vibration. However, construction of development in the residential development area would require the use of heavy equipment that would generate groundborne vibration. Construction activities generate varying degrees of temporary ground vibration depending on the specific construction equipment used and activities involved. Pile driving and blasting are the types of construction activities that typically generate the highest vibration levels and are, therefore, of greatest concern when evaluating construction-related vibration impacts. However, construction associated with the residential development area is not anticipated to include the use of impact pile driving or blasting. Rather, the greatest source of vibration would be the operation of heavy equipment such as bulldozers and loaded trucks. The vibration velocities that would be generated by these types of construction equipment range from 0.003 to 0.089 in/sec PPV at 25 feet from the source of activity. The nearest existing vibration-sensitive receptors to the proposed residential development area are three rural, single-family residences located along Taylorville Road. Each residence ranges from 90 to 140 feet east of the closest boundary of the residential development area. At the closest residence located 90 feet away, the vibration velocities would attenuate to levels no greater than 0.013 in/sec PPV, which would not exceed the Caltrans criteria for structural damage and human annoyance (refer to Tables 3.7-2 and 3.7-3, respectively). Therefore, construction activities associated with the residential development area would not expose any residential receptors to levels of groundborne vibration that would have an adverse effect. Refer to Appendix E for detailed calculations. Thus, construction of the proposed residential development would not result in a new or substantially more severe groundborne vibration impact than was addressed in the 2014 SOI EIR, and this impact would be **less than significant**.

Mitigation Measures

No new mitigation is required.

Impact 3.7-4: Operational (Stationary) Noise Sources

The 2014 SOI EIR concluded that the City's development review process would ensure that stationary-source noise impacts would be less than significant. No mitigation was proposed that would apply to the Southern SOI Amendment or the proposed residential development area. Development associated with the Southern SOI Amendment would involve similar types of land uses and new stationary noise sources as analyzed in the 2014 SOI EIR. Stationary noise sources associated with the proposed residential development area, including mechanical building equipment, would not expose existing residential receptors to noise levels that exceed the City standards. For these reasons, implementation of the Southern SOI Amendment and operation of the proposed residential development area would not result in a new or substantially more severe stationary-source noise impact than was addressed in the 2014 SOI EIR, and this impact would be **less than significant**.

Operational noise generated by stationary noise sources was analyzed under Impact 3.9.4 in the 2014 SOI EIR. The 2014 SOI EIR concluded that the impact would be less than significant because of the location of proposed land uses, required review procedures for future development projects, and future compliance with applicable General Plan policies. The 2014 SOI EIR explains that although industrial land uses could expose adjacent land uses such as residential areas to elevated noise levels, any future adverse noise impacts would be avoided through compliance with the General Plan, which requires acoustical studies and mitigation to meet City standards. The development review process would ensure that future development projects would be sufficiently evaluated to avoid stationary noise impacts.

Southern SOI Amendment

The Southern SOI Amendment would involve revising the General Plan land use designations and zoning in the Southern SOI and would include commercial and manufacturing/industrial land uses. The Southern SOI Amendment does not propose any specific industrial or manufacturing development projects. However, it is anticipated that future development of these types of land uses would involve a large lot industrial subdivision and expansion of existing uses, including a landscaping materials yard, rental yard, RV and personal storage, and fuel sales. These types of industrial land uses can involve noise-generating activities such as the arrival and departures of delivery trucks, loading dock activity, and operation of vehicles and heavy machinery specific to the type of industrial use. For example, loading dock activities can generate noise levels of 60 dB L_{eq} and 82 dB L_{max} at 50 feet from the activity (City of Grass Valley 1999). If located next to a residential use, such activities could result in an exceedance of City noise standards at adjacent residences. Based on the proposed revisions to the General Plan land use designations and zoning, the Southern SOI Amendment would reduce the potential for future industrial uses in the project area to expose residential receptors to noise levels that would exceed City standards. Nevertheless, as discussed in the 2014 SOI EIR, all potential noise impacts from future stationary noise sources would be evaluated at the project level through the City's development review process. Future development would be required to comply with the requirements of the City's Development Code and the General Plan, which requires production of acoustical studies and implementation of appropriate mitigation to meet City standards. Therefore, implementation of the Southern SOI Amendment would not result in a new or substantially more severe stationary-source noise impact than was addressed in the 2014 SOI EIR, and the impact would be **less than significant**.

Residential Development Area

Operational noise sources associated with residential developments are generally limited and include mechanical building equipment such as heating, ventilation, and air conditioning (HVAC) units. The specific locations of mechanical equipment to be installed on new buildings in the residential development area are not known at this time. However, the locations and design features of HVAC units installed for the project would be limited by the City's Development Code, which requires a setback distance for outdoor ground-mounted mechanical equipment and requires roof- or ground-mounted mechanical equipment to be screened from public view, adjoining areas zoned for residential use, and adjoining public streets and right-of-way. HVAC units generate noise levels that range from 50 to 70 dB L_{eq} at 3 feet (EPA 1971:38). Without accounting for any intervening barriers, the loudest possible HVAC unit-generated noise levels would expose the nearest noise-sensitive receptor, a single-family residence located approximately 90 feet east of the residential development area, to 31 dB L_{eq}, which would not exceed the City's daytime or nighttime standard for fixed noise sources and would be imperceptible from ambient noise levels. Therefore, operation of the proposed residential development would not result in a new or substantially more severe stationary-source noise impact than was addressed in the 2014 SOI EIR, and this impact would be **less than significant**.

Mitigation Measures

No new mitigation is required.

3.8 PUBLIC UTILITIES AND ENERGY

This section evaluates the availability of existing utility and infrastructure systems (water, wastewater, stormwater, electricity, and natural gas) to serve the project and the potential for implementation of the project to affect availability, service level, and/or capacity of these systems, and, if such an effect is determined to occur, whether new or expanded facilities would be required that could result in a potentially significant impact to the environment. Drainage and water quality regarding stormwater is also addressed in Section 3.6, "Hydrology and Water Quality."

The 2014 SOI EIR included Section 3.12, "Public Utilities," which evaluated the potential effects of the project. The 2014 SOI EIR determined that there would be less-than-significant impacts related to the construction of new utility infrastructure (Impacts 3.12.1, 3.12.7, and 3.12.8), availability of water supply (Impact 3.12.2 and 3.12.3), wastewater treatment facilities (Impact 3.12.4) wastewater treatment capacity (Impact 3.12.5), and generation of solid waste (Impact 3.12.6).

The 2014 SOI EIR evaluated the need for additional electrical and natural gas infrastructure and supplies (Impact 3.12.7) and found that impacts would be less than significant. However, since certification of the 2014 SOI EIR, Appendix G of the State CEQA Guidelines has been amended to address energy consumption and compliance with applicable renewable energy or energy efficiency plans. When the 2014 SOI EIR was prepared and certified, energy efficiency related impacts were included as Appendix F to the State CEQA Guidelines. The 2014 SOI EIR did evaluate the project's energy demand and the impacts related to it.

Because the 2014 SOI EIR did not evaluate energy efficiency impacts, this section has been expanded to evaluate whether implementing the project would result in an environmental impact related to the inefficient, wasteful, or unnecessary consumption of energy and evaluates the project's consistency with applicable plans related to energy conservation or renewable energy. Applicable federal, state, and local policies related to energy demand and supply are summarized below under the headings, "Energy," were applicable and a description of energy infrastructure within the project area is provided.

No comment letters in response to the notice of preparation were received expressing concerns related to public utilities and energy.

3.8.1 Regulatory Setting

The regulatory information on pages 3.12-3 through 3.12-4 of the 2014 SOI EIR provides a description of the California Department of Health Services, fire flow requirements, and the Nevada Irrigation District (NID). Though the regulatory setting provided in the 2014 SOI EIR remains applicable to this analysis, additional regulatory information is provided below to support the analysis of public services and utilities.

FEDERAL

Water

Safe Drinking Water Act

As mandated by the Safe Drinking Water Act (Public Law 93-523), passed in 1974, the U.S. Environmental Protection Agency (EPA) regulates contaminants of concern to domestic water supply. Such contaminants are defined as those that pose a public health threat or that alter the aesthetic acceptability of the water. These types of contaminants are regulated by EPA primary and secondary maximum contaminant levels (MCLs). MCLs and the process for setting these standards are reviewed every 3 years. Amendments to the Safe Drinking Water Act enacted in 1986 establish an accelerated schedule for setting drinking water MCLs. EPA has delegated responsibility for California's drinking water program to the State Water Resources Control Board Division of Drinking Water (SWRCB-DDW). SWRCB-DDW is

accountable to EPA for program implementation and for adoption of standards and regulations that are at least as stringent as those developed by EPA.

Wastewater, Stormwater, and Recycled Water

Clean Water Act

The Clean Water Act (CWA) employs a variety of regulatory and non-regulatory tools to reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. Those portions of the CWA that relate to wastewater and stormwater discharges are discussed below.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established under the CWA to regulate municipal and industrial discharges to surface waters of the U.S. NPDES permit regulations have been established for broad categories of discharges including point source waste discharges and nonpoint sources. Each NPDES permit identifies limits on allowable concentrations and mass loadings of pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that EPA must consider in setting effluent limits for priority pollutants.

NPDES permits cover various industrial and municipal discharges, including discharges from storm sewer systems in larger cities, stormwater generated by industrial activity, runoff from construction sites disturbing more than 1 acre, and mining operations. Point source dischargers must obtain a discharge permit from the proper authority (usually a state, sometimes EPA, a tribe, or a territory). So-called "indirect" point source dischargers are not required to obtain NPDES permits. "Indirect" dischargers send their wastewater into a public sewer system, which carries it to the municipal sewage treatment plant, through which it passes before entering any surface water.

The CWA was amended in 1987 with Section 402(p) requiring NPDES permits for nonpoint source (i.e., stormwater) pollutants in discharges. Stormwater sources are diffuse and originate over a wide area rather than from a definable point. The goal of the NPDES stormwater regulations is to improve the water quality of stormwater discharged to receiving waters to the "maximum extent practicable" using structural and nonstructural best management practices (BMPs). BMPs can include educational measures (e.g., workshops informing the public of what impacts can result when household chemicals are dumped into storm drains), regulatory measures (e.g., local authority of drainage-facility design), public-policy measures (e.g., labeling storm-drain inlets as to impacts of dumping on receiving waters) and structural measures (e.g., filter strips, grass swales, and detention ponds).

Energy

Energy Policy and Conservation Act and CAFE Standards

The Energy Policy and Conservation Act of 1975 established nationwide fuel economy standards to conserve oil. Pursuant to this act, the National Highway Traffic and Safety Administration, part of the U.S. Department of Transportation (DOT), is responsible for revising existing fuel economy standards and establishing new vehicle economy standards.

The Corporate Average Fuel Economy (CAFE) program was established to determine vehicle manufacturer compliance with the government's fuel economy standards. The EPA calculates a CAFE value for each manufacturer based on the city and highway fuel economy test results and vehicle sales. The CAFE values are a weighted harmonic average of the EPA city and highway fuel economy test results. Based on information generated under the CAFE program, DOT is authorized to assess penalties for noncompliance. Under the Energy Independence and Security Act of 2007 (described below), the CAFE standards were revised for the first time in 30 years.

Energy Policy Act of 1992 and 2005

The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. The EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. The EPAct requires certain federal, state, and local government and private fleets to purchase a percentage of light-duty AFVs capable of running on alternative fuels each year. In

addition, financial incentives are also included in the EPAct. Federal tax deductions are allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs. The Energy Policy Act of 2005 provides renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 is designed to improve vehicle fuel economy and help reduce U.S. dependence on oil. It represents a major step forward in expanding the production of renewable fuels, reducing dependence on oil, and confronting global climate change. The Energy Independence and Security Act of 2007 increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022, which represents a nearly fivefold increase over current levels. It also reduces U.S. demand for oil by setting a national fuel economy standard of 35 miles per gallon by 2020—an increase in fuel economy standards of 40 percent.

By addressing renewable fuels and the CAFE standards, the Energy Independence and Security Act of 2007 builds upon progress made by the Energy Policy Act of 2005 in setting out a comprehensive national energy strategy for the 21st century; however, in August of 2018, the National Highway Traffic Safety Administration and EPA proposed the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks, which, if adopted, would decrease the stringency of CAFE standards. The Proposed Rule would maintain the existing standards until 2020 with a zero percent increase in fuel efficiency until 2026. Part One of the SAFE Rule, which became effective on November 26, 2019, revokes the federal Clean Air Act waiver that California obtains from EPA to set more stringent fuel economy standard. At the time of preparing this environmental document, the exact implications of the SAFE Rule on the energy efficiency of California's vehicle fleet is unknown.

STATE

Water

Urban Water Management Plan

In 1983, the California Legislature enacted the Urban Water Management Planning Act (UWMPA) (California Water Code Sections 10610–10656). The UWMPA states that every urban water supplier that provides water to 3,000 or more customers, or that provides more than 3,000 acre-feet of water annually, should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. This effort includes the adoption of an Urban Water Management Plan (UWMP) by every urban-water supplier and an update of the plan every 5 years on or before December 31, of every year ending in a five or zero. The UWMPA has been amended several times since 1983 with the most recent amendment occurring with Senate Bill (SB) 318 in 2004. The UWMPA and SB 610, described below, are interrelated; the UWMP is typically relied upon to meet the requirements for SB 610.

Sustainable Groundwater Management Act

Groundwater Management is outlined in the California Water Code, Division 6, Part 2.75, Chapters 1-5, Sections 10750 through 10755.4. The Groundwater Management Act was first introduced in 1992 as Assembly Bill (AB) 3030 and has since been modified by SB 1938 in 2002, AB 359 in 2011, and the Sustainable Groundwater Management Act (SB 1168, SB 1319, and AB 1739) in 2014. The intent of the Acts is to encourage local agencies to work cooperatively to manage groundwater resources within their jurisdictions and to provide a methodology for developing a Groundwater Management Plan. The City is not located within a designated groundwater basin.

Senate Bill 610

SB 610, codified in California Water Code Section 10910(c)(2), makes changes to the UWMPA to require additional information in UWMPs if groundwater is identified as a source available to the supplier. Required information

includes a copy of any groundwater management plan adopted by the supplier, a copy of the adjudication order or decree for adjudicated basins, and if nonadjudicated, whether the basin has been identified as being overdrafted or projected to be overdrafted in the most current California Department of Water Resources publication regarding that basin. If the basin is in overdraft, the plan must include current efforts to eliminate any long-term overdraft. A key provision in SB 610 requires that any project subject to CEQA supplied with water from a public water system be provided a specific water supply assessment (WSA), except as specified in the law. WSAs are required under SB 610 for projects that include 500 units of residential development, projects that would demand an amount of water equivalent to or greater than the water required by a project with 500 dwelling units, or projects that would increase the number of the public water system's existing service connections by 10 percent.

California Safe Drinking Water Act

The SWRCB-DDW is responsible for implementing the federal SDWA and its updates, as well as California statutes and regulations related to drinking water. State primary and secondary drinking-water standards are promulgated in California Code of Regulations Title 22, Sections 64431–64501.

The California Safe Drinking Water Act (SDWA) was passed in 1976 to build on and strengthen the federal SDWA. The California SDWA authorizes the California Department of Public Health to protect the public from contaminants in drinking water by establishing MCLs that are at least as stringent as those developed by EPA, as required by the federal SDWA.

Wastewater, Stormwater, and Recycled Water

NPDES Stormwater Permit for Discharges from Small Municipal Separate Storm Sewer Systems

The Municipal Stormwater Permitting Program regulates stormwater discharges from municipal separate storm sewer systems. Stormwater is runoff from rain or snow melt that runs off surfaces such as rooftops, paved streets, highways or parking lots and can carry with it pollutants such as oil, pesticides, herbicides, sediment, trash, bacteria and metals. The runoff can then drain directly into a local stream, lake, or bay. Often, the runoff drains into storm drains which eventually drain untreated into a local waterbody.

Solid Waste

California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989 (AB 939) required all California cities and counties to reduce the volume of waste deposited in landfills by 50 percent by the year 2000, and requires all California cities and counties to continue to remain at 50 percent or higher for each subsequent year. The purpose of AB 939 is to reduce the amount of solid waste generated and extend the life of landfills.

AB 939 requires each California city and county to prepare, adopt, and submit to California Department of Resources Recycling and Recovery a source reduction and recycling element (SRRE) that demonstrates how the jurisdiction will meet the act's mandated diversion goals. Each jurisdiction's SRRE must include specific components defined in PRC Sections 41003 and 41303. In addition, the SRRE must include a program for management of solid waste generated within the jurisdiction that is consistent with the following hierarchy: (1) source reduction, (2) recycling and composting, and (3) environmentally safe transformation and land disposal. Included in this hierarchy is the requirement to emphasize and maximize the use of all feasible source reduction, recycling, and composting options in order to reduce the amount of solid waste that must be disposed of by transformation and land disposal (PRC Sections 40051, 41002, and 41302).

Energy

Warren-Alquist Act

The 1974 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as the California Energy Commission (CEC). The creation of the act occurred as a response to the State legislature's review of studies projecting an increase in statewide energy demand, which would

potentially encourage the development of power plants in environmentally sensitive areas. The act introduced State policy for siting power plants to reduce potential environmental impacts and sought to reduce demand for these facilities by directing CEC to develop statewide energy conservation measures to reduce wasteful, inefficient, and unnecessary uses of energy. Conservation measures recommended establishing design standards for energy conservation in buildings, which ultimately resulted in the creation of the Title 24 Building Energy Efficiency Standards (California Energy Code). These standards are updated regularly and remain in effect today. The act additionally directed CEC to cooperate with the Governor's Office of Planning and Research, the California Natural Resources Agency, and other interested parties in ensuring that a discussion of wasteful, inefficient, and unnecessary consumption of energy is included in all EIRs required on local projects.

State of California Energy Action Plan

CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The current plan is the 2003 Energy Action Plan (2008 update), which calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assisting public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs, as well as encouraging urban design that reduces vehicle miles traveled (VMT) and accommodates pedestrian and bicycle access.

Assembly Bill 2076: Reducing Dependence on Petroleum

Pursuant to AB 2076 (Chapter 936, Statutes of 2000), CEC and the California Air Resources Board (CARB) prepared and adopted a joint agency report in 2003, Reducing California's Petroleum Dependence. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita VMT (CEC and CARB 2003). Further, in response to CEC's 2003 and 2005 Integrated Energy Policy Reports (IEPRs), the governor directed CEC to take the lead in developing a long-term plan to increase alternative fuel use.

A performance-based goal of AB 2076 was to reduce petroleum demand to 15 percent below 2003 demand by 2030.

Integrated Energy Policy Report

SB 1389 (Chapter 568, Statutes of 2002) required CEC to "conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The Energy Commission shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety" (PRC Section 25301[a]). This work culminated in preparation of the first IEPR.

CEC adopts an IEPR every 2 years and an update every other year. The 2019 IEPR, which is the most recent IEPR, was adopted January 31, 2020. The 2019 IEPR provides a summary of priority energy issues currently facing the state, outlining strategies and recommendations to further the State's goal of ensuring reliable, affordable, and environmentally responsible energy sources. Energy topics covered in the report include progress toward statewide renewable energy targets and issues facing future renewable development; efforts to increase energy efficiency in existing and new buildings; progress by utilities in achieving energy efficiency targets and potential; improving coordination among the state's energy agencies; streamlining power plant licensing processes; results of preliminary forecasts of electricity, natural gas, and transportation fuel supply and demand; future energy infrastructure needs; the need for research and development efforts to statewide energy policies; and issues facing California's nuclear power plants (CEC 2020a).

Legislation Associated with Electricity Generation

The state has passed multiple pieces of legislation requiring the increasing use of renewable energy to produce electricity for consumers. California's Renewable Portfolio Standard (RPS) Program was established in 2002 (SB 1078) with the initial requirement to generate 20 percent of their electricity from renewable by 2017, 33 percent of their electricity from renewables by 2020 (SB X1-2 of 2011), 52 percent by 2027 (SB 100 of 2018), 60 percent by 2030 (also

SB 100 of 2018), and 100 percent by 2045 (also SB 100 of 2018). More detail about these regulations is provided in Section 3.3, "Greenhouse Gas Emissions and Climate Change."

Senate Bill 350: Clean Energy and Pollution Reduction Act of 2015

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires doubling of the energy efficiency savings in electricity and natural gas for retail customers through energy efficiency and conservation by December 31, 2030.

Assembly Bill 1007: State Alternative Fuels Plan

AB 1007 (Chapter 371, Statutes of 2005) required CEC to prepare a state plan to increase the use of alternative fuels in California. CEC prepared the State Alternative Fuels Plan in partnership with CARB and in consultation with other state, federal, and local agencies. The plan presents strategies and actions California must take to increase the use of nonpetroleum fuels in a manner that minimizes the costs to California and maximizes the economic benefits of in-state production. The plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuel use, reduce greenhouse gas (GHG) emissions, and increase in-state production of biofuels without causing a significant degradation to public health and environmental quality.

California Building Energy Efficiency Standards (Title 24, Part 6)

The energy consumption of new residential and nonresidential buildings in California is regulated by the California Energy Code. The code was established by CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy-efficiency standards for residential and nonresidential buildings. CEC updates the California Energy Code every 3 years, typically including more stringent design requirements for reduced energy consumption, which results in the generation of fewer GHG emissions.

The 2019 California Energy Code was adopted by CEC on May 9, 2018, and will apply to projects constructed after January 1, 2020. CEC estimates that the combination of required energy-efficiency features and mandatory solar panels in the 2019 California Energy Code will result in new residential buildings that use 53 percent less energy than those designed to meet the 2016 California Energy Code. CEC also estimates that the 2019 California Energy Code will result in new commercial buildings that use 30 percent less energy than those designed to meet the 2016 standards, primarily through the transition to high-efficacy lighting (CEC 2018).

California Green Building Standards (Title 24, Part 11)

The California Green Building Standards, also known as CALGreen, is a reach code (i.e., optional standards that exceed the requirements of mandator codes) developed by CEC that provides green building standards for statewide residential and nonresidential construction. The current version is the 2019 CALGreen Code, which took effect on January 1, 2020. As compared to the 2016 CALGreen Code, the 2019 CALGreen Code strengthened sections pertaining to EV and bicycle parking, water efficiency and conservation, and material conservation and resource efficiency, among other sections of the CALGreen Code. The CALGreen Code sets design requirements equivalent to or more stringent than those of the California Energy Code for energy efficiency, water efficiency, waste diversion, and indoor air quality. These codes are adopted by local agencies that enforce building codes and used as guidelines by state agencies for meeting the requirements of Executive Order B-18-12.

Legislation Associated with Greenhouse Gas Reduction

The state has passed legislation that aims to reduce GHG emissions. The legislation often has an added benefit of reducing energy consumption. SB 32 requires a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. Executive Order S-3-05 sets a long-term target of reducing statewide GHG emissions by 80 percent below 1990 levels by 2050.

SB 375 aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. The Advanced Clean Cars program, approved by CARB, combines the control of GHG emissions and criteria air pollutants and the increase in the number of zero-emission vehicles into a single package of standards. The program's zero-emission vehicle regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025.

Implementation of the state's legislation associated with GHG reduction will have the co-benefit of reducing California's dependency on fossil fuel and making land use development and transportation systems more energy efficient.

More details about legislation associated with GHG reductions are provided in the regulatory setting of Section 3.3, "Greenhouse Gas Emissions and Climate Change."

LOCAL

Grass Valley 2020 General Plan

The 2020 General Plan includes the following policies relevant for the evaluation of public utilities:

- Policy 11-SP: Maintain appropriate standards for water supply, pressure and distribution for fire suppression purposes.
- Policy 20-COSI: Coordinate the timing and phasing of planned wastewater facility extensions/improvements with planned extension of other services, expansion of City sewer services areas, annexations, sphere of influence amendments, and other extraterritorial activities.
- Policy 21-COSI: Assure adequate provision for extending sewer service to areas experiencing inadequate on-site disposal systems, should the need arise.
- Policy 22-COSI: Monitor development trends and on-site disposal system inadequacies to ensure that the City's current plans reflect actual conditions.

Grass Valley Energy Action Plan

On November 13th, 2018, the City of Grass Valley approved the Energy Action Plan. The Energy Action Plan provides an analysis of the energy use within the City limits by the community and City operated facilities as well as a roadmap for accelerating energy efficiency, water efficiency, and renewable energy efforts already underway in Grass Valley. It is designed to assist the City, and other organizations in implementing the energy and water-energy related goals and policies in the City's General Plan and Housing Element and inform the community of cost-effective programs and best practices to help save energy and money (City of Grass Valley 2018).Grass Valley Improvement Standards

The City of Grass Valley Improvement Standards contain construction and design standards, as well as specifications and requirements related to water supply systems, sanitary sewer, and storm drainage. Specifically, Sections 4 through 6 of the City of Grass Valley Construction Standards, include requirements for construction and installation of water, sewer, and stormwater pipelines, pipeline connections, and pipeline testing (City of Grass Valley 2021).

Nevada Irrigation District Draft 2020 Urban Water Management Plan

NID is currently updating its UWMP and has released a public draft of the 2020 UWMP. NID provides treated and raw water deliveries to the City. Raw water provided by NID is treated at the City of Grass Valley Water Treatment Plant. NID water supplies consist of surface water that consists of pre- and post-1914 water rights that total 450,000 acre-feet per year (AFY). However, NID does not regularly exercise these water rights due to hydrologic variability and temporal water right limitations. NID main water storage facilities can contain a maximum of 280,085 acre-feet (AF) of water. The NID Water Shortage Contingency Plan (WSCP) identifies the need for carryover storage be held in the reservoirs of not less than 78,000 AF that includes 33,800 AF of minimal pool requirements for environmental needs. Thus, total available water supply from storage is 202,085 AF (NID 2021:31-32).

NID also purchases water from the Pacific Gas & Electric Company (PG&E) for up to 54,361 AF. However, this water is only available in monthly allotments The draft 2020 UWMP assumes 7,500 AF is available on an average basis (NID 2021:32).

Table 3.8-1 and 3.8-2 identify water supply and demands for normal and dry-year conditions from 2020 to 2040. Watershed modeling in the draft 2020 UWMP identify changes in annual watershed runoff conditions in 2070 from the effects of climate change that range from 90 percent to 148 percent of historic runoff conditions (NID 2021:Table 4-8). The analysis also identifies drought conditions in 2070 that could result in 25 to 43 of the anticipated average year runoff depending on the drought year condition (NID 2021:Table 4-9)

Future water projects identified in the draft 2020 UWMP are anticipated to consist of expansion of reservoir capacity to improve dry-year supplies as well as anticipated shifts in runoff conditions in the watersheds due to climate change. Other water source projects include expansion of NID water treatment plants to increase the amount of treated water available as well as use of recycled water. The details of these future water projects will be determined as part of the development of NID's Plan For Water.

3.8.2 Environmental Setting

The environmental setting starting on page 3.12-1 of the 2014 SOI EIR is relevant to understanding the potential public utility impacts of the project. The setting provides information related to water supply, water demand, wastewater infrastructure, and solid waste collection and disposal. Additional information is provided below based on NID's draft 2021 UWMP (NID 2021) and updated data related to solid waste. The environmental setting starting of page 3.12-16 of the 2014 SOI EIR characterizes the existing electrical, natural gas, telephone, and cable services in the project area and is hereby incorporated by reference.

PROJECTED WATER SUPPLY

The SOI area is located within NID's service area. As a rural area primarily dependent on its snowmelt-based supply, NID and its service area face unique challenges in projecting future supplies and demands. As such, NID is in the early stages of a long-term visioning and planning effort to better understand potential future conditions and needs, and identify management and operational practices to meet those needs. The Plan For Water would identify optional water management practices when triggering points in supply, demand, regulatory, legal, and other events are reached. These practices may include supply projects, demand management efforts, and policy changes (NID 2021).

Tables 3.8-1, 3.8-2, and 3.8-3 identify NID's projected water supply in normal, dry, and multiple dry years, respectively. As described in Table 3.8-1, NID has sufficient available water supply though 2040 during normal water year conditions. Water deficits are anticipated beginning in 2025 for single and multiple dry years. In the event of single and multiple dry years, NID would address water supply shortages through management and operational efforts carried out by NID as determined in the WSCP. These efforts may include demand reductions, implementing carryover storage and system operational strategies, seeking supplemental supplies, and increasing water storage (NID 2021).

Table 3.8-1 NID Normal Year Water Supply and Demand Comparison (AFY)

	2025	2030	2035	2040
Supply Total	385,942	385,942	385,942	385,942
Demand Total	188,336 - 205,963	192,234 - 209,861	196,279 - 213,906	200,324 - 217,951
Available water supply	197,606 - 179,979	193,708 - 176,081	189,663 - 172,036	185,618 - 167,991

Source: NID 2021: Table 5-4

Table 3.8-2 NID Single Dry Year Water Supply and Demand Comparison (AFY)

	2025	2030	2035	2040
Supply Total	91,807	91,807	91,807	91,807
Demand Total	177,436 - 202,977	181,723 - 207,264	186,173 - 211,714	190,621 - 216,162
Available water supply	(85,629) - (111,170)	(89,916) - (115,457)	(94,366) - (119,907)	(98,814) - (124,355)

Source: NID 2021: Table 5-5

Table 3.8-3 NID Multiple-Dry Year Supply and Demand Comparison (AFY)

	2025	2030	2035	2040
First Year				
Supply Total	179,143	179,143	179,143	179,143
Demand Total	177,436 - 202,977	181,723 - 207,264	186,173 - 211,714	190,621 - 216,162
Available water supply	1,708 - (23,834)	(2,580) - (28,121)	(7,030) - (32,571)	(11,478) - (37,019)
Second Year				
Supply Total	176,630	176,630	176,630	176,630
Demand Total	177,436 - 202,977	181,723 - 207,264	186,173 - 211,714	190,621 - 216,162
Available water supply	(806) - (26,347)	(5,093) - (30,634)	(9,543) - (35,084)	(13,991) - (39,532)
Third Year				
Supply Total	381,346	381,346	381,346	381,346
Demand Total	177,436 - 202,977	181,723 - 207,264	186,173 - 211,714	190,621 - 216,162
Available water supply	203,911 - 178,370	199,623 - 174,082	195,173 - 169,632	190,725 - 165,184
Fourth Year				
Supply Total	254,196	254,196	254,196	254,196
Demand Total	177,436 - 202,977	181,723 - 207,264	186,173 - 211,714	190,621 - 216,162
Available water supply	76,761 - 51,220	72,473 - 46,932	68,023 - 42,482	63,575 - 38,034
Fifth Year				
Supply Total	282,920	282,920	282,920	282,920
Demand Total	177,436 - 202,977	181,723 - 207,264	186,173 - 211,714	190,621 - 216,162
Available water supply	105,485 - 79,944	101,197 - 75,656	96,747 - 71,206	92,299 – 66,758

Source: NID 2021: Table 5-6

SOLID WASTE

Waste Management of Nevada County provides solid waste disposal services to the project area. Waste is disposed of at the Recology Ostrom Road Landfill. According to the California Department of Resources Recycling and Recovery, the Recology Ostrom Road Landfill has a total permitted capacity of approximately 43.5 million cubic yards and a remaining capacity of 39.2 million cubic yards. The landfill is expected to reach its capacity and close in approximately 2066 (CalRecycle 2020).

ENERGY

Electricity and Natural Gas

Electric services and natural gas are provided to Grass Valley from Pacific Gas and Electric (PG&E). Electrical and natural gas needs for the residents and employees to the project area would also be served by PG&E. Specific detail pertaining to electrical and natural gas infrastructure in the project area is detailed on page 3.12-6 of the 2014 SOI EIR.

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. One-third of energy commodities consumed in California is natural gas. In 2019, approximately 34 percent of natural gas consumed in the state was used to generate electricity. Large hydroelectric powered approximately 15 percent of electricity and renewable energy from solar, wind, small hydroelectric, geothermal, and biomass combustion totaled 32 percent (CEC 2021). In 2019, PG&E provided its customers with 29 percent eligible renewable energy (i.e., biomass combustion, geothermal, small scale hydroelectric, solar, and wind) and 27 percent and 0 percent from large scale hydroelectric and natural gas, respectively (CEC 2020b). The contribution of in- and out-of-state power plants depends on the precipitation that occurred in the previous year, the corresponding amount of hydroelectric power that is available, and other factors. PG&E is the primary electricity and natural gas service provider in the Bay Area, North Coast, Central Valley, and portions of the Sierra Nevada Mountains in the state.

The proportion of PG&E-delivered electricity generated from eligible renewable energy sources is anticipated to increase over the next three decades to comply with the SB 100 goals described in Section 3.8.1, "Regulatory Setting."

TRANSPORTATION

In 2018, the transportation sector comprised the largest end-use sector of energy in the state totaling 39.1 percent, followed by the industrial sector totaling 23.5 percent, the commercial sectors at 19.2 percent, and the residential sector of 18.3 percent (EIA 2021). On-road vehicles use about 90 percent of the petroleum consumed in California. CEC reported retail sales of 39 and 8 million gallons of gasoline and diesel fuel in Nevada County in 2019, respectively, (the most recent data available) (CEC 2020b). The California Department of Transportation projects that 85 and 25 million gallons of gasoline and diesel fuel will be consumed in Nevada County in 2030, respectively (Caltrans 2009).

3.8.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

The following subsequent analysis compares the effects of Adopted Southern SOI Project disclosed in the 2014 SOI EIR to the anticipated effects of the Southern SOI Amendment. Previously adopted mitigation is detailed and the potential for a new or substantially more severe impacts are evaluated assuming implementation of these mitigation measures, unless otherwise indicated. Impacts on water demand, wastewater, solid waste, and associated infrastructure that would result from the project were identified by determining the adequacy of existing infrastructure and comparing existing service capacity against future demand associated with project implementation.

Energy

The 2014 SOI EIR was prepared prior to the addition of energy to Appendix G of the State CEQA Guidelines; therefore, while energy would have been consumed from construction and operation of the approved land uses evaluated in 2014, this energy was not estimated or evaluated for significance. The analysis below determines if the project with amended land uses would result in significant energy impacts. Also, to assess whether the Southern SOI Amendment would result in a new or substantially more severe impact related to energy, construction and operational energy the Adopted Southern SOI project were estimated to provide a comparative analysis of the projected construction and operational energy consumption associated with the Southern SOI Amendment (evaluated in this Draft SEIR).

Energy consumed by the Adopted Southern SOI project during construction would include gasoline and diesel fuel, measured in gallons. Gasoline, and some diesel fuel, would be consumed from worker commute trips to and from the project area. Diesel would primarily be consumed to operate heavy-duty equipment such as dozers, tractors, and pavers and to support haul truck trips. Emissions factors from CARB's EMissonFactor 2017 program were used to calculate the average fuel economy for vehicles operating within Nevada County by year (2014–2021). This construction period is consistent with the construction assumptions used in Section 3.1, "Air Quality," and 3.3, "Greenhouse Gas Emissions and Climate Change."

Energy consumed during operation would include electricity and direct natural gas consumption, measured in megawatt-hours per year. Natural gas would also be indirectly combusted from electricity demand; however, compliance with California's various renewable energy standards would decrease natural gas combustion in the energy sector over time.

Energy consumption estimates were calculated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 computer software (CAPCOA 2017). Where project-specific information was unknown, CalEEMod default values based on the project area were used. CalEEMod default electricity consumption rates were adjusted to account for energy-efficiency improvements from the 2019 California Energy Code, which would result in a 53 and 30-percent reduction in energy consumption in residential and nonresidential buildings, respectively, compared with the 2016 California Energy Code included in CalEEMod (CEC 2018).

Operational fuel use estimates were calculated using the mobile-source emissions module of CalEEMod and the estimated level of VMT associated with the Southern SOI Amendment as described in Section 3.9, "Traffic and Circulation."

Refer to Appendix F for detailed assumptions and modeling results.

THRESHOLDS OF SIGNIFICANCE

Thresholds of significance are based on Appendix G of the State CEQA Guidelines. A public utilities and energy impact is considered significant if implementation of the project would:

- require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;
- have insufficient 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 inadequate 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;
- not comply with federal, state, and local management and reduction statutes and regulations related to solid waste;
- result in a potentially significant environmental impact related to wasteful, inefficient, or unnecessary consumption of energy during project construction or operation; and/or
- conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

ISSUES NOT DISCUSSED FURTHER

There are no unique, local plans for renewable energy or energy efficiency and there is no element of the proposed land plan amendment that could conflict with or obstruct state plans. As noted above, new land uses developed as part of the Southern SOI Amendment would comply with the 2019 California Energy Code, which is intended to increase the energy efficiency of new development projects in the state. Through the permitting process, all development projects proposed under the Southern SOI Amendment would comply with the current and future versions of the State's Title 24 California Building Code. The 2019 California Energy Code (and subsequent updates), which the Southern SOI Amendment is subject to, is designed to move the state closer to its zero-net energy goals. PG&E, as an electricity utility, is required to comply with the future benchmarks of the state's RPS (i.e., 52 percent renewable by 2027, 60 percent by 2030, and 100 percent by 2045). Because electricity utilities in the state are required to increase the percentage of renewable energy sources in the electricity they provide, over time electricity consumed as part of the Southern SOI Amendment will increasingly be provided by renewable sources. There would be **no impact**.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.8-1: Environmental Effects due to Construction of New or Expanded Infrastructure

The 2014 SOI EIR evaluated whether the project would require construction of new infrastructure. While new water and wastewater infrastructure would be required as part of future development under the Southern SOI Amendment, impacts associated with new infrastructure is evaluated as part of the project throughout the 2014 SOI EIR. No new or expanded infrastructure beyond those identified would be required. Therefore, there is no new significant impact, and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. This impact would remain **less than significant** as identified in the 2014 SOI EIR.

Impacts 3.12.1 and 3.12.7 of the 2014 SOI EIR (pages 3.12-5 and 3.12-18) evaluated whether the project would require construction of new infrastructure. The analysis states that new development within the project area would require the construction of new wastewater conveyance facilities and water pipelines for water distribution within the project area as these facilities are limited in the area. As described on page 3.12-18, PG&E has identified that the project area contains significant facilities, and there are multiple facilities for both electricity and natural gas that future development could connect to extend service. Impacts resulting from construction of new water and wastewater pipelines in the project area are analyzed through the 2014 SOI EIR as part of the proposed project. Impacts were determined to be less than significant.

Southern SOI Amendment

The Southern SOI Amendment would change the General Plan designations to include a range of residential, commercial, and manufacturing land uses. As explained in the 2014 SOI EIR, utility infrastructure in present in the project area. The Southern SOI Amendment would increase the amount of the SOI designated for General Industrial (M-2) uses. Heavy industrial activities that can occur in this zone include manufacturing, assembly and processing, the storage and distribution of raw materials, aggregate plants, and related industrial uses. Although the Southern SOI Amendment could result in nearly 367,000 additional square feet of non-residential land uses compared to the land uses evaluated in the 2014 SOI EIR, the potential for environmental effects due to extension of utilities to serve the project area are not substantially greater than evaluated in the 2014 SOI EIR, because a similar level of ground disturbance and development for new or expanded utility infrastructure would occur under the Southern SOI Amendment.

Future development under the proposed Southern SOI Amendment would require new connections to gas, electric, water, and wastewater infrastructure in the project area. Construction associated with new or replacement utility infrastructure would generally occur within the SOI. The 2014 SOI EIR programmatically addresses the land disturbance that would occur in conjunction with development of the SOI. Changes in land use designations under the proposed project would not result in the need for new or expanded utilities compared to what was evaluated in the 2014 SOI EIR with most infrastructure extensions expected to be placed within future project area roadways. The proposed project would be required to comply with the LAFCo master service agreements for annexation of the project area. Further, extension of service would occur in cooperation with the utility provider and would be subject to project-level environmental review. There would be no new significant effects or more severe impacts than identified in the 2014 SOI EIR. This impact would be **less than significant**.

Residential Development Area

As described above, implementation of the project, including the residential development area, would require the extension of utility service. Construction activities for on-site infrastructure would be consistent with the general types of excavation and ground-disturbing earthwork evaluated throughout this Subsequent Draft EIR, and the type and extent of infrastructure would be consistent with the assumptions for development in the 2014 SOI EIR. Therefore, there is no new significant impact, and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. This impact would be **less than significant**. The reader is referred to Impact 3.8-3 regarding anticipated wastewater conveyance facility placement for the residential development area.

Mitigation Measures

No new mitigation is required.

Impact 3.8-2: Insufficient Water Supply in Normal, Dry, and Multiple Dry Years

The 2014 SOI EIR evaluated whether NID would have sufficient available water supply to serve future development in the project area. Though the Southern SOI Amendment would result in increased water demand, NID has sufficient water supply to adequately serve the project area through 2040 during normal years. NID's draft 2021 UWMP identifies potential water supply shortfalls during single and multiple dry years starting in 2025 that would be addressed through NID's Water Shortage Contingency Plan and Drought Plan to ensure water supply provision. Implementation of the proposed SOI Amendment would increase water demands beyond what was estimated under the 2014 SOI EIR but would not result water supply deficiencies under normal, dry, and multiple dry years. Therefore, there is no new significant impact, and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. This impact would remain **less than significant** as identified in the 2014 SOI EIR.

Impact 3.12.2 of the 2014 SOI EIR (page 3.12-6) evaluated whether NID would have sufficient available water supply to serve future development in the project area. The analysis states that the NID's existing and future water surpluses would be adequate to serve future development within the project area without the need for additional water entitlements. Impacts were determined to be less than significant.

Southern SOI Amendment

Implementation of the proposed Southern SOI Amendment would result in increased water demand through buildout of future uses in the project area. NID projects that customers used 161,678 acre-feet per year (AFY) of water during 2020 (NID 2021). Table 3.8-4, below, identifies land use water demands under the proposed project and compares these demands against those provided in the 2014 SOI EIR.

Table 3.8-4 Programmatic Estimated Water Demand for Maximum Buildout

Land Use	Units	SF	GPD/Unit	GPD/1,000 SF[1]	Total Demand (GPD)	AFY
Residential	516		400[2]		206,400	231.2
Commercial (Retail)[1]		124,146				
Retail (75% = 93,110 sf)				175	16,294	18.3
Restaurant (25% = 31,037 sf)				1,200	37,244	41.7
Industrial		1,703,605		150	255,541	286.2
Total Entire Project Area	**516**	**1,827,751**	**400**	**1,525**	**515,479**	**577.4**
Adopted Southern SOI Project Total	**534**	**1,460,893**			**511,397**	**572.8**
Change in Estimated Water Demand					**4,082**	**4.6**

Notes: SF = square feet, GPD = gallons per day, AFY = acre-feet per year

[1] Because commercial water demand rates vary drastically, the analysis assumed that 25% of the commercial space possible under the maximum buildout scenario would be developed for restaurant uses, which have a much higher water demand rate. The remaining 75% of the commercial space allowable under the maximum buildout scenario was assumed to be developed as retail.

[2] rate assumed in 2014 SOI EIR, Table 3.12-4

Source: Compiled by Ascent Environmental, Inc. based on the assumptions in the 2014 SOI EIR

As identified in Table 3.8-4, project implementation would demand 577.4 AFY (an additional 4,082 gpd [4.6 AFY] than the project previously evaluated in the 2014 SOI EIR). Table 3.8-1 describes that NID's projected available water supply through 2040 during normal years is between 161,473 and 143,846 AFY. Therefore, buildout of the project area would result in approximately 0.004 percent of the NID's available water supply through 2040 during normal years. NID has assumed serving development of the project area through an amendment to the existing water service contract between NID and the City. The City or applicant would generally seek verification or demonstration by NID that

sufficient water supply and associated water supply infrastructure is or would be available prior to operation of the subsequent project(s) prior to approval of any tentative subdivision maps or development.

Since certification of the 2014 SOI EIR, NID has released a draft 2020 UWMP. As identified in Section 3.8.1, "Regulatory Setting," and in Tables 3.8-2 and 3.8-3, NID projects a water supply deficit in the event of single and multiple-dry years between 2025 and 2040. The draft 2020 UWMP also identifies potential water supply deficits beyond 2040 related to the effects of climate change. The draft 2020 UWMP identifies several management and operational efforts to address water deficits during dry years. This includes implementation of NID's WSCP and Drought Plan that consist of carryover water storage strategies for NID reservoirs and the purchase of additional water sources, limitations on the number of days allowed for outdoor irrigation, limitations of new water sales, mandatory water reduction requirements for municipal customers, and other related actions (NID 2021:56-62). The WSCP prioritizes treated water (which represents 10 percent of demand) over agricultural water (which is 90 percent of demand). For this reason, treated water demand can generally be met in drought conditions, although reduced allocations may be mandated. The Drought Plan includes six stages for drought conditions that would reduce water demands (raw water and municipal water users) to match reduced water supplies (from 10 to 50 percent reduction in demands). The draft 2020 UWMP identifies that implementation of the WSCP would provide water savings of up to 23,597 AF. These water demand reduction and measures would adequately address the deficits identified in Tables 3.8-2 and 3.8-3.

NID is also planning future water projects that are anticipated to consist of expansion of reservoir capacity to improve dry-year supplies as well as anticipated shifts in runoff conditions in the watersheds due to climate change. Other water source projects include expansion of NID water treatment plants to increase the amount of treated water available as well as use of recycled water. The details of these future water projects will be determined as part of the development of NID's Plan For Water. However, no details on the exact extent of water savings or reliability have been developed to date.

Because future NID water projects have not been designed, the extent of potential environmental impacts from these activities are not known. Similarly, the mitigation measures that might be identified in future CEQA documents and their effectiveness is unknown. Possible environmental effects of these future water projects are summarized below:

- Aesthetics: Changes in reservoir levels and streamflows and presence of new/modified water storage facilities could affect the visual environment. Construction of new/modified dams, water storage, pumping, and/or transmission facilities near or in residential or recreational areas could negatively affect views.
- Air Quality: Pollutant emissions from construction equipment and traffic could occur during construction of new facilities. Operation of pumping and transmission facilities could produce emissions.
- Biological Resources: Changes in the amount and quality of wildlife habitat, jurisdictional wetlands, or riparian areas from construction or operational changes could result. Plant and wildlife species could be disturbed as a result of construction activities or changes in streamflows or reservoir/lake hydrology. Changes in the amount and quality of fisheries and/or aquatic habitat in affected streams and reservoirs/lakes could result. Fish entrainment could occur at diversion sites in lakes and streams.
- Cultural Resources: Historic, prehistoric, tribal cultural, and ethnographic resources could be affected by construction and maintenance of new facilities or by changes in reservoir/lake levels and streamflows.
- Geology and Soils: Potential geologic hazards could expose people or structures to potential substantial adverse effects. New/modified project facilities could interfere with the extraction of minerals at known or as-yet undiscovered mineral sites. Paleontological resources could be affected by construction and maintenance of new facilities or by changes in reservoir/lake levels and streamflows.
- Greenhouse Gas Emissions: Construction activities and operation of facilities could generate greenhouse gas emissions.
- Hazards and Hazardous Materials: Construction activities could create safety hazards.

- Hydrology and Water Quality: Operational changes in the level of affected reservoirs/lakes and in the magnitude and timing of streamflows could alter sediment transport, erosion, and siltation. Construction activities could cause increased erosion and sedimentation in affected water bodies. Changes in stream and reservoir/lake temperature, dissolved oxygen, turbidity, total suspended solids, and other water quality parameters of concern during facility construction and operation. Construction and operation of facilities could expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.
- Land Use and Planning/Agriculture and Forestry Resources: New/modified facilities may not be compatible with surrounding land uses, or may be inconsistent with related plans and policies. Some agricultural and forestry land could be taken out of production where project conveyance facilities need to be located.
- Noise and Vibration: Construction activities and operation of pumping facilities could expose people to noise levels in excess of local standards or to excessive groundborne vibration or groundborne noise levels.
- Population and Housing: Availability of additional/reliable water supplies could induce service area population growth through extension/expansion of water supply infrastructure.
- Public Services and Utilities: Siting of facilities could interfere with the operation or maintenance of existing or planned public utilities, including communication and energy infrastructure.
- Recreation: Changes in reservoir/lake levels and streamflows could affect the quantity or quality of recreation opportunities.
- Transportation: Construction-related traffic could affect local roads and safety.

As identified above, NID's draft 2020 UWMP identifies potential water supply shortfalls during single and multiple dry years starting in 2025 that would be addressed through NID's WSCP and Drought Plan to ensure water supply provision that would include the proposed Southern SOI Amendment and its increase in water demand. Because treated water is a small proportion of overall water supply managed by NID that is prioritized over agricultural water and because there are established measures that are proven to substantially reduce demand and maintain adequate contingency in the reservoirs, NID anticipates that there would be sufficient supply to serve development in the Southern SOI. Therefore, there is no new significant impact, and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. This impact would be **less than significant**.

Residential Development Area

As described in Chapter 2, "Project Description," the residential development area would result in 128 residential units. Preparation of a WSA pursuant to Section 10912 of the California Water Code is not required for the proposed project. A formal WSA is required for residential developments of more than 500 dwelling units, shopping centers or business establishments employing more than 1,000 persons or having more than 500,000 square feet of floor space, commercial office buildings employing more than 1,000 persons or having more than 250,000 square feet of floor space and projects that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project. As described above, NID would provide potable water to the residential development area and has anticipated water demand from the area in the draft 2020 UWMP. The City would continue to coordinate with NID regarding the anticipated water demand of the residential development area and NID's capacity to serve the project and future development of the area in normal and dry years. Using the water demand rate of 400 gpd/unit (see Table 3.8-4, above), the residential development area would demand approximately 51,200 gpd (or 57.4 AFY), which would represent approximately 0.0004 percent of NID's projected water demand through 2040 during normal weather years (NID 2021).

As described above, NID's draft 2020 UWMP identifies potential water supply shortfalls during single and multiple dry years starting in 2025 that would be addressed through NID's Water Supply Contingency Plan and Drought Plan to ensure water supply provision that would include the proposed Southern SOI Amendment and its increase in water demand. There is no new significant impact, and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. This impact would be **less than significant**.

Mitigation Measures

No new mitigation is required.

Impact 3.8-3: Wastewater Treatment Capacity

The 2014 SOI EIR evaluated whether the project would result in the need for new wastewater collection facilities and whether the project would be adequately served by the City's wastewater treatment plant (WWTP). While the Southern SOI Amendment could result in greater wastewater generation, the WWTP has available capacity to serve buildout of the SOI and necessary wastewater infrastructure would be constructed prior to future development. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. This impact would remain **less than significant** as identified in the 2014 SOI EIR.

Impacts 3.12.4 and 3.12.5 of the 2014 SOI EIR (page 3.12-11 through 3.12-13) evaluated whether the project would result in the need for new wastewater collection facilities and whether the project would be adequately served by the City's WWTP. The analysis states that a combination of new collection lines, upsizing of pipes, and new or upgraded lift stations would be needed to serve new development in the project area. A wastewater feasibility analysis was prepared and determined that extension of sewer service into the project area is feasible, however, the City had not selected a preferred alternative alignment at the time of publication of the 2014 SOI EIR. The analysis also states that future development within the project area would result in connection to the City's wastewater system and additional flows would need to be treated at the City's WWTP. On page 3.12-13 of the 2014 SOI EIR, the analysis determined that maximum buildout of the project area would be within the WWTP's available capacity of 2.78 million gallons per day (mgd) for an average day and 7.6 mgd for peak flows. Because sewer service within the project area was determined to be possible and because there would be sufficient capacity at the WWTP to serve the project, impacts were determined to be less than significant.

Southern SOI Amendment

Amending the southern SOI to modify land use designations and adding approximately 30 acres to the northeast would continue to result in the need for new and expanded wastewater infrastructure, including lift stations and collection lines. As described in the 2014 SOI EIR, the project area would be served by the City's WWTP. The feasibility analysis prepared for the previous EIR determined that while the expansion of wastewater infrastructure into the proposed project area is feasible, the City must identify a preferred alignment for wastewater collection. As of November 2020, a preferred alignment has not been determined. However, future development within the plan area would be limited until a new wastewater system is constructed.

Buildout of the project area would result in an increase in wastewater generation that would be treated at the City's WWTP. As described on page 3.12-13 of the 2014 SOI EIR, approximately 0.29 mgd of wastewater could be generated through full buildout of the previously evaluated project, representing approximately 0.10 percent of the WWTP's total capacity during average flows and 0.03 percent of the total capacity during peak flows. Land uses under the proposed Southern SOI Amendment would be revised, and an additional 30-acres of land would be added to the City's SOI. Development would result in greater wastewater generation than the previously evaluated project. Table 3.8-6 provides an estimate of wastewater generation in the project area based on wastewater generation rates provided in the 2014 SOI EIR (page 3.12-13, Table 3.12-5).

Table 3.8-5 Estimated Wastewater Generation for Maximum Buildout

Land Use	Units	SF	Wastewater Generation Rate (GPD/Unit)	Wastewater Generation Rate GPD/1,000 SF[1]	Average Dry Weather Flow (GPD)	AFY
Residential	516		191		98,556	110.4
Commercial (Retail)[1]		124,146		0.125	15,518.3	17.4
Industrial		1,703,605		0.125	212,950.6	238.5
Total Entire Project Area	**516**	**1,827,751**			**327,024.9**	**366.3**

Land Use	Units	SF	Wastewater Generation Rate (GPD/Unit)	Wastewater Generation Rate GPD/1,000 SF[1]	Average Dry Weather Flow (GPD)	AFY
Adopted Southern SOI Project Total	534	1,460,893			305,207[1]	341.9
Change in Estimated Wastewater Generation					21,817.9	24.4

[1] Includes wastewater generation of existing and proposed developed in the 2014 SOI EIR.

Source: Compiled by Ascent Environmental, Inc. based on the assumptions in the 2014 SOI EIR

As identified in Table 3.8-5, above, the proposed project is estimated to generate 366.3 AFY (0.33 mgd) of wastewater, an approximately 24.4 AFY increase compared to the previously evaluated project. As identified in the 2014 SOI EIR (page 3.12-8), the WWTP is permitted to discharge to Wolf Creek an average dry weather flow of not to exceed 2.78 mgd, or 7.6 mgd for peak flows, and currently receives an average flow of 1.72 mgd. Therefore, buildout of the project area would represent 0.12 percent of the WWTP's average flows.

While buildout of the proposed SOI expansion would increase the potential amount of wastewater generated in the project area, based on full build out of the land use designations, the WWTP would be able to adequately serve the estimated 0.12 percent increase in wastewater flows generated by the project area. There would be no new significant effects or more severe impacts than identified in the 2014 SOI EIR. Impacts would be **less than significant**.

Residential Development Area

Implementation of the residential development area would result in increased wastewater generation. As noted above, development of this area is limited until the preferred wastewater system alignment has been identified and constructed. As identified in the 2014 SOI EIR Appendix 3.12, potential wastewater conveyance connections could be provided to existing facilities in Freeman Way and Taylorville Road. The residential development area would be served by a lift station that has been installed in Taylorville Road, which was designed to serve the existing residential development north of the residential development area plus additional development in the region. At buildout, the lift station is expected to provide service to approximately 400 single family residences along with commercial and industrial businesses (Saurers Engineering, Inc. 2019).

Based on the wastewater generation rate of 191 gpd per residential unit provided in the SOI EIR (page 3.12-13), development of the proposed 128 residential units within the residential development area would generate approximately 21,888 gpd (or 0.02 mgd) of wastewater. This would represent approximately 0.007 percent of the WWTP's total daily capacity and 0.02 percent of the WWTP's daily remaining capacity. Therefore, it is assumed that the WWTP would be able to adequately serve buildout of the residential development area. There would be no new significant effects or more severe impacts than identified in the 2014 SOI EIR. Impacts would be **less than significant.**

Mitigation Measures

No new mitigation is required.

Impact 3.8-4: Generate Solid Waste that Exceeds the Capacity of Local Infrastructure or Conflicts with Waste Reduction Regulations

The 2014 SOI EIR evaluated whether the project would result in an increase in the generation of solid waste and a corresponding need for disposal facilities. The Recology Ostrom Road Landfill has capacity to serve the project through 2066. There would be no new significant impact and the impact is not substantially more severe than the impact identified in the 2014 SOI EIR. This impact would remain **less than significant** as identified in the 2014 SOI EIR.

Impact 3.12.6 of the 2014 SOI EIR (page 3.12-15) evaluated whether the project would result in an increase in the generation of solid waste and a corresponding need for disposal facilities. The analysis states that because the Recology Ostrom Road Landfill has 37.6 million cubic yards of permitted capacity remaining, is permitted to accept

an additional average of over 2,300 tons per day of refuse, and the total project would generate no more than 5.94 to 9.83 tons per day of refuse, completion of the project would have a less than significant impact on landfill capacity.

Southern SOI Amendment

The Southern SOI Amendment would expand the SOI by approximately 30 acres in the northeast and revise the land use designations within the project area. As described in the 2014 SOI EIR, the project area would be served by Waste Management of Nevada County for solid waste disposal services, and waste would be disposed of at the Recology Ostrom Road Landfill. Under implementation of the proposed Southern SOI Amendment, the project area would continue to be served by these providers. The 2014 SOI EIR identified solid waste generation potential and assumed that the project could generate approximately 5.94 to 9.83 ton/day and would be adequately served by the Recology Ostrom Road Landfill. Further, the estimated solid waste identified on page 3.12-16 of the SOI EIR would represent approximately 0.003 percent to 0.004 percent of the landfill's average daily throughput. Since publication of the 2014 SOI EIR, the available permitted capacity of the landfill has increased by approximately 2 million cubic yards. Though the proposed Southern SOI Amendment would change several land use designations in the project area, land uses would still include residential, commercial, and industrial/manufacturing uses. However, because the proposed Southern SOI Amendment includes more area designated for manufacturing, it is reasonable to assume that the totality of future development could result in a slightly greater amount of solid waste generation than the previously evaluated project, depending on the types of manufacturing and industrial uses that are developed in the future. This increase in solid waste generation would be minimal, and it is expected that adequate solid waste services and available solid waste capacity would continue to be available. Therefore, there would be no new significant effects or more severe impacts than identified in the 2014 SOI EIR. This impact would be **less than significant**.

Residential Development Area

Buildout of the residential development area would result in an increase in solid waste generation in the City. As previously described, the proposed project would be served by the Waste Management of Nevada County and the Recology Ostrom Road Landfill. As shown in Table 3.8-6, the proposed development could increase the solid waste generation potential of the residential development area compared to the commercial development analyzed in the 2014 SOI EIR. However, because there is existing capacity to accommodate the amount of solid waste generated through buildout of the SOI area overall, it is assumed that residential uses developed in this area would minimally contribute to existing landfill capacity. Therefore, there would be no new significant effects or more severe impacts than identified in the 2014 SOI EIR. This impact would be **less than significant**.

Table 3.8-6 Solid Waste Generation Potential of Residential Development Area

Proposed Land Use	Units/Square Footage	Solid Waste Generation Rates[1]	Estimated Solid Waste Generation
Southern SOI Amendment: Multi-Family Dwelling	128 dwelling units	3.6 to 8.6 pounds/day	460.80 to 1,180 pounds/day
Adopted Southern SOI Project: Commercial/Retail	108,900 square feet	2.5 to 6.0 pounds/1,000 square feet/day[2]	272.25 to 653.40 pounds/day

[1] reference generation rates provided do not account for compliance with AB 939. Actual disposal rates are anticipated to be 50 percent less. Source: CalRecycle 2021

[2] based on Table 3.12-6 of the 2014 SOI EIR

Source: Data compiled by Ascent Environmental, Inc. 2021

Mitigation Measures

No new mitigation is required.

Impact 3.8-5: Wasteful, Inefficient, or Unnecessary Consumption of Energy during Project Construction or Operation

Implementation of the Southern SOI Amendment would result in the consumption of additional energy supplies during construction in the form of gasoline and diesel fuel consumption; however, this energy expenditure would not be considered atypical when compared to other construction projects. Operation of new land uses associated with the Southern SOI Amendment would also result in additional energy consumption, but the Southern SOI Amendment would be required to comply with the most recent iteration of the California Energy Code as it becomes more stringent over time. Additionally, the Southern SOI Amendment would provide necessary housing to the City of Grass Valley meeting the objectives of the 2019–2027 Housing Element. As compared to the Adopted Southern SOI Project, the Southern SOI Amendment would result less energy efficiency due to the proposed industrial land uses and decreased population. Therefore, the Southern SOI Amendment would result in more energy consumption as compared to the Adopted Southern SOI Project. However, this energy expenditure would not be considered wasteful, inefficient, or unnecessary and the Southern SOI Amendment would meet the commercial, industrial, and housing needs of the City. This impact would be **less than significant.**

The 2014 SOI EIR did not estimate construction or operational energy consumption associated with the project.

Appendix F and Appendix G of the State CEQA Guidelines now require consideration of the energy implications of a project. CEQA requires mitigation measures to prevent or reduce wasteful, inefficient, and unnecessary energy usage. Neither the law nor the State CEQA Guidelines establish thresholds that define when energy consumption is considered wasteful, inefficient, or unnecessary.

Southern SOI Amendment

Most of the construction-related energy consumption for the Southern SOI Amendment would be associated with off-road equipment and the transport of equipment and materials using on-road haul trucks. An estimated 380,000 gallons of gasoline and 1,090,000 gallons of diesel fuel would be used during construction of the Southern SOI Amendment (see Appendix F for a summary of construction calculations). The energy needs for project construction was assumed to occur over an estimated 8-year construction period and are not anticipated to require additional capacity or substantially increase peak or base period demands for electricity and other forms of energy. Gasoline and diesel would also be consumed during worker commute trips. Energy would be required to transport demolition waste and excavated materials. The one-time energy expenditure required to construct the project (spread over the estimate 8-year buildout period) would be nonrecoverable. There is no atypical construction-related energy demand associated with the proposed project. Nonrenewable energy would not be consumed in a wasteful, inefficient, or unnecessary manner when compared to other construction activity in the region. Additionally, as shown in Appendix F, on-road gasoline and diesel fuel consumption associated with construction activity would go down every year as the vehicle fleet becomes more fuel-efficient over time. Construction of the Adopted Southern SOI Project would require roughly the same amount of gasoline and diesel fuel as the Southern SOI Amendment.

Table 3.8-7 summarizes the anticipated operational electricity use, natural gas combustion, and gasoline and diesel fuel consumption associated with the Adopted Southern SOI Project and Southern SOI Amendment at the first full year of project buildout, estimated to be 2040 in this analysis consistent with the approach taken in Section 3.1, "Air Quality," and Section 3.3, "Greenhouse Gas Emissions and Climate Change." Project operation would be typical of residential, commercial, and industrial land uses requiring electricity and natural gas for lighting, space and water heating, climate control, home appliances, and landscape maintenance activities. The Southern SOI Amendment would increase electricity and natural gas consumption relative to existing conditions; however, project construction and operation would not require additional or new electrical or natural gas infrastructure outside of the project area (as discussed above).

Residential and nonresidential buildings would be required to adhere to the 2019 California Energy Code and any subsequent code updates, historically every 3 years, throughout the project lifetime. The Adopted Southern SOI Project would support a total service population of 3,489 and the Southern SOI Amendment would support 3,131.

Table 3.8-7, below, summarizes the total energy consumption of the Adopted Southern SOI Project and Southern SOI Amendment by service population.

Table 3.8-7 Previously Approved Project and Southern SOI Amendment Operational Energy Consumption at Full Build-Out per Service Population (2040)

Energy Type	Energy Consumption	Units
Adopted Southern SOI Project[1]		
Electricity	4.7	MWh/year/SP
Natural Gas	77	therms/year/SP
Gasoline	291	gal/year/SP
Diesel	61	gal/year/SP
Southern SOI Amendment[2]		
Electricity	5.6	MWh/year/SP
Natural Gas	117	therms/year/SP
Gasoline	338	gal/year/SP
Diesel	70	gal/year/SP

Notes: MWh/year/SP = megawatt-hours per year per service population; therms/year/SP = thermal units per year per service population, gal/year/SP = gallons per year per service population.

[1] The previously approved project would support a service population of 3,489.

[2] The Southern SOI Amendment would support a service population of 3,131.

Source: Calculations by Ascent Environmental in 2021

As shown in Table 3.8-7, the Southern SOI Amendment would consume more electricity, natural gas, gasoline, and diesel per service population as compared to the Adopted Southern SOI Project. This increase in per capita consumption is attributable to the land uses proposed under the Southern SOI Amendment. The Southern SOI Amendment would convert portions of the project area to support more square footage of manufacturing activity. As shown in Appendix F, the electricity and natural gas consumption for manufacturing activities is greater than that used for commercial or residential land uses. Moreover, the Southern SOI Amendment would not support the same number of residents and employees as compared to Adopted Southern SOI Project, which has more land designated for commercial and residential uses.

Although energy use was modeled to reflect 2019 California Energy Code, new iterations of the code would likely become increasingly stringent with updates to the efficiency standards until the Southern SOI Amendment's final buildout year. This would result in increased building energy efficiency as buildings continue to be developed within the SOI. Although, as shown in Table 3.8-7, energy per service population would be greater under the Southern SOI Amendment, the buildings constructed under the Southern SOI Amendment would be beholden to the same building code standards that would also future development under the Adopted Southern SOI Project.

Notably, the values presented in Table 3.8-7 for electricity and natural gas consumption are associated with the design elements of the 2019 Title 24 California Building Code. It is foreseeable that the Title 24 California Building Code, and the relevant parts that improve the energy efficiency of residential and nonresidential development (i.e., Part 6, California Energy Code, and Part 11, California Green Building Standards Code), is updated on its triennial basis. At this time, it is unknown how energy efficiency will be upgraded in code updates. Therefore, this analysis provides a more conservative estimate of future energy consumption as it is expected that the Title 24 California Building Code in effect in 2040 would result in more energy efficient development to assist the state in meeting its long-term climate change goals (see Chapter 3.3, "Greenhouse Gas Emissions and Climate Change").

As discussed in Section 3.9, "Transportation and Circulation," the Southern SOI Amendment's proposed land use plan would result in an increase in VMT per service population (i.e., combined residents and employees) as compared to the land use designations under the Adopted Southern SOI Project. This increase is attributed to the longer trip

lengths associated with new general industrial land uses and would result in greater transportation energy use. Notably, however, future gasoline and diesel fuel consumption will likely be reduced as California's transportation sectors transitions to a predominantly electric fleet. Regulations such as Advanced Clean Cars, Advanced Clean Fleets, and Advanced Clean Trucks include benchmark goals to deploy zero-emissions vehicles by various deadlines. Additionally, increasingly more stringent fuel economy standards would result in more fuel-efficient automobiles and light-duty trucks. As the transportation sector is electrified and made more fuel efficient, gasoline and diesel fuel consumption associated with the Southern SOI Amendment would decrease over time.

While the construction and operation of the Southern SOI Amendment would result in new energy consumption in the form of electricity, natural gas, gasoline, and diesel fuel consumption as compared to baseline levels, this energy consumption would not be considered wasteful or unnecessary as it would facilitate the construction and operation of land uses deemed necessary to support future growth in the City. Additionally, newly constructed buildings under the Southern SOI Amendment would become increasingly more energy efficient as the California Building Code continues to be updated and improved. Also, vehicles accessing the Southern SOI Amendment project site would become more fuel efficient as regulatory mechanisms influence the composition of the transportation sector. For these reasons, the energy associated with the Southern SOI Amendment is not considered wasteful, unnecessary, or inefficient. Therefore, this impact would be less than significant

Had energy impacts been evaluated in the 2014 SOI EIR, a similar conclusion would have been made because the energy consumed under the Adopted Southern SOI Project would have been considered necessary to meet the long-term planning needs of the city and would be subject to the aforementioned standards and regulations that would improve the energy efficiency of buildings and fuel efficiency of automobiles and light-duty trucks. As identified in Section 3.1, "Air Quality," implementation of Mitigation Measure 3.1-1a and 3.1-2 would require implementation of construction and design measures that would further reduce energy use for subsequent projects in the SOI.

Therefore, this impact would be **less than significant** and would not be substantially more severe than the Adopted Southern SOI Project.

Residential Development Area

The proposed residential development is anticipated to result in 128 duplex and apartment homes on approximately 10 acres currently designated for commercial use. Development of retail land uses under the existing pre-zoning is anticipated to generate greater vehicle activity as compared to residential uses resulting in greater consumption of gasoline and diesel fuel. Thus, residential development under the proposed amendment would result in less vehicle activity, reducing gasoline and diesel fuel consumption as compared to level of vehicle activity that would be generated from the land use parcels currently zoned for commercial use. Additionally, as discussed previously, the proposed residential development would be constructed in accordance with the applicable version of the California Energy Code in effect at the time of construction. Vehicle movement associated with the proposed residential development would also become more fuel efficient over time as various regulations are implemented.

The modeling of total energy consumption presented in Table 3.8-7 is inclusive of these land uses changes. As identified in Section 3.1, "Air Quality," implementation of Mitigation Measure 3.1-1a and 3.1-2 would require implementation of construction and design measures that would further reduce energy use for residential development area.

Therefore, this impact would be **less than significant** and would not be substantially more severe than the Adopted Southern SOI Project

Mitigation Measures

No mitigation is required.

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3.9 TRANSPORTATION AND CIRCULATION

This section describes the applicable federal, state, and local transportation regulations and policies, and discusses the existing roadway network and transportation facilities in the vicinity of the project. This section also summarizes project-generated transportation impacts associated with the Southern Sphere of Influence Planning and Annexation Project (Adopted Southern SOI Project), as described in the approved 2014 SOI EIR, and evaluates the potential transportation impacts resulting from implementation of the proposed amendments to the Southern Sphere of Influence Planning and Annexation Project (Southern SOI Amendment) related to transportation and circulation.

The 2014 SOI EIR included Section 3.13, "Transportation and Circulation," which evaluated the potential effects of the Adopted Southern SOI Project. The 2014 SOI EIR concluded that there would be less-than-significant impacts related to design hazards; emergency access; and transit, bicycle, and pedestrian facilities (Impacts 3.13.2, 3.13.3, 3.13.4, respectively). The 2014 SOI EIR also concluded that impacts related to traffic operational impacts would be significant and unavoidable with implementation of all feasible mitigation measures (Impact 3.13.1). However, pursuant to Senate Bill (SB) 743, Public Resources Code (PRC) Section 21099, and California Code of Regulations (CCR) Section 15064.3(a), generally, vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts and a project's effect on automobile delay no longer constitutes a significant impact under CEQA. Additionally, as part of the regional transportation planning process, Nevada County Transportation Commission (NCTC), in coordination with the County of Nevada, City of Grass Valley, City of Nevada City, and Town of Truckee, developed the *SB 743 Vehicle Miles Traveled Implementation* guidelines document (NCTC 2020; hereinafter VMT Implementation Guidelines), which identifies recommended screening criteria, methodologies, baselines, and thresholds values, consistent with the Office of Planning and Research's *Technical Advisory on Evaluating Transportation Impacts in CEQA* (OPR 2018; hereinafter OPR's Technical Advisory) and the State CEQA Guidelines.

The transportation analysis here-in evaluates impacts using VMT, based on the current understanding that VMT is the most appropriate measure of transportation impacts. Although not addressed in this SEIR, the analyses of traffic operations (i.e., intersection and freeway level of service (LOS) analysis) for the Southern SOI Amendment were conducted by GHD and are included in the *Sphere of Influence Specific Plan Draft Transportation Impact Analysis* attached as Appendix C. This LOS analysis compares the vehicle delay anticipated with the Southern SOI Amendment to the Adopted Southern SOI Project. The evaluation was conducted for disclosure and has not been used as a basis for determining environmental impacts. The City will use the LOS analysis to evaluate consistency with City regulations, including policies in the General Plan.

No comment letters were received in response to the notice of preparation that express concerns related to transportation.

3.9.1 Regulatory Setting

The State and regional regulatory setting for transportation provided on pages 3.13-8 through 3.13-9 of the 2014 SOI EIR is no longer applicable to this analysis as it is outdated or based on delay-based traffic operations; and thus, is no longer relevant under CEQA as described above. Therefore, descriptions of new or updated regulatory settings related to the California Department of Transportation (Caltrans), State CEQA Guidelines pursuant to SB 743, and the NCTC Regional Transportation Plan (RTP) that have occurred subsequent to the approval of the 2014 SOI EIR are described below. The City of Grass Valley General Plan has not been updated since the approval of the 2014 SOI EIR; and thus, the Local regulatory setting for transportation provided on page 3.13-9 and in Appendix 3.1-1 of the 2014 SOI EIR remains applicable to this analysis.

STATE

Caltrans

Caltrans is responsible for planning, designing, constructing, operating, and maintaining all state-owned roadways in Nevada County. Federal highway standards are implemented in California by Caltrans.

The Transportation Impact Study Guide (TISG) was prepared to provide guidance to Caltrans Districts, lead agencies, tribal governments, developers, and consultants regarding Caltrans review of a land use project or plan's transportation analysis using a VMT metric. This guidance is not binding on public agencies and it is intended to be a reference and informational document. The TISG replaces the Guide for the Preparation of Traffic Impact Studies and is for use with local land use projects, not for transportation projects on the State Highway System (Caltrans 2020).

Senate Bill 743

SB 743, passed in 2013, required the Governor's Office of Planning and Research (OPR) to develop new State CEQA Guidelines that address traffic metrics under CEQA. As stated in the legislation, upon adoption of the new guidelines, "automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any." These changes to State CEQA Guidelines were adopted in December 2018.

OPR's Technical Advisory, most recently updated in December of 2018, provides guidance for VMT analysis. The Office of Administrative Law approved the updated State CEQA Guidelines and lead agencies had an opt-in period until July 1, 2020 to implement the updated guidelines as they relate to VMT. As of July 1, 2020, implementation of CCR Section 15064.3 of the updated State CEQA Guidelines apply statewide.

REGIONAL

Senate Bill 743 Vehicle Miles Traveled Implementation

The VMT Implementation Guidelines were adopted by NCTC on July 6, 2020. The VMT Implementation Guidelines are meant to be help guide lead agencies within Nevada County (including the City of Grass Valley) in implementing and analyzing VMT for the purposes of CEQA. The VMT Implementation Guidelines discuss alternatives for VMT measurement methods and thresholds, recommend VMT methods and thresholds, and recommend transportation demand management (TDM) strategies for reducing VMT on projects.

Nevada County Regional Transportation Plan

As the Regional Transportation Planning Agency for Nevada County, California State law requires that NCTC prepares, adopts, and submits an updated RTP to the California Transportation Commission and Caltrans at least every 5 years. The NCTC adopted the Nevada County RTP in January of 2018. The RTP documents the short-term (2016-2026) and long-term (2026-2036) regional transportation needs and sets forth an effective, cost-feasible action plan to meet these needs. The RTP includes the projects that are reasonably anticipated to be funded within the plan's fiscal constraints. The RTP also identifies projects that can be implemented if additional funds become available. To qualify for funding in the State Transportation Improvement Program, projects included in a Regional Transportation Improvement Program or Caltrans Interregional Transportation Improvement Program must be consistent with adopted regional transportation plans.

The RTP documents the policy direction, actions, and funding strategies designed to maintain and improve the regional transportation system. The RTP promotes a continuous, comprehensive, and cooperative transportation planning process that facilitates the efficient development and implementation of projects while maintaining Nevada County's commitment to public health and environmental quality. The RTP is consistent with the California Transportation Plan, the California Interregional Transportation Strategic Plan, and the California Strategic Highway Safety Plan (NCTC 2018).

Nevada County Active Transportation Plan

The *Nevada County Active Transportation Plan* (NCTC 2019) covers Nevada County and its three incorporated cities: City of Grass Valley, City of Nevada City, and Town of Truckee. The plan helps make each jurisdiction eligible for new funding to create new trails, sidewalks, bike lanes, and other improvements for bicycling and walking and will support applications for funding from the statewide Active Transportation Program and other sources of funding. The *Nevada County Active Transportation Plan* provides a set of goals and objectives, details the existing and planned bike and pedestrian facilities in the City of Grass Valley, and identifies implementation prioritizations and costs. Planned facilities within, or in the vicinity of the project site consist of a Class III multi-use shoulder along La Barr Meadows Road and a Class II bike lane along Freeman Lane from McKnight Way to Boston Ravine on the west side of SR 49. The plan does not identify any future pedestrian facilities within the project site.

3.9.2 Environmental Setting

This section describes the existing environmental setting, which is the baseline scenario upon which project-specific impacts are evaluated. Portions of the Environmental Setting for transportation directly related to delay-based traffic operations provided on pages 3.13-1 through 3.13-8 of the 2014 SOI EIR are no longer applicable to this analysis. The environmental setting for transportation includes baseline descriptions for roadway, bicycle, pedestrian, and transit facilities. The setting information pertaining to the roadway, bicycle, pedestrian, and transit facilities on pages 3.13-1 through 3.13-8 of the 2014 SOI EIR generally remain applicable to this analysis; however, minor updates are included below.

EXISTING ROADWAY NETWORK

State Route (SR) 49 is an inter-regional highway that begins in Madera County where it diverges from SR 41. SR 49 traverses in the north-south direction through Tuolumne, Calaveras, Amador, El Dorado, Placer, Nevada, Yuba, Sierra, and Plumas counties. SR 49 terminates at its northern terminus at SR 70. SR 49 is a four-lane divided freeway through the project study area. SR 49 has double designation through the project study area as SR 20. Throughout this report, the segment of highway will be recognized as SR 49.

McKnight Way is a two-lane east-west roadway that runs between S. Auburn Street/La Barr Meadows and Freeman Lane. McKnight is a primary roadway that connect regional traffic from SR 49 to residential and business uses via collector roadways.

La Barr Meadows Road is a two-lane north-south roadway that runs between McKnight Way south to SR 49. La Barr Meadows Road primarily serves housing, industrial, and manufacturing land uses.

Taylorville Road is a two-lane north-south roadway that runs between Freeman Lane to a southern terminus south of McKnight Way. Taylorville Road serves housing and business land uses.

South Auburn Street is a two-lane north-south roadway that runs between McKnight Way north to Washington Street. South Auburn Street serves a mixture of housing, industrial, and businesses.

TRANSIT SYSTEM

Existing transit services in the vicinity of the Southern SOI Amendment project site are provided by Gold Country Stage and Gold Country Lift. Gold Country Stage is a fixed route system serving populated centers in western Nevada County and Colfax. Gold Country Lift is a private, non-profit system for handicapped and elderly patrons, using cars and similar vehicles to transport passengers to shopping and medical appointments.

The Grass Valley Route operates in the vicinity of the Southern SOI Amendment project site, with bus stops at S. Auburn Street at Adams Lane and Whiting Street at Church of Christ on the east side of SR 49. The bus stops north of, and in the vicinity of, the Southern SOI Amendment project site is located at Freeman Lane at Pine Creek Center. This bus route operates six days a week with one-hour headways.

BICYCLE SYSTEM

Within the City of Grass Valley, bicycle facilities are designated according to the following four classifications:

- Bike paths or shared use paths, also referred to as Class I bikeways, provide a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians with crossflows by motorists minimized.
- Bike lanes, also referred to as Class II bikeways, provide a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and crossflows by pedestrians and motorists permitted.
- Bike routes, also referred to as Class III bikeways, provide a right-of-way on street or off-street, designated by signs or permanent markings and shared with pedestrians and motorists.
- Cycle tracks or separated bikeways, also referred to as Class IV bikeways, promote active transportation and provide a right-of-way designated exclusively for bicycle travel adjacent to a roadway and which are separated from vehicular traffic. Types of separation include, but are not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking.

Bicycle facilities in the vicinity of the project site include Class II bike lanes along McKnight Way from Freeman Lane to La Barr Meadows Road. No bicycle facilities are present along Taylorville Road, La Barr Meadows Road, S. Auburn Street, or SR 49.

PEDESTRIAN SYSTEM

In the vicinity of the Southern SOI Amendment project site, pedestrian facilities are provided as follows:

- La Barr Meadows Road: Sidewalks are provided south of McKnight Way on both sides of the roadway for approximately 425 feet.
- South Auburn Street: Sidewalks are present on the east side of the roadway for approximately 485 feet. Discontinuous sidewalks are currently provided on the west and east side of the roadway.
- Taylorville Road: Sidewalks are provided south of McKnight Way on the west side of the roadway for approximately 1,175 feet.
- McKnight Way: Sidewalks are provided on both sides of the roadway between Taylorville Road and Freeman Lane. Additionally, sidewalks are only present on the southside of the roadway from Taylorville Road to S. Auburn Street/La Barr Meadows Road
- Crosswalks are present on McKnight Way along the south side of the roadway across Taylorville Road, SR 49 WB on-ramp, SR 29 EB off-ramp, and La Barr Meadows Road.
- Pedestrian trails that connect the first phases on Berriman Ranch to the Kmart shopping center have been approved and sidewalks connect this phase to the Piccadilly Lane and Freeman Lane sidewalks. The City will require future development on the west side of Highway 49 to incorporate pedestrian trails that will connect to the north and west.

In the vicinity of the Southern SOI Amendment project site, no sidewalks are identified along or near the intersection of SR 49 and Allison Ranch Road/La Barr Meadows Road. Additionally, no crosswalks are identified along La Barr Meadows Road or Taylorville Road.

3.9.3 Environmental Impacts and Mitigation Measures

This section describes the analysis techniques, assumptions, and results used to identify potential significant impacts of the project on the transportation system. Transportation and circulation impacts are described and assessed, and mitigation measures are recommended for impacts identified as significant or potentially significant.

METHODOLOGY

State CEQA Guidelines Section 15064.3 was added December 28, 2018, to address the determination of significance for transportation impacts. The new guideline requires that the analysis is based on VMT instead of congestion (such as LOS). The change in the focus of transportation analysis is the result of legislation (SB 743) and is intended to shift the emphasis from congestion to, among other things, reducing greenhouse gas emissions, promoting a diversity of land uses, and developing multimodal transportation networks. Pursuant to CEQA Guidelines Section 15064.3(c), this change in analysis is mandated to be used beginning July 1, 2020. Therefore, VMT is included in the analysis of this SEIR.

State CEQA Guidelines Section 15064.3(b) identifies four criteria for analyzing the transportation impacts of a project. To determine how the project should be considered, each of the criteria is discussed below.

Section 15064.3(b)(1) addresses land use projects. The Southern Sphere of Influence Planning and Annexation Project is a land use plan that was prepared in part to guide future development of the project site. Therefore, the Southern Sphere of Influence Planning and Annexation Project and the projects regulated under it would generally be considered "land use projects." Section 15064.3(b)(1) describes that projects with specified proximity to "major" or "high quality" transit should be presumed to cause a less than significant transportation impact. As defined in PRC Section 21064.3, a "major transit stop" means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. PRC Section 21155(b) defines a high-quality transit corridor as a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. No such major transit stops or high-quality transit corridors exist in the vicinity of the project site. Additionally, Section 15064.3(b)(1) also describes that projects resulting in a decrease VMT in the project site as compared to existing conditions should also be presumed to have a less than significant effect.

Section 15064.3(b)(2) addresses transportation projects. As described above, the Southern Sphere of Influence Planning and Annexation Project and the projects regulated under the it would generally be considered land use projects. Section 15064.3(b)(2) describes that transportation projects that reduce or have no impact on VMT should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, a lead agency may tier from that analysis as provided in Section 15152.

Section 15064.3(b)(3), Qualitative Analysis, states that if existing models or methods are not available to estimate the VMT for the particular project being considered, a lead agency may analyze the project's VMT qualitatively. Additionally, this section notes that for many projects, a qualitative analysis of construction traffic may be appropriate.

Section 15064.3(b)(4), Methodology, explains that the lead agency (in this case, City of Grass Valley) has discretion to choose the most appropriate methodology to evaluate VMT subject to other applicable standards, such as CEQA Guidelines Section 15151 (standards of adequacy for EIR analyses).

OPR's Technical Advisory notes that projects generating or attracting fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact, absent substantial evidence indicating otherwise. Therefore, individual projects under the Southern Sphere of Influence Planning and Annexation Project that would likely generate fewer than 110 trips per day, would likely result in a less-than-significant VMT impact. However, the change in VMT associated with the Southern Sphere of Influence Planning and Annexation Project considers the changes to the plan as a whole.

The City of Grass Valley has not developed VMT guidelines and thresholds to meet the requirements set by SB 743 and addressing CEQA Guidelines Section 15064.3. However, in July of 2020 NCTC completed the VMT Implementation Guidelines document, which identifies recommended screening criteria, VMT methodologies, baselines, and thresholds values for lead agencies in Nevada County, consistent with the OPR's Technical Advisory and State CEQA Guidelines Section 15064.3. Therefore, in the absence of City of Grass Valley adopted VMT guidelines and thresholds of significance, the VMT analysis here-in relies on the guidance provided in CEQA Guidelines Section 15064.3, OPR's Technical Advisory, and the NCTC VMT Implementation Guidelines document.

The VMT Implementation Guidelines recommend using total weekday VMT per service population (residents plus employees and students) as the measure of VMT. This measure captures all vehicles and trip types related to VMT production by the service population, which includes residents, employees, and students. This measure also provides the benefit of being consistent with VMT data used in other sections of CEQA analysis, such as air quality, greenhouse gases, and energy (Fehr & Peers 2020). Additionally, the VMT Implementation Guidelines recommends using the following thresholds of significance for analyzing a project or plan's VMT impact:

- The project or plan total weekday VMT per service population is equal to or less than "X" percent below the subarea mean under baseline conditions; and
- The project or plan is consistent with the jurisdiction's general plan and the Nevada County Regional Transportation Plan.

A specific reduction of "X" below the subarea baseline VMT may be selected by each jurisdiction based on key factors such as the setting (as noted in CEQA Guidelines Section 15064(b)(1)), evidence related to VMT performance, and policies related to VMT reduction (Fehr & Peers 2020). Additionally, the VMT Implementation Guidelines identify screening criteria for land use projects and plans within Nevada County. However, due to the size and nature of the proposed project, it would not be screened out from VMT analysis.

The City of Grass Valley is the subarea against which the Southern Sphere of Influence Planning and Annexation Project is evaluated. The City of Grass Valley has not established a specific reduction from the subarea mean; and thus, the analysis in this document utilizes a 15 percent reduction, consistent with the recommendations of OPR's Technical Advisory. As detailed in the VMT Implementation Guidelines, the total VMT per service population for the City of Grass Valley is 28.0. Therefore, a 15 percent reduction from this subarea mean would be 23.8 VMT per service population. However, the analysis here-in examines whether the changes to the Adopted Southern SOI Project would result in any new significant impacts or substantially more severe impacts; and thus, compares the VMT per service population of the Adopted Southern SOI Project to the proposed Southern SOI Amendment.

VMT Modeling and Calculations

The project-level trip-based VMT per service population was modeled for the Adopted Southern SOI Project and the proposed Southern SOI Amendment project using the Year 2040 scenario of the NCTC western Nevada Regional Travel Demand Model. The travel demand model was utilized to estimate trip based VMT for each of the different land uses associated with the Adopted Southern SOI Project and the proposed Southern SOI Amendment. Service population for each land use was estimated based on the travel demand model's land use input conversion factors. Additional detailed information related to methodology and approach of the VMT analysis is included in Appendix D.

THRESHOLDS OF SIGNIFICANCE

The significance criteria used to evaluate project impacts on transportation under CEQA are based on Appendix G of the State CEQA Guidelines, State CEQA Guidelines Section 15064.3, OPR's Technical Advisory, and the NCTC VMT Implementation Guidelines document.

The project would result in a significant impact related to transportation if it would:

- 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); or
- result in inadequate emergency access.

ISSUES NOT DISCUSSED FURTHER

The 2014 SOI EIR determined that the Adopted Southern SOI Project would not conflict with a program, plan, ordinance, or policy addressing transit, bicycle, and pedestrian facilities or otherwise decrease the performance or safety of such facilities. No new transit service or routes are planned for the project site. The project is expected to generate a moderate increase in demand on existing transit services, similar to that of the Adopted Southern SOI Project. However, the increase in demand is expected to be satisfied by existing transit service. Therefore, the proposed Southern SOI Amendment would not conflict with a program, plan, ordinance, or policy addressing transit, or otherwise decrease the performance of such facilities. The bicycle and pedestrian improvements identified in the 2013 *Nevada County Bicycle Master Plan* and analyzed in the 2014 SOI EIR are consistent with the planned improvements detailed within the *Nevada County Active Transportation Plan*. Additionally, the proposed amendments to, and all future development under the Southern SOI Amendment would similarly be subject to, and designed in accordance with City standard roadway improvements and design standards, and consistent with the adopted *Nevada County Active Transportation Plan*. Therefore, there would be no new significant effects or more severe impacts to transit, bicycle, or pedestrian facilities than that which were identified in the 2014 SOI EIR.

The 2014 SOI EIR determined that all future development within the project site would be required to comply with all applicable roadway and other transportation facility design standards (e.g., City of Grass Valley, Caltrans). Therefore, the 2014 SOI EIR determined that future development within the project area would result in a less than significant impact to transportation hazards. The proposed Southern SOI Amendments to, and all future development under the Southern SOI Amendment would similarly be subject to, and designed in accordance with City design and safety standards. Therefore, there would be no new significant effects or more severe impacts to transportation hazards than that which was identified in the 2014 SOI EIR.

The 2014 SOI EIR determined that all future development within the project site would be required to comply with City requirements for emergency access, and all future development within the project site would be required to be reviewed and approved by the fire department and any other applicable emergency service providers to ensure adequate emergency access during construction and implementation. Therefore, the 2014 SOI EIR determined that future development within the project site would maintain adequate emergency access and access to evacuation routes; and thus, would result in a less than significant impact to emergency access. The proposed Southern SOI amendments to, and all future development under the Southern SOI Amendment, would similarly be subject to the requirements of the City and applicable emergency service providers. Pursuant to General Plan Policy 4-SI, the City would require future developments to provide multiple ingress and egress points to facilitate emergency access and evacuation. Therefore, there would be no new significant effects or more severe impacts to emergency access than that which was identified in the 2014 SOI EIR. The reader is referred to Impact 3.5-3 in Section 3.5, "Hazards and Hazardous Materials," for a further discussion on emergency access.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.9-1: Conflict or be Inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)

The proposed Southern SOI Amendment would result in a higher VMT per service population than that which would be generated under the Adopted Southern SOI Project. Additionally, the project-generated VMT associated with the proposed Southern SOI Amendment would exceed the Citywide VMT per service population significance threshold of 23.8. Thus, the proposed Southern SOI Amendment would result in new significant impacts not identified in the 2014 SOI EIR. Therefore, this impact would be **significant**.

The 2014 SOI EIR did not include an impact analysis or significance determination related to VMT as it was not required under CEQA at the time.

Southern SOI Amendment

The analysis within this section is based on the analysis and findings of the *Vehicle Miles Traveled Analysis* memo prepared by GHD in March 2021, which evaluates and compares the VMT effects of the proposed Southern SOI Amendment project to those of the Adopted Southern SOI Project. The VMT Analysis memo is included as Appendix D and provides additional detailed data, modeling, and information related to the VMT analysis.

Table 3.9-1 presents the trips, trip lengths, VMT, estimated service population, and VMT per service population metrics for the Adopted Southern SOI Project and the proposed Southern SOI Amendment.

Table 3.9-1 Vehicle Miles Traveled per Service Population

	City of Grass Valley	Adopted Southern SOI Project	Southern SOI Amendment
Total Trips		24,864	23,182
Average Trip Length		3.48	3.85
Total VMT		86,546	89,187
Total Service Population		3,489	3,131
VMT per Service Population	**28.0**	**24.8**	**28.5**

Notes: VMT = vehicle miles traveled.

Source: GHD 2021.

As shown in Table 3.9-1, the proposed Southern SOI Amendment has a higher VMT and higher VMT per service population compared to that of the previously Adopted Southern SOI Project. Although the number of trips for the proposed Southern SOI Amendment is estimated to be lower than that of the previously Adopted Southern SOI Project, the difference in average trip length combined with the lower total service population results in a higher overall VMT and higher VMT per service population. As shown in Table 2-2 of Section 2, "Project Description," the proposed Southern SOI Amendment increases the development potential for the general industrial (M-2) land use as compared to the Adopted Southern SOI Project by up to 926,978 square feet. Trip lengths associated with industrial land uses are the longest of all the land uses included under the Adopted Southern SOI Project; and thus, are the primary reason for the increase in VMT associated with the Southern SOI Amendment relative to the Adopted Southern SOI Project. Additionally, as shown in Table 3.9-1, the total VMT per service population for the City of Grass Valley is 28.0. Therefore, a 15 percent reduction from the subarea mean (i.e., the VMT threshold for new projects) would be 23.8 VMT per service population. The VMT per service population of the proposed Southern SOI Amendment (i.e., 28.5) also exceeds the Citywide VMT per service population significance threshold of 23.8.

Therefore, the proposed Southern SOI Amendment would result in a higher VMT per service population than under the previously Adopted Southern SOI Project and would exceed the Citywide VMT per service population significance threshold for new projects of 23.8. Thus, the proposed Southern SOI Amendment would result in a new **significant** impact and is substantially more severe impacts than would occur under the Adopted Southern SOI Project.

Residential Development Area

The proposed residential development is anticipated to result in 128 duplex and apartment homes on approximately 10 acres currently designated for commercial use. Development of retail land uses under the existing pre-zoning is anticipated to generate relatively long average trip lengths and an average VMT per service population of 76.3 (Appendix D: Table 5.2). In contrast, residential development under the proposed amendment would generate shorter average trip lengths and a VMT per service population of 3.6 and 4.7 for multi-family and single-family units, respectively (Appendix D: Table 5.1). Therefore, the residential development would not be anticipated to result in a substantial increase in VMT. However, because the modeling and analysis of VMT requires consideration of the land uses in the greater project area to determine number and length of trips, the impact of the residential development is anticipated to be consistent with the evaluation for the overall project area. This impact would be **significant**.

Mitigation Measures

Mitigation 3.9-1a: Provide Bicycle and Pedestrian Network Improvements

Subsequent development projects within the Southern SOI Amendment area shall ensure adequate access to destinations by making walking and biking feasible and safe. These improvements shall include, but are not limited to the following:

- Provide continuous Class II bicycle facilities for throughout the entirety of the Southern SOI Amendment area and provide connections to any adjacent off-site bicycle facilities;
- Provide for, contribute to, or dedicate land for the provision of off-site bicycle trails linking the project to designated bicycle commuting routes in accordance with an adopted citywide or countywide bikeway plan;
- Provide bicycle and pedestrian connections to the Empire Mine State Park trail network north and east of the Southern SOI Amendment area;
- Provide continuous pedestrian facilities (i.e., sidewalks, paths, cross-walks, etc.) along all roadways within the Southern SOI Amendment area;
- Provide pedestrian access connecting to all existing or planned external streets and pedestrian facilities contiguous with the within the Southern SOI Amendment area. If present, the implementation of this measure could include elimination of barriers (e.g., walls, landscaping, slopes) to pedestrian access and interconnectivity.
- Provide pedestrian and bicycle safety and traffic calming measures in excess of any applicable jurisdictional requirements designed to reduce motor vehicle speeds and encourage pedestrian and bicycle trips with traffic calming features. Traffic calming features may include: marked crosswalks, count-down signal timers, curb extensions, speed tables, raised crosswalks, raised intersections, median islands, tight corner radii, roundabouts or mini-circles, on-street parking, planter strips with street trees, chicanes/chokers, and others.

Mitigation 3.9-1b: Provision of Bicycle Parking

Subsequent development projects within the Southern SOI Amendment area shall provide secure and convenient bicycle parking at all nonresidential land uses. The associated bicycle parking shall include, but are not limited to the following:

- Provide bicycle parking facilities at all non-residential buildings that meet or exceed bicycle parking requirements required under the 2016 California Green Building Standards Code;
- Incorporate the provision of long-term bicycle parking and support facilities (i.e., shower/changing space, secure storage for bicycle gear) into the design of the commercial and high-density residential areas of the project site;
- Provide short-term bicycle parking (i.e., anchored bicycle racks) at all commercial, high density residential, industrial, and publicly dedicated open space areas within the Southern SOI Amendment area.

Mitigation 3.9-1c: Transit Service Improvements

As new development is proposed within the Southern SOI Amendment area, the City shall coordinate with Gold Country Stage to identify and support the provision of additional transit service and/or facility improvements within the area with a goal of providing bus service to residents and employees. Potential transit improvements may include construction of bus shelters/stops, modifying existing transit routes, of adding new routes to serve areas within the Southern SOI Amendment area.

Mitigation 3.9-1d: Develop Transportation Demand Management Programs

In coordination with the City, Subsequent development projects within the Southern SOI Amendment project site shall develop and/or contribute towards alternative transportation programs and TDM programs undertaken by the City and/or regional partners such as NCTC and the Northern Sierra Air Quality Management District. TDM programs may include the following element measures:

- Car-sharing and/or ride-sharing programs;
- Employer-sponsored vanpool/shuttle;
- Subsidized demand-responsive trips provided by contracting with private TNCs or taxi companies; and
- Actions that encourage telecommuting and alternative work schedules.

Significance after Mitigation

Mitigation Measures 3.9-1a through 3.9-1d are measures proven to reduce vehicle miles traveled, especially when implemented in conjunction with one another. However, there is a high variation in the range of potential VMT reductions that could be accomplished through the implementation of these mitigation measures. Additionally, the quantification and effectiveness of the VMT reductions associated with these measures cannot be calculated at this time because of the surrounding land use context, uncertainty of the specific type of future land uses in the Southern SOI Amendment area and the fact that these measures are typically most appropriate in the urban and suburban context; thus, rendering their effectiveness uncertain. Therefore, because of the uncertainty surrounding the VMT reductions that could be achieved through the implementation of Mitigation Measures 3.9-1a through 3.9-1d, and the reduction needed to achieve an equivalent VMT per service population as the Adopted Southern SOI Project (i.e., approximately 13 percent reduction required) it cannot be known at this time if the project-related VMT per capita would be reduced to a less-than-significant level with the implementation of all mitigation measures identified above. Therefore, this impact would be **significant and unavoidable**.

3.10 WILDFIRE

This section identifies the regulatory context and policies related to wildfire, describes the existing wildfire conditions in the project area, and evaluates potential wildfire-related impacts of the Southern SOI Amendment and the residential development area.

The 2014 SOI EIR evaluated the potential for impacts associated with wildfire in Section 3.7, "Hazards and Hazardous Materials," and Section 3.11, "Public Services." The 2014 SOI EIR determined that implementation of the proposed project would not interfere with any adopted emergency response or evacuation plans (Impact 3.7.3) and, although future development in the project area would result in structures near vegetation and wooded areas, there would be a less-than-significant effect to the development as a result of exposure to wildfire (Impact 3.11.2).

The City did not receive any comments related to wildfire in response to the notice of preparation.

3.10.1 Regulatory Setting

Existing regulations, including the California building code and relevant policies in the City of Grass Valley's General Plan, are described on pages 3.11-2 and 3.11-3 of the 2014 SOI EIR. In addition, the following regulatory setting is applicable to the analysis.

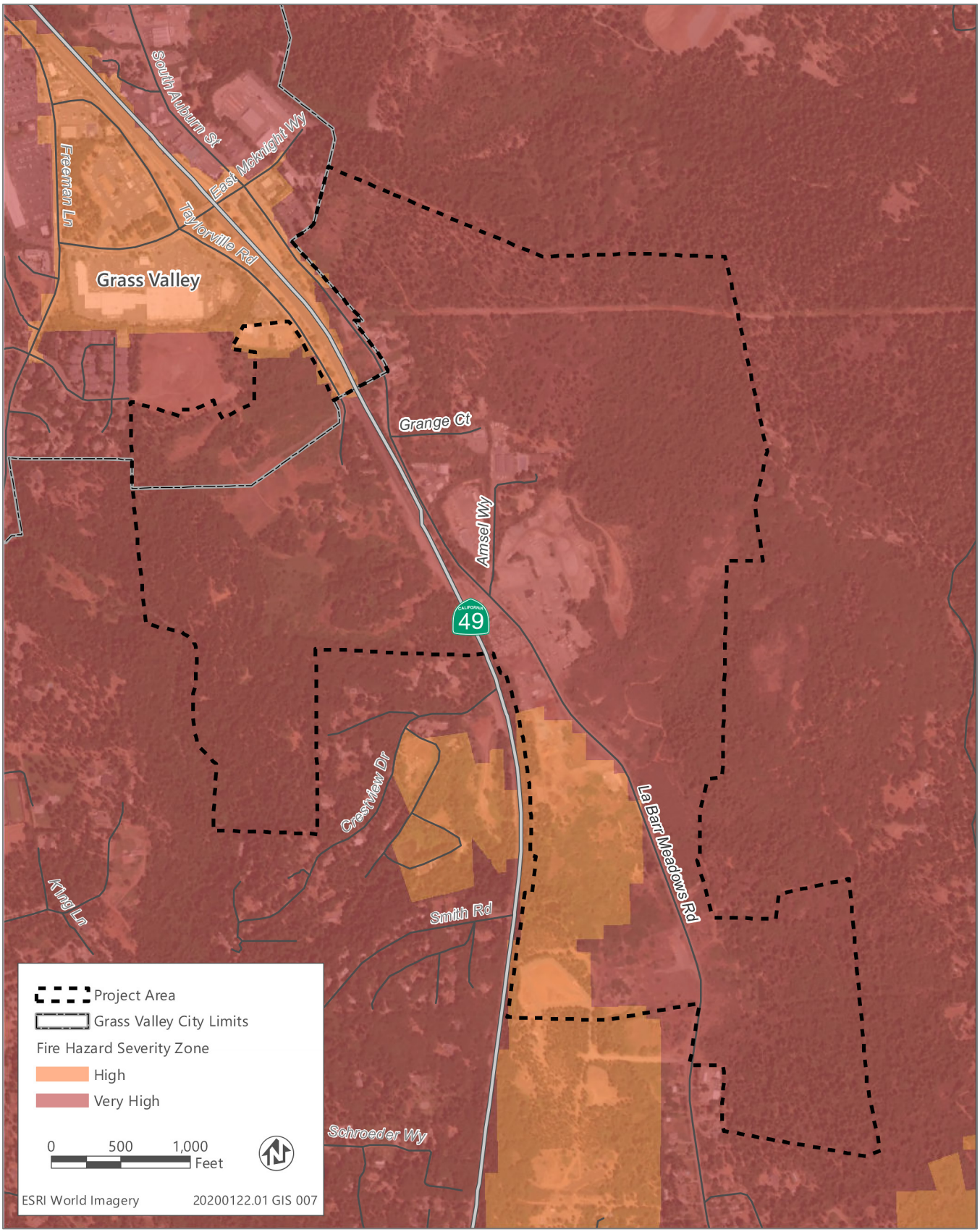
CAL FIRE REGULATIONS

The State of California has determined that some non-federal lands in unincorporated areas with watershed value are of statewide interest and have classified those lands as State Responsibility Areas (SRAs). SRAs are managed by the California Department of Forestry and Fire Projection (CAL FIRE), the state agency established for fire protection and stewardship of over 31 million acres of the state's privately-owned wildlands and to provide emergency services in 36 of California's 58 counties via contracts with local governments.

CAL FIRE is required by law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors (Public Resources Code [PRC] 4201-4204 and Government Code 51175-89). Factors that increase an area's susceptibility to fire hazards include slope, vegetation type and condition, and atmospheric conditions. CAL FIRE has identified two types of wildland fire risk areas: 1) wildland areas that may contain substantial forest fire risks and hazards, and 2) very high fire hazard risk zones. The project area is within a very high fire hazard risk zone (Figure 3.10-1). Under State regulations, areas within very high fire hazard risk zones must comply with specific building and vegetation management requirements intended to reduce property damage and loss of life within these areas.

PRC Section 4291 gives CAL FIRE the authority to enforce 100 feet of defensible space around all buildings and structures on SRA lands. PRC Sections 4790 through 4799.04 provide the regulatory authority for CAL FIRE to administer the California Forest Improvement Program. PRC Sections 4113 and 4125 give CAL FIRE the responsibility for preventing and extinguishing wildland fires in the SRAs (PRC Sections 4113 and 4125). The PRC also includes fire safety statutes that restrict the use of equipment that may produce a spark, flame, or fire; requires the use of spark arrestors on construction equipment with internal combustion engines; specifies requirements for the safe use of gasoline-powered tools in fire hazard areas; and specifies fire suppression equipment that must be provided for various types of work in fire-prone areas.

In September of 2019, CAL FIRE amended and reorganized the regulations that set standards for future design and construction of structures, subdivisions, and developments in SRAs to ensure basic emergency access and perimeter wildfire protection, signage, building numbering, private water supply reserves, and vegetation modification. The purposes of the amendments and reorganization include addressing inconsistencies and conflicts within and between codes and regulations, addressing the needs of fire apparatus and civilian vehicles during wildfire emergencies, and clarifying the applicability, enforcement, and implementation of the regulations for the regulated public. This regulatory action became effective January 1, 2020.



Source: Data downloaded from CalFIRE in 2017

Figure 3.10-1 Fire Hazard Severity Zones

2019 Strategic Plan for California

The *2019 Strategic Plan* prepared by CAL FIRE and the California Natural Resources Agency lays out central goals for reducing and preventing the impacts of fire in the state (CAL FIRE 2019). The goals are meant to establish, through local, state, federal, and private partnerships, a natural environment that is more resilient and human-made assets that are more resistant to the occurrence and effects of wildland fire. The goals of the *2019 Strategic Plan* include: improving core capabilities; enhancing internal operations; ensuring health and safety; and building an engaged, motivated, and innovative workforce.

In addition to the *2019 Strategic Plan,* individual CAL FIRE Units develop Fire Plans, which are major strategic documents that establish a set of tools for each CAL FIRE Unit for its local area. Updated annually, Unit Fire Plans identify wildfire protection areas, initial attack success, assets and infrastructure at risk, pre-fire management strategies, and accountability within their unit's geographical boundaries. The Unit Fire Plan identifies strategic areas for pre-fire planning and fuel treatment as defined by the people who live and work locally. The plans include contributions from local collaborators and stakeholders and are aligned with other plans for the area.

California Fire Code

The California Fire Code (CFC) is Chapter 9 of CCR Title 24. It is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The CFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The CFC and the California Building Code use a hazard classification system to determine necessary protective measures. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the CFC employs a permit system based on hazard classification. The CFC is updated every 3 years.

CCR Title 24, Part 2, Section 701A.3.2 (New Buildings Located in Any Fire Hazard Severity Zone) requires that new buildings located in any Fire Hazard Severity Zone within SRAs, any local agency Very-High Fire Hazard Severity Zone, or any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted, shall comply with all the requirements of Chapter 7A. These requirements include the following:

- roofing design to be fire resistant and constructed to prevent the intrusion of flames and embers (Section 704A.1);
- attic ventilation designed to be resistant to the intrusion of flames and embers into the attic area of the structure (Section 704A.2);
- exterior walls design (including vents, window, and door) with noncombustible or ignition-resistant material and resist the intrusion of flame and ember (Section 704A.3);
- decking be designed with ignition-resistant material (Section 704A.4); and
- ancillary buildings and structures comply with the above provisions (Section 704A.5).

Nevada County Local Hazard Mitigation Plan

Hazard mitigation planning is the process through which hazards that threaten communities are identified, likely impacts determined, mitigation goals set, and appropriate mitigation strategies determined, prioritized, and implemented. The 2017 Local Hazard Mitigation Plan (LHMP) identifies wildfire as a hazard that is highly likely to occur throughout the county. The LHMP details the increased vulnerability of Nevada County to devastating wildfire due to recent drought, increases in tree mortality, and overall increase in wildfire conditions; as well as development in the wildland urban interface (WUI). The LHMP also states that ongoing and aggressive wildfire mitigation activities in the county continue to effectively mitigate and prevent out-of-control, damaging wildfires despite an increase in wildfire risk and vulnerability.

City of Grass Valley Fire Control Ordinance

The City's ordinance includes restrictions on open flames and burning, and establishes the property owner's obligation to address potentially hazardous vegetation that could hinder emergency response or exacerbate fire conditions. Pursuant to Section 8.16.230, it is the duty of every owner, occupant, or person in control of any private land within the city, whether improved or unimproved, to abate all weeds, flammable vegetation and other combustible materials that constitute a fire hazard. The requirements vary for property less than or equal to 1 acre and property greater than 1 acre, but do not change based on whether the property is vacant or improved.

3.10.2 Environmental Setting

Existing fire protection services, including Grass Valley Fire Department, Nevada County Consolidated Fire District, and CAL FIRE, are described on pages 3.11-1 and 3.11-2 of the 2014 SOI EIR. The following supplemental discussion focuses on the existing potential for wildfire in and around the southern SOI.

WILDFIRE CONDITIONS IN THE PLAN AREA

The following basic wildfire concepts and background information are helpful to understand the context of the wildfire regime in the Southern SOI and the interplay of the wildland fire setting and development within the City. Generally, there are four major factors that sustain wildfires and allow for predictions of a given area's potential to burn: fuel, topography, weather, and human actions. Fuel is the material that feeds a fire and is a key factor in wildfire behavior. Nevada County's topography increases its risk to wildfire because both fire intensity and rate of spread increase as slope increases due to the tendency of heat from a fire to rise via convection. Weather components such as temperature, relative humidity, wind, and lightning also affect the potential for wildfire. Finally, most wildfires are ignited by human action; the result of direct acts of arson, carelessness, or accidents (Nevada County 2017).

The plan area is located in the WUI and, as described above, the entire plan area is mapped by CAL FIRE as within a very high fire hazard risk zone. There are two types of WUI environments. The first is the true urban interface where development abruptly meets wildland. The second WUI environment is referred to as the wildland urban intermix. Wildland urban intermix communities are rural, low density communities where homes are intermixed in wildland areas. Wildland urban intermix communities are difficult to defend because they are sprawling communities over a large geographical area with wild fuels throughout. This profile makes access, structure protection, and fire control difficult as fire can freely run through the community. Many WUI fire areas have long histories of wildland fires that burned only vegetation in the past. However, with new development, a wildland fire following a historical pattern now burns developed areas (Nevada County 2017: 4-131). Nevada County has a history of wildfire, including the Jones Fire, which was ignited by lightning in August of 2020 in the South Yuba River canyon off Jones Bar Road, northwest of Nevada City.

Wind direction and intensity during wildfires are important because air quality is poorest immediately adjacent to and downwind of such fires. Fires near populated areas may pose an increased risk of air quality-related health problems. Mountain-to-valley breezes may also distribute smoke. At night, the air drains down-slope, but during the day winds reverse and blow upslope, carrying the polluted air. Mountain areas may become smoky in late afternoon or early evening for this reason. By morning, however, cold, dense nighttime air has traveled down-slope and polluted valleys and mountain basins. This may cause ground-level inversions to form as the land radiates heat. Mountain basins or valleys, such as the Sacramento Valley, have high smoke impact potential creating public health issues. This condition was recently experienced during the 2018 and 2020 fire seasons when smoke from northern California fires elevated particulate matter levels in the Sacramento Valley Air Basin to unhealthy levels.

Changes to the Fire Regime

People can have a dramatic effect on the fire regime. Human influence on wildfire includes direct influences, such as the ignition and suppression of fires, and indirect influence through climate change, the alteration of native vegetation, and development patterns. Common anthropogenic ignition sources include escapes from debris and brush-clearing fires, electrical equipment malfunctions, campfire escapes, smoking, fire play (e.g., fireworks), vehicles,

and arson. Consequently, areas where development is near open space more frequently experience fires than very remote or urban areas (Syphard et al. 2007; Mann et al. 2016; Balch et al. 2017).

Climate Change and Wildfire

Wildfire activity is closely related to temperature and drought conditions. In recent decades, increasing drought frequency and warming temperatures have led to an increase in wildfire. In particular, the western United States, including California, has seen increases in wildfire activity in terms of area burned, number of large fires, and fire season length (Westerling et al. 2006; Abatzoglou and Williams 2016). These conditions have resulted in the largest, most destructive, and deadliest wildfires on record in California history.

Climate change is expected to continue to produce conditions that facilitate a longer fire season, which, when coupled with human-caused changes in the seasonality of ignition sources, will produce more, longer, and bigger fires during more times of the year. Refer to Section 3.3, "Climate Change and Greenhouse Gas Emissions," for additional discussion of climate change trends and the effects of climate change on the environment.

Fire Fuel Management and Wildfire Risk Reduction

People have intervened deliberately and dramatically in the natural fire regime through fire suppression and, more recently, actions that affect fuel connectivity. Historically, fire suppression was used to prevent and limit wildfires. Although an important practice in limiting fire spread, over time, this land management practice (combined with forest regrowth after extensive logging in the late 19th century) has led to a buildup of forest fuels and an increase in the occurrence and threat of large, severe fires (Westerling et al. 2006). Contemporary fire management practices include fuel management activities that are intended to reduce the intensity and severity of wildfires. Reducing fuels through mechanical treatments and prescribed fire have been found to be effective at reducing fire frequency, fire severity, and annual area burned when applied at the landscape scale 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. Fuel treatments also promote faster forest recovery post-fire by causing less damage to soils and leaving some live vegetation within burn areas, increasing seedling regeneration (Tubbesing et al. 2019), protecting resources such as soils, wildlife, riparian function, and wetlands (Kim et al. 2013), and reducing drought-related tree mortality (Restaino et al. 2019).

Certain treatments, such as hand or mechanical thinning followed by prescribed fire, or prescribed fire alone, are very effective at reducing wildfire severity, and related ecological impacts are often neutral to positive (Winford et al. 2015). Quantitative modeling has provided robust empirical support for the basic principles of tree thinning treatments coupled with the reduction of surface fuels through prescribed burning (Martinson and Omi 2013). Prescribed burning as a follow-up treatment to reduce surface ladder fuels and to eliminate slash (i.e., limbs and branches) generated by mechanical thinning has shown to have the greatest benefit in moderating fire behavior (Martinson and Omi 2013).

Community Wildfire Hazard Reduction Programs

Implementing community wildfire hazard reduction practices is an important component of establishing a fire-adapted community; key practices include establishing defensible space and implementing home hardening features. Homes have become one of the most combustible parts of the landscape and are increasingly vulnerable as development extends into the WUI.

Nevada County and CAL FIRE have been using vegetation management to manage wildfire risk. Specifically, the Ponderosa West Grass Valley Defense Zone Project, was the highest priority hazardous fuel reduction project in the Nevada County Community Wildfire Prevention Plan, identified by CAL FIRE and Governor Newsom as a top priority to protect the one of California's most wildfire-vulnerable communities. The defense zone provides an effective location for fire suppression activities. It creates a shaded fuel break, or defense zone, in a high-risk region adjacent to the City of Grass Valley and focuses on both private and Nevada County-maintained land. The 1,237-acre footprint is north-south oriented and spans Highway 20, extending approximately 2 miles west of the project area. and offers

protection to the communities of Lake Wildwood, Penn Valley, and Rough and Ready to the west, as well as the City of Grass Valley.

Empire Mine State Park, which is adjacent to the expanded SOI, is managed by California State Parks. Management actions for wildland fires on California State Parks' lands include: pre-fire planning, fuel (vegetation) management, public safety measures, fire control support, post-fire evaluation and rehabilitation. As a general rule, State Parks does not create fuel breaks on its boundaries. However, State Parks has created guidelines for the protection of structures from wildland fire and to guide vegetation modification requested by neighboring landowners. It does, on a case-by-case basis, respond to homeowners to address defensible space needs, in some cases undertaking work that is aligned with Department resource and land management goals. State Parks also offers a right of entry permit to neighbors to allow access to State property to carry out defensible space modifications following appropriate environmental reviews and approvals (California State Parks 2021).

Mutual Threat Agreement

Grass Valley Fire Department, Nevada City Fire Department, and CAL FIRE Nevada Yuba Placer Unit entered a Mutual Threat Agreement in September 2019. The Mutual Threat Agreement leverages the full response of both the City and CAL FIRE in response to a vegetation fire within the city. As a result of the agreement, Cal FIRE aircraft are dispatched to all vegetation fires in the city. The Grass Valley Interagency Air Attack Base is located on Loma Rica Drive, less than 2 minutes flight time to most of the City.

3.10.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

In response to 2019 revisions to the State CEQA Guidelines (Public Resources Code Section 15126.2) and the 2015 California Supreme Court case, *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, the following discussion is focused on the environmental effects could result from future development that increases the risk of wildfire. The analysis in this section considers whether the project could cause or exacerbate hazards impacts, based on the analysis in the 2014 SOI EIR regarding the potential effects of exposure to potential for wildfire. Although lead agencies retain the authority to include a review of potential impacts of the environment on a project undertaken by a lead agency, such review would occur separate and apart from CEQA and is not provided herein.

THRESHOLDS OF SIGNIFICANCE

Thresholds of significance are based on Appendix G of the State CEQA Guidelines. The Southern SOI Amendment would result in a significant impact related to wildfire if it would:

- impair an adopted emergency response plan or emergency evacuation plan;
- 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; 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.

ISSUES NOT DISCUSSED FURTHER

The potential for the Southern SOI Amendment to impair an adopted emergency response plan or emergency evacuation plan is addressed in Section 3.5, "Hazards and Hazardous Materials," of this SEIR.

Infrastructure required to serve potential development of the Southern SOI Amendment would largely be located within the project area. The potential for this infrastructure to exacerbate wildfire risk is evaluated below as a component of the project. The effects that this infrastructure could have on the environment are evaluated throughout this SEIR.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.10-1: Exacerbate Wildfire Risks and Thereby Expose Project Occupants to Pollutant Concentrations from a Wildfire or the Uncontrolled Spread of a Wildfire

Implementation of the Southern SOI Amendment could result in new development within the project area and along the margins of existing development. Buildout of the Southern SOI Amendment would not result in substantially greater potential to exacerbate wildfire than the Adopted Southern SOI Project. Buildings constructed in the area would be subject to the same regulations, and would comply with the building code and vegetation management requirements described in the 2014 SOI EIR. Similar infrastructure upgrades would be implemented. There would be no new significant effects or more severe impacts than identified in the 2014 SOI EIR. This impact would be **less than significant.**

As described in Impact 3.11.2 of the 2014 SOI EIR, future development of the project area could result in the construction of structures near vegetation and wooded areas. The 2014 SOI EIR evaluated the potential for this development to expose people to wildland fire hazard and determined that the impact would be less than significant. The analysis therein noted that the City's fire standards require buffers and fuel reduction adjacent to the WUI. New buildings must meet current building and fire code requirements based on the very high fire hazard rating of the area and incorporate required fire-safe and fire-resistant building materials pursuant to Chapter 7A of the California Building Code. Vegetation management plans would also be required for all projects located adjacent to open space and wildland areas that would not only protect land uses within the SOI but also minimize impacts to land areas adjacent to the SOI and the western portion of Nevada County that could occur from wildfire events in the SOI (e.g., land spread or embers spread by wind). These plans require annual removal of grasses, brush, blackberries, and ladder fuels, and a long-term maintenance plan. Further, the infrastructure improvements, such as fire hydrants that provide sufficient fire flow and improved roadways, may improve response to wildfires.

Several key changes to State and regional wildfire regulations have occurred since certification of the 2014 SOI EIR. As described above in the discussions of the regulatory and environmental setting, CAL FIRE has prepared updated regulations and a strategic plan, building codes have been modified, and local fuel break projects have been implemented in recognition of this potential hazard. Collectively, these regulations would be expected to reduce the potential for development to exacerbate wildfire hazards and reduce the potential for uncontrolled wildfire spread.

Southern SOI Amendment

Implementation of the Southern SOI Amendment could result in new development within the project area and along the margins of existing development. Buildout of the Southern SOI Amendment would not result in substantially greater potential to exacerbate wildfire than the Adopted Southern SOI Project because the development footprint would be similar, and the pre-zoning would allow for the same general types of future land uses. Future electrical service and associated infrastructure for new development in the area are expected to primarily be placed underground, which would minimize accidental fire events from above ground electrical power lines. However, it is acknowledged that future development of the area may require the construction of a substation and connect to above ground electrical power lines.

The amendment would reduce the number of residential units compared to the Adopted Southern SOI Project (by 18 dwelling units), and would change the pre-zoning of the SOI so that housing would be generally higher density. People cause most wildfires through arson, carelessness, or accidents (Nevada County 2017). Accidental ignition sources in the low-density and rural residential areas (e.g., residential lots greater than 0.50 acres in size that include fuels such as tall grasses and trees) can include brush clearing and equipment malfunctions. Higher density residential uses, by virtue of their common managed and irrigated outdoor spaces, would generally be associated with less equipment use in outdoor areas. In addition, multi-family developments are more likely to be surrounded by contiguous managed areas that serve as fire breaks and minimize fire spread within and outside of the SOI. Concentrating housing, near roadways as proposed in the Southern SOI Amendment could also facilitate access to the area. Thus, the number of new residents in the project area would be reduced and the risk of exacerbating wildfires may be reduced because of changes in residential density.

The Southern SOI Amendment also increases the potential for heavy industrial uses while reducing potential for commercial and business park-type uses that could introduce more people into the area. Further, the amendments reduce the amount of land designated as open space within the plan area, potentially limiting the intermixing of wildlands and development that could increase both the fire hazard and the potential to expose project area and surrounding area residents to associated pollutants released onto the land and waters from burning of forest of building materials as well as air pollution from smoke (particulate matter) that could impact residents state-wide.

As discussed above, defensible space requirements are established through the PRC and the City's Fire Control Ordinance. CCR Title 24, Part 2, Section 701A.3.2 (New Buildings Located in Any Fire Hazard Severity Zone) requires that new buildings located in any Fire Hazard Severity Zone within SRAs, any local agency Very-High Fire Hazard Severity Zone, or any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted, comply with specific requirements intended to improve fire resistance. Further, the City's Fire Control Ordinance establishes that property owners are responsible for addressing potentially hazardous vegetation that could hinder emergency response or exacerbate fire conditions, regardless of whether the parcel is improved or vacant. Once annexed, subsequent development projects would be required to demonstrate compliance with these provisions; reducing the potential for fire exacerbation as compared to existing rural land use conditions. Once developed, the project area would also provide public water systems to improve the ability to fight wildfires in this area. While electrical equipment malfunctions would be possible and vehicles would be present on new, existing, and improved roadways, adherence to established regulations related to vegetation clearing and access would limit the potential for wildfire. A vegetation management plan, as required by the City's Fire Control Ordinance, would adequately address any potential wildfire risk associated with new development and changes in land use as proposed under the Southern SOI Amendment. Development of the area in compliance with above standards would also help reduce fire hazards for existing developed areas of the City north of the area through improved fire protection measures associated with fuel reduction, building design, and water infrastructure extension as compared to existing rural land use conditions.

Buildings constructed in the area would be subject to the same and more stringent updated regulations, and would comply with the building code and vegetation management requirements described in the 2014 SOI EIR. Similar infrastructure upgrades would be implemented. Thus, there would be no new significant effects or more severe impacts than identified in the 2014 SOI EIR. This impact would be **less than significant**.

Residential Development Area

The 10-acre residential area is mapped as very high hazard severity zone, like the remainder of the project area. There is currently a single residence on the property, and the natural vegetation has been cleared for a small orchard and outbuildings. The property is located near existing and approved development and has access to infrastructure, including SR 49. The area west of the residential development would be pre-zoned for medium- and low-density residential development, and the western boundary of the project area along Wolf Creek would remain open space. The Ponderosa West Grass Valley Defense Zone Project is located approximately 2 miles west of the project area. The area was evaluated for commercial development in the 2014 SOI EIR and is now anticipated to be developed with 60 duplex lots and approximately 68 multifamily units.

Introducing housing and residents into a relatively forested area with a high fire hazard could exacerbate wildfire risks, thereby exposing project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. However, the City requires all projects to develop a vegetation management plan in the open space areas adjacent to development and to maintain those spaces to reduce the risk of fire. Also, as discussed above, residents of this area may be less likely to inadvertently ignite a wildfire than lower density residential development because use of equipment and other potential ignition sources would be generally limited to the urbanized environment of the proposed neighborhoods built to current standards that substantially reduce the risk of ignitions. In addition, once the Southern SOI is incorporated into the City it would be covered by the Mutual Threat Agreement that leverages both City and CAL FIRE resources in response to vegetation fires.

As described above for the proposed Southern SOI Amendment, buildout of the residential development area would not result in substantially greater potential to exacerbate wildfire than the Adopted Southern SOI Project. Thus, there would be no new significant effects or more severe impacts than identified in the 2014 SOI EIR. This impact would be **less than significant**.

Mitigation Measures

No new mitigation is required.

Impact 3.10-2: Expose People or Structures to Significant Risks as a Result of Runoff, Post-Fire Slope Instability, or Drainage Changes

The Southern SOI Amendment would increase the overall development potential of the project area, which could lead to increased stormwater runoff and higher peak flows, as well as an increase in wildfire potential as a result of increased anthropogenic disturbance. This impact was not addressed in the 2014 SOI EIR. However, because the Southern SOI Amendment would not substantially exacerbate the potential for wildfire to occur in the project area and would manage stormwater flows, the project is not expected to substantially contribute to drainage changes or post-fire slope instability that would expose people or structures to significant risks. With implementation of established standards, this impact would be **less than significant**.

The 2014 SOI EIR evaluated the potential for the Adopted Southern SOI Project to result in risks associated with drainage changes, slope instability, and wildfire separately. The analyses found that compliance with existing regulations would ensure that future development is engineered and constructed to prevent slope failure and drainage changes that could expose people or structures to significant risk. As discussed further below, these risks were all found to be less than significant.

The 2014 SOI EIR (page 3.6-3) notes that the stability of a slope is dependent on factors such as gradient, available water content, existing vegetation, and stresses (natural and anthropomorphic) affecting the slope. Loss of vegetation due to wildfire and grading for road construction can contribute to instability. As detailed in Impact 3.6.2 (page 3.6-12), the project area slopes generally westward with elevations ranging from approximately 2,200 to 2,700 feet above mean sea level. There are steep slopes present in portions of the project area that could be unstable or become unstable during site development. Per Municipal Code Chapter 17.54, Hillside and Ridgeline Development, no development is permitted where slopes exceed 30 percent. This chapter also provides specific requirements and guidelines for building sites with a slope of 20 percent or greater that encourage the retention of natural topographic features and the use of appropriate grading practices for hillside areas. In addition, Municipal Code Section 17.62.040 provides specific standards for the design and construction of excavations and fills to ensure slope stability and preserve natural contours. Furthermore, all future development on the project site would be required to comply with applicable building codes (UBC and CBC) and commonly accepted engineering practices. Generally, these sloped areas are at the eastern edge of the project site proposed for General Industrial (M-2) pre-zoning.

Impact 3.8.3 of the 2014 SOI EIR (page 3.8-18) indicated that construction and operation of future uses in the project area could affect existing drainage patterns, runoff rates, and flooding. Future development would result in the addition of new impervious surfaces that, if not designed properly, could impact drainage conditions both on- and

off-site. The analysis determined that the City's Improvement Standards establish prescriptive requirements that would address runoff from specific, future development and the potential for erosion, siltation, and flooding.

Finally, Impact 3.11.2 evaluated the potential for future development to expose people and structures to wildfire hazards. The impact discussion notes that the project area includes areas with heavy vegetation and steep slopes, which result in a "high potential for wildfires of devastating intensity," particularly when combined with increased human activity. Compliance with existing regulations (e.g., vegetation management) and improvements to existing infrastructure (e.g., fire flows and widening of La Barr Meadows Road) were identified as addressing the potential for increased wildland fire risk that would not only protect land uses within the SOI but also minimize impacts to land areas adjacent to the SOI and the western portion of Nevada County that could occur from wildfire events in the SOI (e.g., land spread or embers spread by wind).

Southern SOI Amendment

The Southern SOI Amendment would increase the overall development potential of the project area, which could lead to increased stormwater runoff and higher peak flows, as well as an increase in wildfire potential as a result of increased anthropogenic disturbance. As described in Section 3.6, "Hydrology and Water Quality," City standards require that post-construction stormwater rates and intensities do not exceed predevelopment levels. Additionally, as described above, the Southern SOI Amendment would not substantially exacerbate the potential for wildfire to occur in the project area. Therefore, the project is not expected to substantially contribute to drainage changes or post-fire slope instability that would expose people or structures to significant risks. There would not be a new significant effect. With implementation of established standards, this impact would be **less than significant**.

Residential Development Area

The residential development area is located in a relatively flat portion of the project area west of SR 49 and east of a steep, wooded gully associated with Wolf Creek. Several seasonal drainages flow southwest through the area to Wolf Creek. As described in Section 3.6, "Hydrology and Water Quality," and above, the City would require verification that storm flows (up to the 100-year event) would not increase compared to existing conditions and adopted City regulations and building codes would address the potential for the development to lead to slope instability.

Because the development would comply with these regulations and would not increase the potential for wildfire as compared to the Adopted Southern SOI Project, there would not be a new significant effect. With implementation of established standards that require preparation of drainage plans to ensure that stormwater rates do not exceed pre-project levels, this impact would be **less than significant**.

Mitigation Measures

No new mitigation is required.

4 ALTERNATIVES

4.1 INTRODUCTION

The CCR Section 15126.6(a) (State CEQA Guidelines) requires EIRs to describe "… a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather, it must consider a range of potentially feasible alternatives that will avoid or substantially lessen the significant adverse impacts of a project, and foster informed decision making and public participation. An EIR is not required to consider alternatives that are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason." This section of the State CEQA Guidelines also provides guidance regarding what the alternatives analysis should consider. Subsection (b) further states the purpose of the alternatives analysis is as follows:

> Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (PRC Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

The State CEQA Guidelines require that the EIR include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative must be discussed, but in less detail than the significant effects of the project as proposed (State CEQA Guidelines Section 15126.6[d]).

In defining "feasibility" (e.g., "… feasibly attain most of the basic objectives of the project …"), State CEQA Guidelines Section 15126.6(f) (1) states, in part:

> Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

In determining what alternatives should be considered in the EIR, it is important to consider the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by the lead agency's decision-making body, here the Planning Commission. (See State CEQA Guidelines Sections 21081.5, 21081[a] [3].)

4.2 CONSIDERATIONS FOR SELECTION OF ALTERNATIVES

As described above, State CEQA Guidelines Section 15126.6(c) provides that the range of potential alternatives for the project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. Alternatives that fail to meet the fundamental project purpose need not be addressed in detail in an EIR.

In determining what alternatives should be considered in the EIR, it is important to acknowledge the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by lead agency decision-maker(s). At the time of action on the project, the decision-maker(s) may consider evidence beyond that found in this EIR in addressing such determinations. The decision-maker(s), for example, may conclude that a particular alternative is infeasible (i.e., undesirable) from a policy standpoint, and may reject an alternative on that basis provided that the decision-maker(s) adopts a finding, supported by substantial evidence, to that effect, and provided that such a finding reflects a reasonable balancing of the relevant economic, environmental, social, and other considerations supported by substantial evidence.

As described in Chapter 2, "Project Description," the City's General Plan Housing Element identifies provision of additional and mixed-use housing opportunities as key challenges for the City through 2027 and a lack of higher-paying job opportunities for existing residents. The 2019-2027 Regional Housing Need Assessment Plan adopted by the State Department of Housing and Community Development allocates 743 housing units to the City of Grass Valley. The proposed land designations of the Southern SOI Amendment would result in potential for development of 516 dwelling units (nearly 70 percent of the City total).

4.2.1 Attainment of Project Objectives

As described above, one factor that must be considered in selection of alternatives is the ability of an alternative to attain most of the objectives of the Project (State CEQA Guidelines Section 15126.6[a]). Chapter 2, "Project Description," articulates the following Project objectives:

- Amend the Southern SOI to reflect land ownership and provide logical boundaries for the City.
- Revise the General Plan land use designations and zoning in the Southern SOI to better reflect land ownership and envisioned future uses.
- Provide for a range in types and prices of housing.
- Allow the City to be responsive to market demand for housing by establishing an area that has been fully evaluated for development.
- Refine the industrial uses envisioned for the area east of SR 49 and to ensure there is adequately zoned land to accommodate future industrial land uses in western Nevada County.
- Create opportunities for development that maintains and improves the local environment and quality of life in the City.
- Annex land to improve the City's efforts to obtain grants for infrastructure to support residential homes and for job creation.
- Facilitate the State's efforts to provide more housing and to expedite housing projects.

4.2.2 Environmental Impacts of the Proposed SOI Amendment

Sections 3.1 through 3.10 of this Draft SEIR address the environmental impacts of implementation of the proposed Southern SOI Amendment relative to designated land uses under the Adopted Southern SOI Project. Potentially feasible alternatives were developed with consideration of avoiding or lessening the significant, and potentially significant, adverse impacts of the project, as identified in Chapter 3 of this Draft SEIR and summarized below.

- Impact 3.1-1: Violate Air Quality Standard or Contribute Substantially to an Air Quality Violation: Short-Term Construction Emissions
- Impact 3.1-2: Violate Air Quality Standard or Contribute Substantially to an Air Quality Violation: Long-Term Operational Emissions

- Impact 3.3-1: Generate Greenhouse Gas Emissions That May Have a Significant Impact on the Environment
- Impact 3.7-2: Increases in Traffic Noise that Exceed City Standards
- Impact 3.9-1: Conflict or be Inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)

4.3 ALTERNATIVES EVALUATED IN THE 2014 SOI EIR

As discussed in the 2014 SOI EIR, the most notable impact of the project is related to the capacity of the existing interchange at SR 49 and traffic impacts that would occur until such time as a new interchange is constructed. Therefore, a creating a level of development that could reduce traffic impacts was the basis for the reduced intensity alternatives.

The following discussion summarizes the alternatives evaluated in the 2014 SOI EIR.

4.3.1 2014 SOI EIR: No Project Alternative

Under this alternative, no General Plan amendments, pre-zoning, or annexation would occur. The property would develop in a manner consistent with the Nevada County General Plan land use designations and zoning districts. The Nevada County zoning for the project area included Business Park (BP), Community Commercial (C2), Light Industrial (M1), Medium Density Residential (R2), and Residential Agriculture (RA). Based on the development potential under the Nevada County zoning, the 2014 SOI EIR: No Project Alternative would result in more business park, less commercial and industrial development, fewer residential units, and no open space compared to the adopted Southern SOI. By eliminated open space, this alternative could result in greater impacts associated with ground disturbance and development to biological and cultural resources. The increased amount of business park use in the No Project Alternative would also generate more traffic than the adopted project, which would contribute to more severe air quality and greenhouse gas impacts.

4.3.2 2014 SOI EIR: Reduced Commercial Alternative

Under this alternative, the allowable retail commercial area would be reduced compared to the adopted Southern SOI from approximately 300,000 square feet to 200,000 square feet. The intent of the reduction is to reduce traffic associated with retail uses and to evaluate a project that is more consistent with the findings in the Glenbrook Basin Redevelopment Infill Study prepared for the City in 2010. A reduction in retail uses would result in fewer vehicle trips and less impact to air quality, greenhouse gas emissions, traffic, and traffic-generate noise. Assuming trip generation of 42.7 trips per 1,000 square feet of commercial uses, the Reduced Commercial Alternative would result in a reduction of 4,270 daily trips compared to the adopted SOI's 23,671 daily trips, a reduction of approximately 20 percent. The remainder of the project area would be developed in a fashion and density identical to that of the proposed project.

The Reduced Commercial Alternative would result in less severe impacts in each of the issue areas as compared to the proposed project. The alternative would result in a reduction in the amount of development compared with proposed project and a reduced footprint, and would generate fewer vehicle trips than the proposed project. The Reduced Commercial Alternative would improve roadway level of service compared to the project and would have a corresponding decrease in criteria pollutant emissions as well as greenhouse gas emissions. The Reduced Commercial Alternative was considered to be the environmentally superior alternative in the 2014 SOI EIR. However, because significant and unavoidable impacts would remain and the resultant development would be less economically viable, the City determined that all the project objectives would not be fully met, and the was not selected.

4.3.3 2014 SOI EIR: Reduced Residential Density and Reduced Industrial Alternative

Under the Reduced Residential Density and Reduced Industrial Alternative, the 57.6 acres of R-2 in the adopted Southern SOI would be prezoned R-1. R-2 zoning allows for up to 8 units per acre, whereas R-1 zoning allows 4 units per acre. The result of this change in zoning would be a reduction in residential potential of 230 units, for a total residential potential of 304 units. In addition, this alternative includes a reduction in the amount of General Industrial (M-2) compared with the adopted Southern SOI. This change results in a reduction of approximately 100,000 square feet of industrial use and would allow approximately 16.5 acres of additional open space on land assumed for development of industrial uses in the proposed project. The reduction in residential and industrial development is intended to reduce the overall vehicle trip generation from the proposed project, which would include a reduction in truck traffic associated with the industrial use. Assuming a reduction of 230 residential units at 9.52 daily trips per unit, this alternative would result in 2,190 fewer daily trips from residential uses and 163 fewer daily industrial trips, assuming 1.5 daily trips per 1,000 square feet. The reduction of 230 residential units and approximately 100,000 square feet of industrial use under the Reduced Residential Density and Reduced Industrial Alternative would result in a reduction in daily vehicle trips compared to the proposed project. While this would be a substantial reduction compared to the adopted Southern SOI, mitigation identified for the project would likely still be required to ensure traffic impacts can be reduced. This impact would also be significant and unavoidable.

Because the Reduced Residential Density and Reduced Industrial Alternative would result in less trip generation than the adopted Southern SOI, including truck trips, the operational air quality and greenhouse gas emissions associated with those vehicle trips would be less severe than that of the adopted Southern SOI. However, like the adopted Southern SOI, these impacts would be significant and unavoidable. The Reduced Residential Density and Reduced Industrial Alternative would reduce the footprint compared to the adopted Southern SOI by approximately 16.5 acres. Consequently, this alternative would result in a reduction in footprint effects.

The Reduced Residential Density and Reduced Industrial Alternative would result in less severe impacts than the proposed project due to a reduction in developed acreage and a reduction in overall operational impacts due to the decreased intensity of use in the area compared to the adopted Southern SOI.

While impacts like traffic, air quality, and greenhouse gas emissions would be reduced under this alternative, they would not be reduced to a less-than-significant level, and the reduction in industrial development potential could also reduce the number of jobs that could be generated within the project area. This alternative would provide for job creation within Grass Valley, but not the same extent of the proposed project. Because significant and unavoidable impacts would remain and the resultant development would be less economically viable, the City determined that all the project objectives would not be fully met, and the was not selected.

4.3.4 2014 SOI EIR: Alternatives Considered but not Evaluated Further

The following alternatives were considered, but not evaluated in detail in the 2014 SOI EIR. Those alternatives that would have impacts identical to or more severe than the proposed project, or that would not meet most of the project objectives, were rejected from further consideration.

ALTERNATIVE LOCATION

The project area is generally located within the City's SOI and is adjacent to State Route (SR) 49 in an area that is already partially developed and currently envisioned in the City's General Plan to include industrial, commercial, and residential uses. As discussed below, the General Plan land use designations and prezoning districts requested under the proposed project are similar to those under the existing Nevada County General Plan for the SOI. The proposed project area has been designated and planned for this type of growth since adoption of the General Plan. Based on a review of lands in the City, there are no other sites of sufficient size and similar access that could accommodate all of

the uses proposed under the proposed project. While the uses proposed under the project could be accommodated on a number of sites throughout the City, the ability to develop an area equivalent to the proposed project would be infeasible. Consequently, an off-site alternative is not considered in this EIR.

INCREASED INTENSITY OF COMMERCIAL USES

Because a part of the project includes commercial and employment uses, an alternative that includes an intensification of these uses was briefly considered. The intent of this alternative would be to increase business and employment opportunities and reduce the vehicle miles travelled for residents of the proposed project and immediate vicinity. A reduction in vehicle miles travelled would lessen air quality, greenhouse gas and traffic impacts associated with the proposed project. Intensification of the uses would also expand the draw of the commercial and employment uses and the increased traffic associated with a larger regional draw would likely offset any reduction in impacts gained as a result of the internalization of trips from the more intense uses. Therefore, larger commercial and employment uses would not substantially reduce traffic impacts associated with the project and an increased density alternative was not analyzed.

4.4 ALTERNATIVES SELECTED FOR DETAILED ANALYSIS

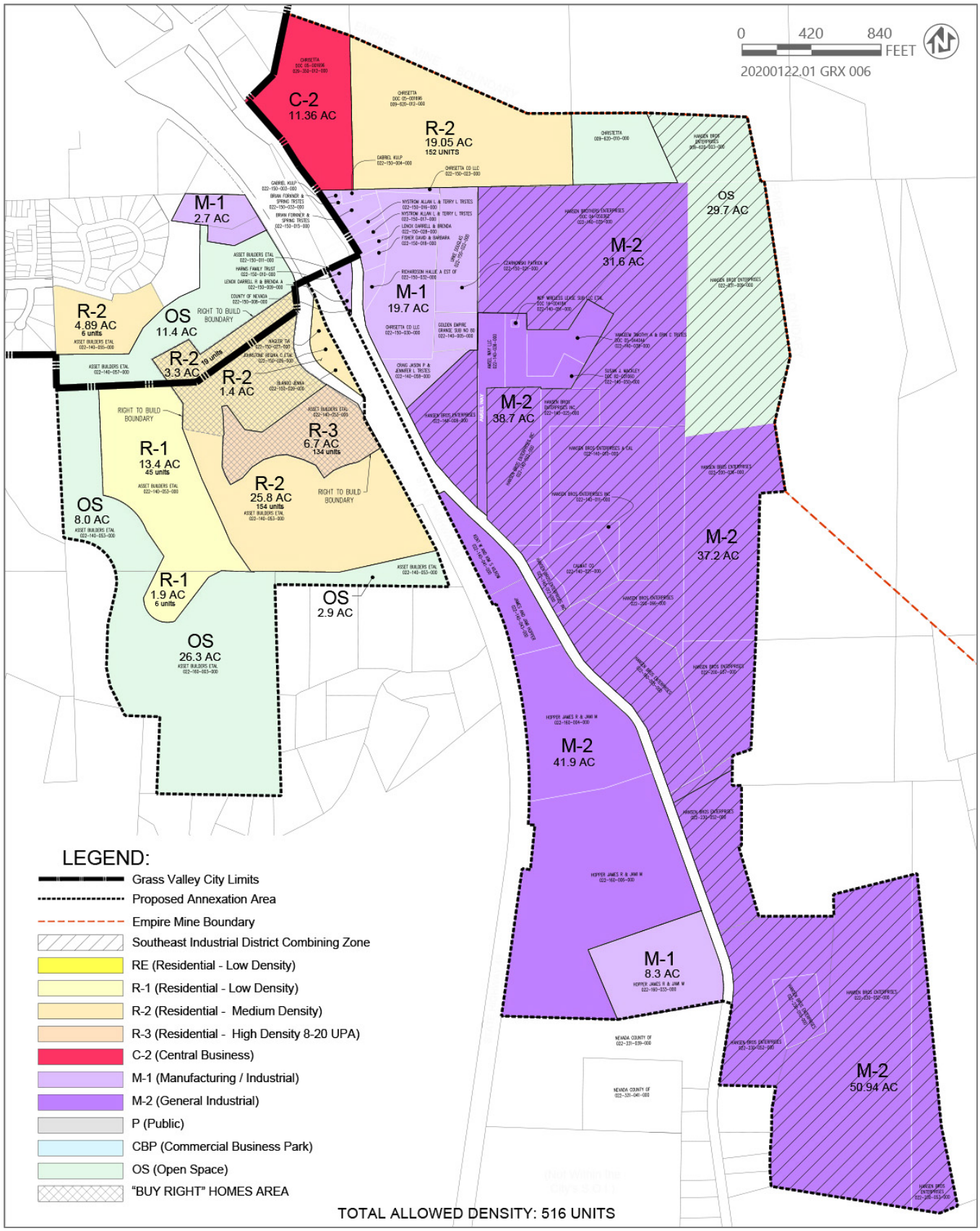
The following alternatives are unique to the evaluation of the proposed Southern SOI Amendment. Consistent with CEQA, primary consideration was given to alternatives that would reduce new significant environmental impacts or a substantial increase in severity of previously identified significant impacts in the 2014 SOI EIR from the implementation of the proposed Southern SOI Amendment, while still meeting most of the project objectives.

4.4.1 Alternative 1: No Project Alternative

Under the No Project Alternative, the City would continue to implement the current Southern Sphere of Influence Planning and Annexation Project as shown in Figure 2-2, 2-3, and Table 2-2. The No Project Alternative 1 would result in the continuation of existing conditions and planned development of the City. No new significant environmental impacts or an increased severity of environmental impacts identified in the 2014 SOI EIR would occur under this alternative because it would retain the current General Plan land use designations and zoning.

4.4.2 Alternative 2: Increased Open Space East of SR 49

The Southern SOI Amendment would add 31.5 acres of land between the existing northeast SOI boundary and Empire Mine State Park (see Figure 4-1). These lands are currently designated RA-3 Residential Agriculture by Nevada County and proposed for a General Industrial (M-2) zoning designation. Under this alternative, this 31.5 acres would still be annexed into the city but would be designated as open space (OS). By designating this area open space, this alternative would limit the potential for ground disturbance in the area, which could reduce potential impact to biological, cultural, and hydrologic resources. If managed effectively, this alternative could also serve as a critical fire break between the open space to the east and future industrial development. Further, this alternative could result in greater compatibility between land uses in the city and the State Park. Finally, because the Increased Open Space East of SR 49 Alternative would reduce the potential for industrial land uses in the project area, there would be a reduction in VMT and associated impacts.



Source: Figure produced by SCO Planning and Engineering in 2021

Figure 4-1 Alternative 2: Increased Open Space East of SR 49

AIR QUALITY

The Increased Open Space East of SR 49 Alternative would designate the approximately 30-acre SOI expansion area for open space. The remainder of the project area would still be subject to ground disturbance, grading, and vegetation removal during construction of project elements (e.g., buildings, underground utilities). Because less area would be developed than proposed under the Southern SOI Amendment, construction emissions of criteria air pollutants are anticipated to be reduced. The remainder of the project area would be pre-zoned in a manner consisted with the proposed Southern SOI Amendment and would result in similar potential for operational emissions. However, there would not be long-term, operational emissions associated with the energy use of the industrial buildings or mobile source emissions associated with traffic to and from the open space area created under this alternative. For these reasons, the Increased Open Space East of SR 49 Alternative would have a **reduced** impact on air quality as compared to the proposed Southern SOI Amendment.

BIOLOGICAL RESOURCES

The Increased Open Space East of SR 49 Alternative would designate the approximately 30-acre SOI expansion area for open space. This forested area is relatively undeveloped and likely provides habitat for a variety of wildlife species immediately west of Empire Mine State Park. The remainder of the project area would still be subject to ground disturbance, grading, and vegetation removal during construction of project elements (e.g., buildings, underground utilities). Implementation of Adopted Mitigation Measures MM 3.3.1 through 3.3.5 and proposed Mitigation Measure 3.2-5 would reduce impacts associated with future development proposals within the project area to less-than-significant levels. Because this alternative would reduce development in the project area, potential impacts to biological resources would be **reduced** as compared to the proposed Southern SOI Amendment.

CLIMATE CHANGE AND GREENHOUSE GAS EMISSIONS

The Increased Open Space East of SR 49 Alternative would designate the approximately 30-acre SOI expansion area for open space. The remainder of the project area would still be subject to ground disturbance, grading, and vegetation removal during construction of project elements (e.g., buildings, underground utilities). Because less area would be developed than proposed under the amended Southern SOI, construction emissions are anticipated to be reduced. The remainder of the project area would be pre-zoned in a manner consisted with the proposed Southern SOI Amendment and would result in similar potential for operational emissions. However, there would not be long-term, operational emissions associated with the energy use of the industrial buildings or mobile source emissions associated with traffic to and from the open space area created under this alternative. For these reasons, the Increased Open Space East of SR 49 Alternative would have a **reduced** impact on climate change as compared to the proposed Southern SOI Amendment.

CULTURAL AND PALEONTOLOGICAL RESOURCES

As described in Section 3.4 "Cultural and Paleontological Resources," the NCIC records search identified one historic-period archaeological resource: the Empire Mine Historic District. Although the District is outside of the Southern SOI Amendment area boundaries, it is possible that mining-related resources with the potential to contribute to the District's significance extend into the project area. The Increased Open Space East of SR 49 Alternative would designate the area closest to this District as open space, which would limit the potential for ground disturbance that could damage cultural resources. Development of the remainder of the project area could still result in damage to or destruction of a building or structure that has not yet been evaluated for historical significance, encounter previously undiscovered or unrecorded archaeological sites and materials, unidentified tribal cultural resources, or undocumented human remains during preconstruction or construction-related ground disturbing activities. Adopted Mitigation Measures MM 3.5.1b through 3.5.1e would continue to be implemented and the impact would be less than significant. Because this alternative would reduce development in the project area near documented archaeological resources, potential impacts to cultural resources would be **reduced** as compared to the proposed Southern SOI Amendment.

HAZARDS AND HAZARDOUS MATERIALS

As discussed in Section 3.5, "Hazards and Hazardous Materials," future development would increase the routine use, transport, and storage of potentially hazardous materials and could be sited on known locations of hazardous materials releases. The Increased Open Space East of SR 49 Alternative would decrease the potential for industrial uses in the area by 31.5 acres. Depending on type, industrial facilities can be associated with greater use, storage, and transport of hazardous materials. Therefore, by reducing overall use, the alternative could reduce the potential for upset. In addition, because this alternative would generate less traffic, the potential for effects to emergency response and evacuation plans would also be reduced.

The overall potential to encounter hazardous materials sites would be similar under this alternative because the documented sites are not within the area that would be designated for open space. Implementation of Adopted Mitigation Measures MM 3.7.2a, MM 3.7.2b, and MM 3.7.2c would reduce potential public health impacts by requiring certification of cleanup and implementing recommendations for cleanup at known hazardous materials sites. In addition to implementation of Adopted Mitigation Measures MM 3.7.2a, MM 3.7.2b, and MM 3.7.2c, the City is contracted with DTSC to investigate and remediate hazards identified at the Berriman Ranch Property and Bear River Mill Site East, and is under contract through a Voluntary Cleanup Agreement to remediate hazards identified at the Rare Earth Landscape Materials and La Barr Meadow Roads Property sites. Potential for development on these properties would not change under this alternative. Overall, the Increased Open Space East of SR 49 Alternative would result in **slightly reduced** impacts related to hazards and hazardous materials as compared to the proposed Southern SOI Amendment.

HYDROLOGY AND WATER QUALITY

The Increased Open Space East of SR 49 Alternative would designate the approximately 30-acre SOI expansion area for open space. The remainder of the project area would still be subject to ground disturbance, grading, and vegetation removal during construction of project elements (e.g., buildings, underground utilities). This development would be subject to the City's General Plan, Development Code, and Improvement Standards, which would address the potential for the construction or operation of future development in the project area to violate water quality standards, waste discharge requirements, or otherwise substantially degrade surface water quality. Implementation of Adopted Mitigation Measure MM 3.8.2 would reduce impacts to groundwater quality associated with future development proposals within the project area by requiring soil investigations to analyze the subsurface soils that are present and the elevation of the subsurface water table as part of the final design of specific future development projects within the project area. Because this alternative would result in open space in the northeast corner of the project area that would provide for natural runoff attenuation and infiltration, the impact to hydrology and water quality would be **reduced** as compared to the proposed a Southern SOI Amendment.

NOISE

The Increased Open Space East of SR 49 Alternative would designate the approximately 30-acre SOI expansion area for open space. This would reduce the area designated for industrial uses, relative to the proposed Southern SOI Amendment, which could reduce the traffic noise generated by the project. Potential for construction and operational noise and vibration would also be reduced in this area specifically. As discussed in Section 3.7, "Noise," all potential noise impacts from future stationary noise sources would be evaluated at the project level through the City's development review process. Nonetheless, this alternative may have a beneficial impact on the noise environment of the adjacent open space associated with Empire Mine State Park. Thus, noise impacts would be **reduced** as compared to the proposed Southern SOI Amendment.

PUBLIC UTILITIES AND ENERGY

Implementation of the Increased Open Space East of SR 49 Alternative would not be expected to result in substantial changes to utility demand or the use of energy, although there would be some reduction in demand proportionate to the 31.5 acres that would be designated for open space rather than industrial uses. Future development would require new connections to gas, electric, water, and wastewater infrastructure in the project area. Changes in land use designations under this alternative would not result in the need for new or expanded utilities compared the Southern SOI Amendment. The proposed project would be required to comply with the LAFCo master service agreements for annexation of the project area. Further, extension of service would occur in cooperation with the utility provider and would be subject to project-level environmental review. Compared to the proposed Southern SOI Amendment, this impact would be **reduced** because of the reduced extent of development.

TRANSPORTATION AND CIRCULATION

As discussed above, implementation of the Increased Open Space East of SR 49 Alternative would result in a reduction in associated VMT. The Nevada County Transportation Commission's Western Nevada Regional Travel Demand Model indicates that industrial uses are typically associated with longer trip lengths and any reduction in vehicle trips associated with industrial uses is likely to decrease the average trips lengths and VMT per service population. Thus, impacts to transportation and circulation would be **reduced** as compared to the proposed Southern SOI Amendment.

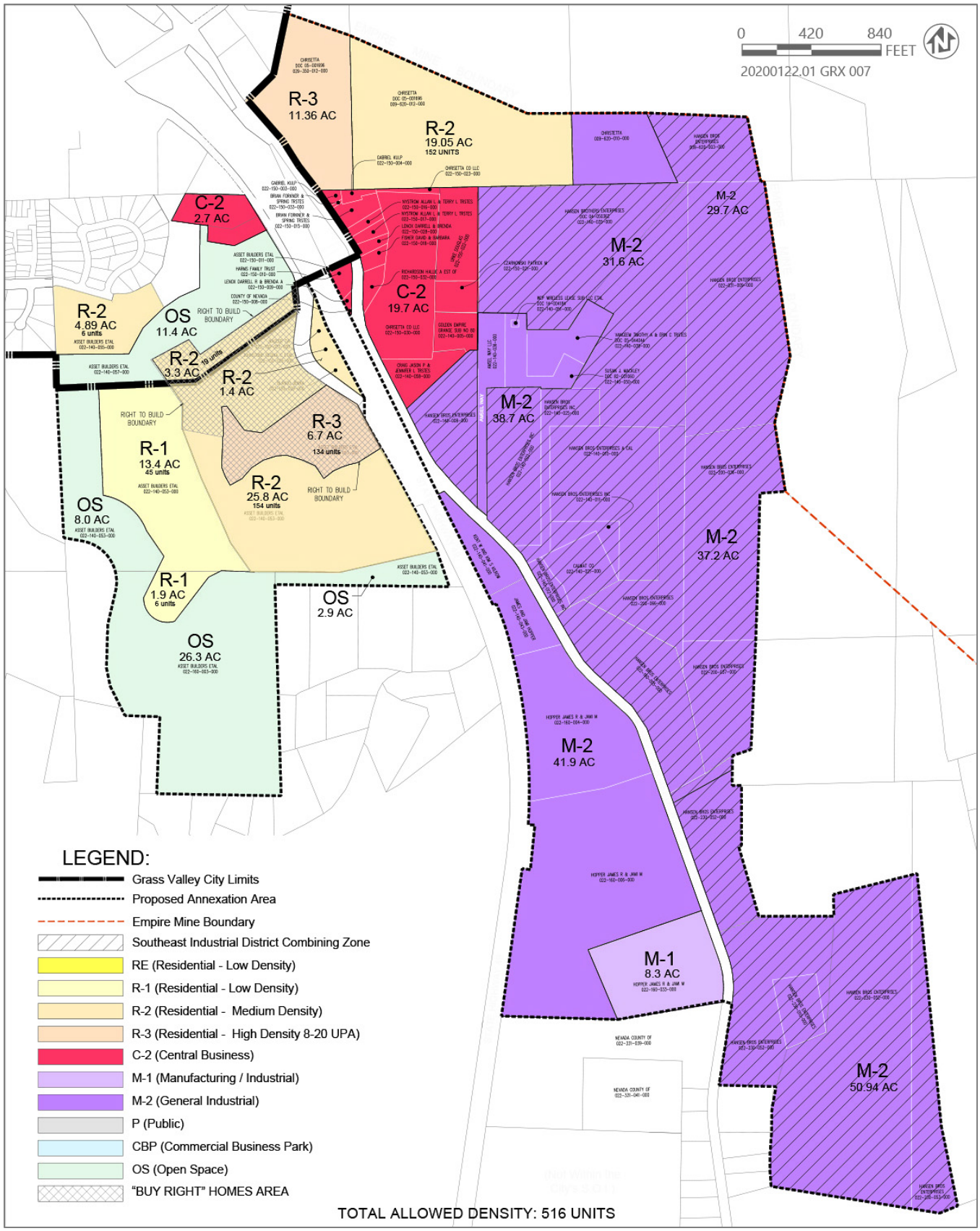
WILDFIRE

The Increased Open Space East of SR 49 Alternative would result in development along the margins of existing development in an area designated as Very High Fire Hazard Severity Zone. However, the 31.5-acre addition to the SOI would be designated for open space rather than industrial use. As indicated above, this area could serve as a fire break between the city and Empire Mine State Park, if properly managed. Otherwise, buildout of this alternative would not change potential to exacerbate wildfire compared to the Southern SOI Amendment because the pre-zoning would be the same. Buildings constructed in the area would comply with the building code and vegetation management requirements. Similar infrastructure upgrades would be implemented. Because this alternative would designate open space that could serve as a key fire break for the proposed residential and commercial land uses at the northern boundary of the SOI east of SR 49, potential impacts to wildfire would be **reduced**.

4.4.3 Alternative 3: Increased Residential and Supporting Commercial

This alternative is intended to reduce VMT and associated impacts at buildout while increasing housing opportunities and local-serving commercial near the existing development at the City's southern boundary. Under this alternative, the 11.4 acres of commercial at the northern project area boundary would be designated for high-density residential (R-3) and the two areas in the northern portion of the project area that are proposed for manufacturing/industrial (M-1) would be designated for commercial uses (Central Business, C-2) (see Figure 4-2). This could result in 228 additional dwelling units in the project area.

As Described in Section 3.9, "Transportation and Circulation," the amended Southern SOI Project would result in a significant and unavoidable impact related to VMT. This is, at least in part, attributable to the longer average trip lengths assumed for industrial uses., which are modeled to have a VMT per service population for the proposed Southern SOI Amendment of 35.1. Multi-family residential development under the proposed Southern SOI Amendment would generate the shortest average trip lengths and a VMT per service population of 3.6, while retail use would result in longer trip lengths and a VMT per service population of 84.1 (Appendix D: Table 5.1). However, the modeling and analysis of VMT requires consideration of the land uses in the greater project area to determine number and length of trips and the actual modeled values would be slightly different for this alternative. It is possible that an alternative with complimentary land uses adjacent to each other (residential and commercial) would reduce the VMT of both land uses.



Source: Figure produced by SCO Planning and Engineering in 2021

Figure 4-2 Alternative 3: Increased Residential and Supporting Commercial

Because this alternative would result in a net decrease of industrial designation of 22.4 acres, an 11.4 acre increase in commercial area, and greater opportunity for affordable housing in proximity to existing jobs and planned commercial, this alternative is anticipated to improve VMT as compared to the proposed Southern SOI Amendment.

AIR QUALITY

The Increased Residential and Supporting Commercial Alternative would not considerably change the potential for construction emissions because ground-disturbing activities could occur throughout the project area. Because less land would be pre-zoned for industrial uses than proposed under the amended Southern SOI, it is anticipated that VMT would be lower, which would reduce effects on air quality. For these reasons, the impact on air quality under the Increased Residential and Supporting Commercial Alternative would be **reduced** as compared to the proposed Southern SOI Amendment.

BIOLOGICAL RESOURCES

The Increased Residential and Supporting Commercial Alternative would increase the potential for development of commercial and residential uses, while reducing land designated for industrial uses. The entire project area would still be subject to ground disturbance, grading, and vegetation removal during construction of project elements (e.g., buildings, underground utilities). Implementation of Adopted Mitigation Measures MM 3.3.1 through 3.3.5 and proposed Mitigation Measure 3.2-5 would reduce impacts associated with future development proposals within the project to less-than-significant levels. Because this alternative would not change the potential for ground disturbance and development in the project area, potential impacts to biological resources would be **similar** as compared to the proposed Southern SOI Amendment.

CLIMATE CHANGE AND GREENHOUSE GAS EMISSIONS

The Increased Residential and Supporting Commercial Alternative would not considerably change the potential for construction emissions because ground-disturbing activities could occur throughout the project area. Because less land would be pre-zoned for industrial uses than proposed under the Southern SOI Amendment, it is anticipated that VMT would be lower, which would reduce associated greenhouse gas emissions. In addition, this alternative would increase the service population which, combined with a reduction in VMT would be expected to improve the efficiency metric (expressed as carbon dioxide per year per service population). For these reasons, the impact on climate change and greenhouse gas emissions under the Increased Residential and Supporting Commercial Alternative would be **reduced** as compared to the proposed Southern SOI Amendment.

CULTURAL AND PALEONTOLOGICAL RESOURCES

The Increased Residential and Supporting Commercial Alternative would increase the potential for development of commercial and residential uses, while reducing land designated for industrial uses. The entire project area would still be subject to potential ground disturbance and demolition during construction of project elements (e.g., buildings, underground utilities). Development of the Southern SOI Amendment area could result in damage to or destruction of a building or structure that has not yet been evaluated for historical significance, encounter previously undiscovered or unrecorded archaeological sites and materials, unidentified tribal cultural resources, or undocumented human remains during preconstruction or construction-related ground disturbing activities. Adopted Mitigation Measures MM 3.5.1b through 3.5.1e would be implemented. This impact would remain less than significant with mitigation. Because this alternative would not change the potential for ground disturbance and development in the project area, potential impacts to biological resources would be **similar** as compared to the proposed Southern SOI Amendment.

HAZARDS AND HAZARDOUS MATERIALS

As discussed in Section 3.5, "Hazards and Hazardous Materials," future development would increase the routine use, transport, and storage of potentially hazardous materials and could be sited on known locations of hazardous materials releases. The Increased Residential and Supporting Commercial Alternative would decrease the potential for industrial uses in the area. Depending on type, industrial facilities can be associated with greater use, storage, and transport of hazardous materials. Therefore, by reducing overall use, the alternative could reduce the potential for upset.

This alternative would result in potential development of the same project area, however, and would have the same potential to encounter hazardous materials sites. Implementation of Adopted Mitigation Measures MM 3.7.2a, MM 3.7.2b, and MM 3.7.2c would reduce potential public health impacts by requiring certification of cleanup and implementing recommendations for cleanup at known hazardous materials sites. In addition to implementation of Adopted Mitigation Measures MM 3.7.2a, MM 3.7.2b, and MM 3.7.2c, the City is contracted with DTSC to investigate and remediate hazards identified at the Berriman Ranch Property and Bear River Mill Site East, and is under contract through a Voluntary Cleanup Agreement to remediate hazards identified at the Rare Earth Landscape Materials and La Barr Meadow Roads Property sites. Potential for development on these properties would not change under this alternative.

The potential for effects to emergency response and evacuation plans would also be similar. This alternative would introduce more residents to the area that may need to evacuate in an emergency situation. Overall, the Increased Residential and Supporting Commercial Alternative would result in **reduced** impacts related to hazards and hazardous materials as compared to the proposed Southern SOI Amendment.

HYDROLOGY AND WATER QUALITY

The Increased Residential and Supporting Commercial Alternative would change the proposed pre-zoning of three parcels near the southern boundary of the city, but the project area would still be subject to ground disturbance, grading, and vegetation removal during construction of project elements (e.g., buildings, underground utilities). This development would be subject to the City's General Plan, Development Code, and Improvement Standards, which would address the potential for the construction or operation of future development in the project area to violate water quality standards, waste discharge requirements, or otherwise substantially degrade surface water quality. Implementation of Adopted Mitigation Measure MM 3.8.2 would reduce impacts to groundwater quality associated with future development proposals within the project area by requiring soil investigations to analyze the subsurface soils that are present and the elevation of the subsurface water table as part of the final design of specific future development projects within the project area. Because future land use projects would comply with these requirements, implementation of the Increased Residential and Supporting Commercial Alternative would not be expected to increase the rate or amount of surface runoff in a manner that would result in on- or offsite flooding, or substantial erosion or siltation. Thus, the impact to hydrology and water quality would be **similar** as compared to the proposed Southern SOI Amendment.

NOISE

The Increased Residential and Supporting Commercial Alternative would change the designation of three parcels near the existing city limits. Residential development would be located closest to the city limits and would be generally buffered from the industrially designated parcels by commercial uses. This may reduce the potential for operational noise associated with industrial uses to affect residents in the area. Further, because this alternative would reduce VMT, traffic-related noise may be reduced. Potential construction noise and vibration would be similar to the proposed Southern SOI Amendment. As discussed in Section 3.7, "Noise," the General Plan exempts noise generated by construction activities and all potential noise impacts from future stationary noise sources would be evaluated at the project level through the City's development review process. Noise impacts would be **reduced** under this alternative due to the separation of residential and industrial land use designations.

PUBLIC UTILITIES AND ENERGY

Implementation of the Increased Residential and Supporting Commercial Alternative would not be expected to result in substantial changes to utility demand or the use of energy. Future development would require new connections to gas, electric, water, and wastewater infrastructure in the project area. Changes in land use designations under this alternative would not result in the need for new or expanded utilities compared to the Southern SOI Amendment. The proposed project would be required to comply with the LAFCo master service agreements for annexation of the project area. Further, extension of service would occur in cooperation with the utility provider and would be subject to project-level environmental review. Thus, this impact would be **similar** as compared to the proposed Southern SOI Amendment.

TRANSPORTATION AND CIRCULATION

As discussed above, implementation of the Increased Residential and Supporting Commercial Alternative would be associated with a reduction in VMT. Although the precise reduction in VMT has not been quantified, the Nevada County Transportation Commission's Western Nevada Regional Travel Demand Model indicates that industrial uses are typically associated with longer trip lengths and any reduction in vehicle trips associated with industrial uses is likely to decrease the average trips lengths and VMT per service population. As indicated above, for the proposed Southern SOI Amendment industrial uses are modeled to have a VMT per service population of 35.1. Multi-family residential development under the proposed Southern SOI Amendment would generate the shortest average trip lengths and a VMT per service population of 3.6, while retail use would result in longer trip lengths and a VMT per service population of 84.1 (Appendix D: Table 5.1). Therefore, decreasing the land designated for industrial and increasing high-density residential could improve VMT.

However, the modeling and analysis of VMT requires consideration of the land uses in the greater project area to determine number and length of trips and the actual modeled values would be slightly different for this alternative. For example, retail projects typically re-route travel from other retail destinations. Thus, locating more commercial land uses, much of which would include retail development, in close proximity to the increased number of residential land uses would likely shorten trips and reduce VMT. Further, this alternative would designate additional land for high-density housing in proximity to existing jobs in the city. Thus, impacts to transportation and circulation would be **reduced** as compared to the proposed Southern SOI Amendment.

WILDFIRE

Like the proposed Southern SOI Amendment, the Increased Residential and Supporting Commercial Alternative could result in development along the margins of existing development in an area designated as Very High Fire Hazard Severity Zone. Buildout would not result in substantially greater potential to exacerbate wildfire than the Southern SOI Amendment because the development footprint would be similar, and the pre-zoning would allow for the same general types of future land uses. Although additional dwelling units would be provided in the project area, they would be high-density uses built to the most current building standards. Buildings constructed in the area would comply with the building code and vegetation management requirements. Similar infrastructure upgrades would be implemented. Because this alternative would not change the potential for development in the project area, potential impacts to wildfire would be **similar** as compared to the proposed Southern SOI Amendment.

4.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

As illustrated in Table 4-1, below, the Increased Open Space East of SR 49 Alternative would be environmentally superior action alternative. Although the environmental impacts would be similar to the proposed project, and significant impacts may not be completely avoided, this alternative would result in at least a slight reduction in each of the environmental topics evaluated. This alternative could reduce VMT by decreasing the amount of the SOI re-zoned for industrial uses, without substantially affecting the viability of the greater industrial area. In addition, the reduced potential for construction and excavation would reduce the potential effect to biological resources, potential

to encounter native soils that could contain cultural resources, and potential effects on the hydrology and water quality of the project area. Further, this alternative would reduce the emissions of criteria air pollutants and GHGs generated by the construction and operation of the project. The designation of the land at the northern corner of the project area as open space could also result in increased land compatibility by creating a buffer between the developed city and Empire Mine State Park. Finally, this area (which is sloped and less ideal for development) could be managed as a fire break between the land uses.

Table 4-1 Summary of Environmental Effects of the Alternatives Relative to the Proposed Southern SOI Amendment

Environmental Topic	Southern SOI Amendment	Alternative 1: No Project Alternative	Alternative 2: Increased Open Space East of SR 49 Alternative	Alternative 3: Increased Residential and Supporting Commercial Alternative
Air Quality	significant and unavoidable	similar	reduced	reduced
Biological Resources	less than significant with mitigation	similar	reduced	similar
Climate Change and Greenhouse Gas Emissions	significant and unavoidable	similar	reduced	reduced
Cultural and Paleontological Resources	less than significant with mitigation	similar	reduced	similar
Hazards and Hazardous Materials	less than significant with mitigation	similar	slightly reduced	reduced
Hydrology and Water Quality	less than significant with mitigation	similar	reduced	similar
Noise	significant and unavoidable	similar	reduced	reduced
Public Utilities and Energy	less than significant	similar	slightly reduced	similar
Transportation and Circulation	significant and unavoidable	similar	reduced	reduced
Wildfire	less than significant	similar	reduced	similar

5 OTHER CEQA SECTIONS

This section discusses additional topics statutorily required by the California Environmental Quality Act (CEQA) for inclusion in environmental impact reports (EIRs). The topics discussed include cumulative impacts, growth-inducing impacts, significant irreversible environmental effects, and significant and unavoidable environmental impacts.

5.1 CUMULATIVE IMPACTS

State CEQA Guidelines define a cumulative impact as "two or more individual effects which, when considered together, are considerable" in Section 15355. An individual effect need not itself be significant to result in significant cumulative effects; the impact is the result of the incremental effects of the project combined with the effects of "other closely related past, present, and reasonably foreseeable probable future projects." CEQA does not define "closely related," but the Code of Federal Regulations (40 CFR 1508.25) indicates that a "closely related" project is one which is automatically triggered by the project; one which cannot proceed without the project first proceeding (mutual dependency); one which requires the project for justification or is an interdependent part of the same action; or one which is a similar action with common timing, geography, and other features.

5.1.1 Cumulative Impact Analysis Methodology

State CEQA Guidelines Section 15355 defines a cumulative impact as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. The analysis herein evaluates whether, after adoption of project-specific mitigation, the residual impacts of the project would cause a cumulatively significant impact or would contribute considerably to existing/anticipated (without the project) cumulatively significant effects.

For purposes of this SEIR, the project would have a significant cumulative effect if it meets either one of the following criteria:

- The cumulative effects of related projects (past, current, and probable future projects) without the project are not significant but the project's incremental impact is substantial enough, when added to the cumulative effects, to result in a significant impact; or
- The cumulative effects of related projects (past, current, and probable future projects) without the project are already significant and the project represents a considerable contribution to the already significant effect. The standards used herein to determine "considerable contribution" are that the impact either must be substantial or must exceed an established threshold of significance.

The significance criteria used for analysis are the same as those used throughout the topical chapters of the SEIR. Section 15130(a)(3) states that a project's contribution to an impact is "less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures to alleviate the cumulative impact. The lead agency shall identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable."

5.1.2 Scope of the Cumulative Analysis

The requirements for a cumulative analysis are described in CEQA Guidelines Section 15130. A cumulative analysis "need not provide as great detail as is provided for the effects attributable to the project alone." The analysis should focus on analyzing the effects of the project to which other projects contribute, to the extent practical and reasonable. The State CEQA Guidelines identify two basic methods for establishing the cumulative environment in which the project is to be considered: (1) the use of a list of past, present, and probable future projects; or (2) the use

of adopted projections from a general plan, other regional planning document, or a certified EIR for such a planning document. This analysis is based primarily on the latter approach.

The cumulative impact analysis provided in this chapter evaluates whether the proposed Southern SOI Amendment could result in new cumulatively considerable impacts or an increase in the severity of previously identified cumulative impacts that were identified in the 2014 SOI EIR pursuant to State CEQA Guidelines Section 15162(b).

The cumulative environmental setting has been updated from the 2014 SOI EIR and is based upon the development forecasts in the City's adopted General Plan, augmented to reflect the Dorsey Marketplace (SCH 2016022053), which was approved by the City in April of 2020. The Dorsey Marketplace project included a General Plan amendment on nearly 27 acres in the city. The amendment changed 14.5 acres from Business Park to Commercial and created Residential Urban High Density on 12.3 acres and a zone map amendment from Corporate Business Park to Commercial (C-2) and Multiple Dwelling Residential (R-3). The project includes 104,350 square feet of commercial space, 8,500 square feet of office space, and 172 apartments; and a Use Permit for three drive-through uses.

The setting has also been expanded to include the proposed Idaho-Maryland Mine Project (SCH 2007092017) which is currently undergoing environmental review. The project encompasses two separate project sites: the Brunswick Industrial Site and the Centennial Industrial Site, totaling approximately 175.34 acres along with approximately 2,585 subsurface acres where the applicant will retain mineral rights.

The effects of past and present projects on the environment are reflected by the existing conditions in the project area.

5.2 CUMULATIVE IMPACT ANALYSIS

5.2.1 Air Quality

The geographic context for cumulative impacts related to air quality is regional for criteria air pollutant and ozone precursors and includes the Mountain Counties Air Basin. Cumulative development in the region will continue to increase the concentration of pollutants from construction activities, traffic, natural gas combustion in buildings, area sources, stationary sources, and mining activities, but this increase would be partially offset by State and federal policies that set emissions standards for mobile and nonmobile sources. *The City of Grass Valley 2020 General Plan Draft Environmental Impact Report* (General Plan EIR, City of Grass Valley 1999b) identified significant cumulative air quality impacts from buildout of the City and planning area (City of Grass Valley 2019).

Impact 5-1: Cumulative Air Quality Impacts

As stated in Section 3.1, "Air Quality," the region is currently in nonattainment for emissions of ozone precursors (ROG and NO_X) and PM_{10}. The analysis determined that the project, in combination with foreseeable development in the Mountain Counties Air Basin, would contribute to future concentrations of ozone and PM_{10}. The project's mitigated short-term construction emissions and operational emissions would exceed significance thresholds; and the condition would worsen when combined with other foreseeable development in the region. The 2014 SOI EIR identified that contribution to cumulative air quality impacts would be cumulatively considerable and a significant unavoidable impact (Impact 3.2.6).

The emissions associated with the Southern SOI Amendment would result in fewer emission than what was identified in the 2014 SOIR EIR and would not generate additional emissions would not result in a new or greater contribution to cumulative effects to air quality beyond the cumulatively considerable and a significant unavoidable impact identified in the 2014 SOI EIR even with application of adopted Mitigation Measures 3.2.1a through 3.2.1d. Thus, the project's contribution to the significant cumulative impact **would be less than cumulatively considerable**.

Mitigation Measures

No additional mitigation is required beyond those adopted Mitigation Measures 3.2.1a through 3.2.1d.

5.2.2 Biological Resources

The geographic scope for consideration of cumulative impacts to biological resources is the City of Grass Valley. The main habitat types found in the City include northern mixed chaparral, non-native grassland, black oak woodland, blue oak woodland, canyon live oak forest, foothill pine-oak woodland, west side ponderosa pine forest, and riparian habitats (City of Grass Valley 1999a). The General Plan EIR found that impacts to biological resources caused by buildout of the General Plan would be reduced to a less than significant level through compliance with the policies and standards identified in the General Plan. For example, the General Plan EIR found that with a requirement that development cause "no net loss of habitat functions or values" through "avoidance of the resource, or through creation or restoration of habitat of superior or comparably quality, in accordance with guidelines of the U.S. Fish and Wildlife Service and the California Department of Fish and Game," cumulative impacts to habitat would be reduced to a less than significant level. Specifically, the General Plan EIR found that potential cumulative impacts related to loss of habitat, particularly for sensitive species, loss of wetlands, and adverse effects on movement and dispersal of wildlife and wildlife migration corridors would all be reduced to less than significant levels through compliance with the General Plan and City ordinances.

Impact 5-2: Cumulative Biological Resource Impacts

As discussed in Impacts 3.2-1 through 3.2-5 of this Draft SEIR, implementation of the Southern SOI Amendment would include ground disturbance that would affect biological resources similar in extent to the Adopted Southern SOI Project because the extent of assumed land disturbance would not change substantially from what was evaluated in the 2014 SOI EIR.

The 2014 SOI EIR determined that the impact of future development within the project area would be less than cumulatively considerable after implementation of adopted Mitigation Measures MM 3.3.1 through MM 3.3.7. Compliance with existing regulations, General Plan policies and standards, and adopted and new mitigation measures would ensure that the Southern SOI Amendment's contribution to the cumulative impacts are addressed in a manner consistent with the 2014 SOI EIR analysis. There is no element of the proposed amendments that would substantially modify the project's contributions to the cumulative impact. The Southern SOI Amendment maintains the concept approved in 2014 that preserves the key riparian and habitat corridors in open spaces. Therefore, the Southern SOI Amendment would not result in a new or greater contribution to cumulative effects to biological resources beyond what was identified in the 2014 SOI EIR. The Southern SOI Amendment's contribution to the cumulative impact would be **less than cumulatively considerable**.

Mitigation Measures

No additional mitigation is required beyond adopted Mitigation Measures MM 3.3.1 through 3.3.7.

5.2.3 Climate Change and Greenhouse Gas Emissions

Climate change is a global problem. Greenhouse gases (GHGs) are global pollutants (unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern). Whereas most pollutants with localized air quality effects have relatively short atmospheric lifetimes (approximately 1 day), GHGs have long atmospheric lifetimes (1 year to several thousand years). GHGs persist in the atmosphere long enough to be dispersed around the globe. Although the lifetime of any GHG molecule depends on multiple variables and cannot be determined with any certainty, it is understood that more carbon dioxide (CO_2) is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO_2 emissions, approximately 55 percent are estimated to be sequestered through ocean and land uptake every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remain stored in the atmosphere (IPCC 2014:467).

No single project alone would measurably contribute to an incremental change in the global average temperature or to global or local climates or microclimates. From the standpoint of CEQA, GHG impacts relative to global climate change are inherently cumulative.

The General Plan EIR found that the General Plan has no potential to alter air movement, moisture, temperature, or cause a change in climate (City of Grass Valley 2019). The 2014 SOI EIR determined this impact would be cumulative considerable and significant and avoidable (Impact 3.4.1).

Impact 5-3: Cumulative Climate Change and Greenhouse Gas Emissions Impacts

As described in Section 3.3, "Greenhouse Gas Emissions and Climate Change," the discussion of GHG emissions associated with Southern SOI Amendment is inherently a cumulative impact analysis. GHG emissions contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. No single land use project could generate enough GHG emissions to noticeably change the global average temperature. The combination of GHG emissions from past, present, and future projects contribute substantially to the phenomenon of global climate change and its associated environmental impacts. Although implementation of the Southern SOI Amendment would result in both direct and indirect GHG emissions. As noted above, the 2014 SOI EIR determined this impact would be cumulative considerable and significant and avoidable (Impact 3.4.1).

These additional emissions would not result in a new or greater contribution to cumulative effects to GHG emissions beyond the cumulatively considerable and a significant unavoidable impact identified in the 2014 SOI EIR even with application of adopted Mitigation Measure 3.4.1. Thus, the project's contribution to the significant cumulative impact would be less than cumulatively considerable.

Mitigation Measures

No additional mitigation is required beyond those adopted Mitigation Measure 3.4.1 and mitigation measures identified in Section 3.3, "Greenhouse Gas Emissions and Climate Change."

5.2.4 Cultural and Paleontological Resources

Geologic units in the Grass Valley Planning Area are known to contain paleontological and archaeological resources. The General Plan EIR found that future projects in the city could adversely impact cultural resources. However, the General Plan contains several specific goals, objectives, policies, and implementation strategies that address these issues. In addition, the General Plan EIR identified Mitigation Measures 3.12-1 and 3.12-2, which reduce this impact to a less than significant level.

The loss of any one archaeological site or tribal cultural resource affects all others in a region, because the cultural setting context for a given region is a reflection of all the cultural resources in that region and these resources are best understood in the context of the entirety of the cultural system of which they are a part. Because all significant archaeological resources and human remains are unique and non-renewable members of finite classes, all adverse effects or negative impacts erode a dwindling resource base. There could, therefore, be a significant cumulative impact to archaeological resources if any cultural resources (including subsurface and surface archaeological resources) or tribal cultural resources are disturbed and/or destroyed.

The General Plan, as well as state and federal law, require that archaeological resources be preserved in place whenever feasible, and require resources that cannot be preserved be properly recorded, evaluated, and curated. State law also requires consultation with tribes that have been traditionally and culturally affiliated with a region to identify and develop mitigation for any potential effects to tribal cultural resources. Therefore, although development is anticipated in the region and could occur in proximity to known archaeological resource sites and has the potential to affect tribal cultural resources, compliance with the applicable state and federal regulations and General Plan policies would address the potential for loss of archaeological resources.

Impact 5-4: Cumulative Cultural Resources Impacts

Section 3.5, "Cultural and Paleontological Resources," of the 2014 SOI EIR addressed cumulative impacts associated with undiscovered prehistoric and historic resources and human remains, as well as paleontological resources. The cumulative analysis determined that the possible cumulative impact of future development within the project area, in combination with other cumulative development in the region, on prehistoric resources, historic resources, human remains, and paleontological resources would result in a potentially significant cumulative impact. However,

implementation of adopted Mitigation Measures MM 3.5.1a though MM 3.5.1e and MM 3.5.2 would mitigate the proposed project's contribution to the potential cumulative impacts, and this cumulative impact would, therefore, be less than cumulatively considerable.

There is no element of the proposed amendments that would substantially modify the project's contributions to the cumulative impact. Therefore, the Southern SOI Amendment would not result in a new or greater contribution to cumulative effects to cultural resources beyond what was identified in the 2014 SOI EIR. The Southern SOI Amendment's contribution to cumulative impact would be **less than cumulatively considerable**.

Mitigation Measures

No additional mitigation is required beyond adopted Mitigation Measures MM 3.5.1a through MM 3.5.1e and MM 3.5.2.

5.2.5 Hazards and Hazardous Materials

Potential hazardous materials impacts related to site-specific conditions are generally not regional in nature; therefore, impacts from one project typically do not combine with impacts from other projects in the area to create a cumulative impact. Compliance with all applicable federal, state, and local regulations related to hazards and hazardous materials on a project-by-project basis would be required for all projects within the Grass Valley area and would ensure that site-specific impacts are appropriately addressed and cannot combine with site-specific impacts from other project sites.

The General Plan EIR determined that development in accordance with the General Plan could expose property, people, and the environment to hazardous materials (City of Grass Valley 1999b). The General Plan addresses, in specific goals, objectives, policies, and implementation strategies, ways of preventing these incidents from occurring. These include requiring new development located on officially identified hazardous waste sites to conduct appropriate investigations, submit results to the City, and prepare a mitigation plan, and to consider the location and characteristics of documented hazardous waste sites as part of the environmental assessment process for proposed developments. Another major concern is development in close proximity to abandoned mine shafts, which could contain toxic gases or toxic materials. The General Plan discusses various ways of preventing impacts resulting from mining activities such as requiring development plans in mined areas to include in-depth assessments of potential safety, including mining-related excavations, and health hazards and accompanying mitigation measures and establishing a mine-related hazards program which would include a mine hazard database, technical studies, and other pertinent information. These goals, policies, objectives, and implementation actions and strategies ensure that new growth and development will comply with all applicable health and safety standards.

As discussed in Impact 3.11-2 of the General Plan EIR, new development in accordance with the General Plan could potentially interfere with an emergency response plan or emergency evacuation plan. The Safety Element is required by California law to address evacuation routes in the event of a catastrophe. The General Plan does address, in specific goals, objectives, policies, and implementation strategies, ways of preventing interference with emergency response or evacuation such as requiring future developments to provide multiple ingress/egress points, to facilitate emergency vehicle access and mobility, and removing impediments to emergency access from public streets and rights-of-way. The General Plan also recommends the coordination of circulation and development plans with public safety agencies, fire department/districts and emergency service providers. These goals, policies, objectives and implementation actions and strategies will prevent interference with emergency response or evacuation to the extent feasible. The General Plan EIR determined that the impact on development consistent with the General Plan would have a less than significant impact on emergency response and evacuation plans.

Impact 5-5: Cumulative Hazardous Materials Impacts

The hazards and hazardous materials analysis in Section 3.7 of the 2014 SOI EIR evaluated whether future development within the project area would contribute to a cumulative increase in the transport, handling, use, and disposal of hazardous materials in the region and determined that with required regulations providing controls and

oversight, this impact would be less than cumulatively considerable. Section 3.7 also analyzed the potential for development on lands within the project area that are known to be past release sites of hazardous materials. Implementation of Adopted Mitigation Measures MM 3.7.2a though MM 3.7.2c would ensure that project sites within the SOI are fully remediated prior to any possible future development activities. This impact was determined to be less than cumulatively considerable. There is no element of the proposed amendments that would substantially modify the project's contributions to the cumulative impact. Therefore, the Southern SOI Amendment would not result in a new or greater contribution to cumulative effects related to hazardous materials beyond what was identified in the 2014 SOI EIR. The Southern SOI Amendment's contribution to the cumulative impact would be **less than cumulatively considerable**.

Mitigation Measures

No additional mitigation is required beyond adopted Mitigation Measures MM 3.7.2a though MM 3.7.2c.

Impact 5-6: Cumulative Emergency Response and Evaluation Plan Impacts

As identified in Impact 3.5-3 of this Draft SEIR, the Southern SOI Amendment would not affect the potential for the project to physically interfere with implementation of an adopted emergency response or evacuation plans. As discussed in the 2014 SOI EIR, if construction activities require temporary closure of all or part of SR 49 or other roadways, alternative routes would, as standard practice, be established for both regular traffic and emergency response vehicles. Additionally, the Nevada County EOP includes measures for establishing traffic control points and identifying bottlenecks and road failures, such as construction sites, as well as maintaining county roads to provide additional evacuation routes (Nevada County 2011). Fire officials take cumulative roadway capacity into account in determining potential effects on evacuation planning.

The 2014 SOI EIR did not reach an explicit conclusion regarding cumulative impacts to emergency response and evacuation plans. However, the project-level impact was determined to be less than significant, consistent with the cumulative determination of the General Plan EIR. There is no element of the proposed Southern SOI Amendment that would substantially modify the project's contributions to cumulative impacts. Therefore, the Southern SOI Amendment would not result in a new or greater contribution to cumulative effects related to emergency response and evacuation. The Southern SOI Amendment's contribution to the cumulative impact would be **less than cumulatively considerable**.

Mitigation Measures

No additional mitigation is required.

5.2.6 Hydrology and Water Quality

The City has a number of policies, standards, and procedures in place to ensure all development fully mitigates the hydrology and water quality–related impacts associated with new development and construction. The Conservation/Open Space Element of the General Plan includes specific goals, objectives, and policies regarding water resources and flooding. The element notes the presence and importance of the hydrologic features in the Grass Valley area, including stream corridors, floodplains, riparian areas, wetlands, and canals.

However, all future development would be subject to the National Pollutant Discharge Elimination System (NPDES) MS4 permit and would be required to comply with best management practices (BMPs) in the City of Grass Valley Stormwater Management Plan; low impact design measures to reduce pollutants; the City's Grading Ordinance (Municipal Code, Chapter 12.04 12.06.120); General Plan policies related to hydrology and water quality; and the General Construction NPDES permit. New development and redevelopment projects would require implementation of plans that identify and implement a variety of BMPs to reduce the potential for erosion or sedimentation. Compliance with these regulations would ensure that each development in the cumulative scenario would not cause an increase in stormwater runoff rates or volumes and would not introduce new sources of surface water and groundwater pollution.

In addition, the City has adopted several other policy documents that implement specific hydrology and water quality standards. These include the City's Storm Drainage Master Plan, City of Grass Valley Stormwater Management Program, City Improvement Standards, and Development Code, which includes subdivision standards. Article 5 (Resource Management) Chapter 17.50 (Creek and Riparian Resource Protection) of the Grass Valley Development Code specifies standards to protect watercourses and riparian areas from the effects of development. The standards in these chapters are intended to have a mitigating effect on, and in some cases to improve, existing conditions of the City's water resources. Article 6 (Site Development Regulations) Chapters 17.60 (Grading Permit Requirements and Procedures) and 17.62 (Grading, Erosion and Sediment Control Standards) of the Grass Valley Development Code establish standards for grading, including filling and excavation activities.

As a condition of approval for all grading plans, the City requires submittal of a stormwater pollution prevention program (SWPPP) to the City for acceptance, to file a Notice of Intent with the State Water Resources Control Board, and to comply with all provisions of the Clean Water Act. City standards also require developers to keep adjoining public streets free and clean of project dirt, mud, materials, and debris during the construction period. Therefore, the cumulative impacts to water quality would be less than significant.

Impact 5-7: Cumulative Hydrology and Water Quality Impacts

Section 3.8, "Hydrology and Water Quality," of the 2014 SOI EIR determined that construction and operation of future development within the project area could degrade long-term water quality, but with implementation of City standards for stormwater management practices and erosion control measures for each future development project within the SOI, cumulative impacts on water quality would be controlled and mitigated, making this impact less than cumulatively considerable. Section 3.8 also looked at the potential for cumulative flooding impacts. The analysis determined that the City's Storm Drain Master Plan would ensure future developments would individually mitigate impacts on the City's storm drainage system by requiring that each future development detain stormwater flows on-site and that runoff rates do not exceed existing site conditions. The analysis determined that with implementation of City policies and standards regarding stormwater detention and flow rates, cumulative impacts would be less than cumulatively considerable.

Compliance with existing regulations, General Plan policies and standards, and adopted and new mitigation measures would ensure that the Southern SOI Amendment's contribution to the cumulative impacts are addressed in a manner consistent with the 2014 SOI EIR analysis. There is no element of the proposed amendments that would substantially modify the project's contributions to the cumulative impact. There is no element of the proposed amendments that would substantially modify the project's contributions to the cumulative impact. Therefore, the Southern SOI Amendment would not result in a new or greater contribution to cumulative effects to hydrology and water quality beyond what was identified in the 2014 SOI EIR. The Southern SOI Amendment's contribution to the cumulative impact would be **less than cumulatively considerable**.

Mitigation Measures

No additional mitigation is required.

5.2.7 Noise

Cumulative traffic in the City would result in substantial increases in noise along roadway segments under future conditions. The General Plan estimates noise levels along portions of SR 49 and SR 20 to exceed 70 decibels (dB). Existing sensitive receptors along these roadways could be subject to noise levels that exceed City standards. This would be a significant cumulative impact.

Impact 5-8: Cumulative Operational Noise Impacts

Impact 3.9.7 in the 2014 SOI EIR analyzed the potential for operation of the Adopted Southern SOI Project to contribute to the noise and vibration environment of nearby land uses. Development of the Southern SOI Amendment would contribute to traffic noise in the City, including traffic noise on SR 49 and SR 20. Although new sensitive uses in the project area and throughout the City would be required to comply with General Plan Policy 4-NI,

which requires preparation of a noise analysis that would take into account traffic noise levels, existing sensitive receptors would be exposed to increased noise levels from traffic. Therefore, the cumulative impact would be cumulatively considerable and significant and unavoidable.

The proposed amended SOI would not result in a new or greater contribution to noise impacts beyond the cumulatively considerable and a significant unavoidable impact identified in the 2014 SOI EIR because the range of land uses would be similar to the approved SOI land uses. Thus, the project's contribution to the significant cumulative impact would be less than cumulatively considerable.

Mitigation Measures

No additional mitigation is required.

Impact 5-9: Cumulative Construction Noise Impacts

The analysis also states that the Adopted Southern SOI Project does not propose any noise-sensitive land uses near any existing stationary noise sources. General Plan policies and the subdivision and development review process would ensure that specific development proposals would undergo noise and vibration analysis, which would allow possible adverse noise impacts to be corrected. Because construction noise is generally limited to the vicinity of individual project sites, and because construction activities would have to be concurrent to have a cumulative effect, construction activities in the project area would generally not combine with other construction activities in the overall area to result in a cumulative effect. The analysis in the 2014 SOI EIR determined that the cumulative impact associated with the potential exposure of sensitive receptors to noise and vibration would be less than cumulatively considerable. The proposed amendment would further standardize land use designations, particularly east of SR 49, in a manner that would limit the potential for incompatible land uses and the development of noise-sensitive land uses in proximity to industrial land uses that generate noise. Therefore, the Southern SOI Amendment would not result in a new or greater contribution to cumulative effects beyond what was identified in the 2014 SOI EIR. The Southern SOI Amendment's contribution to the cumulative impact would be less than cumulatively considerable.

Mitigation Measures

No additional mitigation is required.

5.2.8 Public Utilities and Energy

The General Plan land use diagram evaluated in the General Plan EIR proposed areas for urban development throughout the Sphere of Influence. As land is annexed into the City, it may result in the City approving new development. This new development would result in a need for the City and other public utility providers to extend and/or upgrade utility infrastructure to the area. The General Plan EIR determined that buildout development projections of the General Plan would have a less than significant impact on water supply, wastewater, stormwater drainage, and solid waste with the implementation of the General Plan goals, objectives, policies and implementation actions and strategies.

Future development within the City would be guided by the General Plan, Development Code, and other associated planning and policy documents. Each project would be subject to the City's planning and environmental review processes. As part of the planning and environmental process, the payment of appropriate fees by all development projects would be required to mitigate any impacts on public utilities and minimize cumulative impacts on a project-by-project basis. The City Public Works Department, Nevada Irrigation District, Waste Management, PG&E, and other utility providers would be involved in the development review process for all projects in the City and would continue to provide input during the review of new projects to ensure they comply with all federal, state, and local regulations and ordinances protecting utility services, including complying with all water conservation measures and solid waste reduction measures implemented by the City or the state. Therefore, the cumulative public utility impacts would be considered less than significant.

Impact 5-10: Cumulative Utility Demand Impacts

As described in Section 3.8, "Public Utilities and Energy," the Southern SOI Amendment would increase the potential demand for water and generation of wastewater and solid waste compared to the Adopted Southern SOI Project. Although measurable, these changes would not substantially change demand for utilities and energy compared to the theoretical buildout of the project area evaluated in the 2014 SOI EIR. Utility providers would use the revised land use diagram in planning future utility infrastructure in the project area. Actual capacity would be determined on a project-by-project basis, in consultation with the utility providers. Therefore, the Southern SOI Amendment would not result in a new or greater contribution to cumulative effects beyond what was identified in the 2014 SOI EIR. The Southern SOI Amendment's contribution to the cumulative impact would be **less than cumulatively considerable**.

Mitigation Measures

No additional mitigation is required.

5.2.9 Transportation and Circulation

The 2014 SOI EIR evaluated the potential effects of the Adopted Southern SOI Project. The 2014 SOI EIR concluded that there would be less-than-significant impacts related to design hazards, emergency access, and transit, bicycle, and pedestrian facilities (Impacts 3.13.2, 3.13.3, 3.13.4, respectively). The 2014 SOI EIR also concluded that impacts related to traffic operational impacts would be significant and unavoidable with implementation of all feasible mitigation measures (Impact 3.13.1). The General Plan EIR does not evaluate traffic impacts in terms of VMT. Prior to the passage of Senate Bill (SB) 743 level of service was used to address potential vehicle delay. Public Resources Code (PRC) Section 21099 and California Code of Regulations (CCR) Section 15064.3(a), now establish that vehicle miles traveled (VMT) is generally the most appropriate measure of transportation impacts.

Impact 5-11: Cumulative Vehicle Miles Traveled Impacts

The 2014 SOI EIR evaluated the potential effects of the Adopted Southern SOI Project. The 2014 SOI EIR concluded that there would be less-than-significant impacts related to design hazards, emergency access, and transit, bicycle, and pedestrian facilities (Impacts 3.13.2, 3.13.3, 3.13.4, respectively). The 2014 SOI EIR also concluded that impacts related to traffic operational impacts would be significant and unavoidable with implementation of all feasible mitigation measures (Impact 3.13.1). However, as discussed above, VMT is now considered the most appropriate metric to use for analysis of transportation impact under CEQA.

The discussion of VMT impacts associated with the project in Impact 3.9-1 of Section 3.9, "Transportation and Circulation," is inherently a cumulative impact analysis because it addresses project-generated VMT based on an efficiency threshold that is aligned with long-term goals and relevant plans. As detailed under Impact 3.9-1, implementation of the proposed Southern SOI Amendment would result in a higher VMT per service population than that which would be generated under the Adopted Southern SOI Project, and the VMT would exceed the citywide VMT per service population significance threshold of 23.8. Implementation of Mitigation Measures 3.9-1a through 3.9-1d would reduce VMT generated by the project; however, it is unknown to what degree and it is unlikely that the reduction needed to bring the VMT per capita to a less-than-significant level would be achievable. Therefore, the project's contribution to substantial effects related to VMT would be **cumulatively considerable** and significant and unavoidable.

Mitigation Measures

No additional mitigation is required beyond Mitigation Measure 3.9-1a.

5.2.10 Wildfire

The General Plan EIR (Impact #3.11-4) indicates that new development in accordance with the 2020 General Plan could potentially increase fire hazard in areas with flammable brush, grass, or trees (City of Grass Valley 1999b). Additional development in the foothills increases the potential for wildland fires caused by illegal or inappropriate

burning, ignition by lawnmowers, improper disposal of cigarettes, or barbeques. The General Plan does address, in specific goals, objectives, policies, and implementation strategies, ways of preventing wildland fires including incorporating fire hazard reduction considerations into land use plans/patterns, developing and implementing fire-safe community design and landscaping standards, construction codes, and property maintenance regulations, and assuring public awareness of fire safety measures, including those addressing property maintenance. The General plan EIR determines that these goals, policies, objectives, implementation actions, and strategies will, to the extent feasible, reduce this impact; however, given the existing setting, the potential for wildland fire hazard will still exist. Therefore, there is a potentially significant cumulative condition.

Impact 4-12: Cumulative Wildfire Impacts

The Southern SOI Amendment would pre-zone the project area for development. Based on the analysis in the General Plan EIR, and because this area has been identified by CAL FIRE as a wildfire hazard zone, there would be a cumulative impact related to development in the City of Grass Valley's planning area. Due to compliance with regulations, including recent legislation related to reduction of existing wildfire hazards, the impact of the Southern SOI Amendment would not result in a significant contribution to this impact. There is no element of the proposed amendments that would substantially modify the project's contributions to the cumulative impact. The Southern SOI Amendment's contribution to the cumulative impact would be **less than cumulatively considerable**.

Mitigation Measures

No additional mitigation is available to effectively reduce this impact.

5.3 GROWTH INDUCEMENT

CEQA specifies that growth-inducing impacts of a project must be addressed in an EIR (Public Resources Code, Section 21100[b][5]). Specifically, Section 15126.2(d) of the California Code of Regulations states that the EIR shall:

> Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also, discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

Direct growth inducement would result from construction of new housing, which would facilitate new population to an area. Indirect growth inducement results, for instance, if implementing a project resulted in:

- substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises);
- substantial short-term employment opportunities (e.g., construction employment) that indirectly stimulates the need for additional housing and services to support the new temporary employment demand; and/or
- removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service (e.g., construction of a major sewer line with excess capacity through an undeveloped area).

The following discusses ways in which the Southern SOI Amendment could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. Growth can be induced in a number of ways, such as through the elimination of obstacles to growth, through the stimulation of economic activity within the region, or through the establishment of policies or other precedents that directly or indirectly encourage additional growth. Although growth inducement itself is not considered an environmental effect, it could potentially lead to environmental effects. If substantial growth inducement occurs, it can result in secondary

environmental effects, such as increased demand for housing, demand for other community and public services and infrastructure capacity, increased traffic and noise, degradation of air or water quality, degradation or loss of plant or animal habitats, conversion of agricultural and open-space land to urban uses, and other effects. In general, a project may foster spatial, economic, or population growth in a geographic area if the project removes an impediment to growth (e.g., the establishment of an essential public service, the provision of new access to an area, a change in zoning or general plan land use designation) or if economic expansion or growth occurs in an area in response to the project (e.g., changes in revenue base and employment expansion).

5.3.1 Growth Inducement Potential

The timing, magnitude, and location of land development and population growth in a community or region are based on various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and nonresidential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions.

The General Plan explicitly recognizes that growth and development are inevitable. It further emphasizes that the General Plan is structured to achieve development to foster economic growth. Though it also notes the need to balance this economic development with protection of the environment and character of Grass Valley, it nevertheless places a strong emphasis on accommodating and expecting growth in the City's Sphere of Influence. Most of the project area is within the City's SOI. The SOI represents the area the City anticipates annexing to meet the long-term economic, environmental, and social needs of the community. Land use designations for the project area established in the General Plan would create an urban development land use pattern. Therefore, this project would continue the planned urban development for the area.

The 2014 SOI EIR determined that future development in the project area would not be expected to indirectly induce growth in areas not currently planned for growth, based on consistency with the development potential of the land use designations established for the project area in the Nevada County and City of Grass Valley's General Plans. Further, the 2014 SOI EIR concluded that the extension and sizing of the infrastructure will be based on the needs to serve the development within the SOI, so it will not be sized to induce future growth.

As described in Chapter 2, "Project Description," the project proposes a mix of residential, commercial, industrial, business park, and open space land use designations. To determine the possible environmental effects from development within the project area, the City applied the maximum possible development potential of the parcels as described in the Grass Valley Development Code and the General Plan land use designations. For nonresidential parcels, the City made assumptions for floor area ratios based on the intensity of similar development in Grass Valley and the surrounding areas and the presence of site constraints such as steep slopes. The analyses throughout Chapter 3, "Environmental Impacts and Mitigation Measures," evaluates development of all parcels within the project area to their maximum development potential and does not take into account parcels that are already partially developed. It is assumed that the proposed Southern SOI Amendment would decrease the total development potential by up to 18 residential dwelling units and increase the total development potential of nonresidential uses by approximately 367,000 square feet.

The amendments would decrease the area within the southern SOI identified for future commercial business and light industrial development. The amendments would also decrease the area designated for lower density housing and increase the amount of high-density housing, with a net decrease in the potential residential units. There would be an increase in the area designated for heavy industrial uses (M-2). While this land use designation could accommodate development of manufacturing and assembly-type employment opportunities, uses of the lands in this designation currently use large areas for equipment staging and dry material storage. Expansion of these land uses would not likely result in substantial new employment opportunities.

Therefore, the Amended Southern SOI would result in direct population growth through designation of residential land and could increase indirect population growth through the increased potential for development of industrial

land uses. These types of land uses are generally consistent with the City's established land use designations for the project area. The potential for growth inducement would not be greater than disclosed in the 2014 SOI EIR.

5.3.2 Population, Housing, and Growth-Inducing Impacts of the Project

With the proposed Southern SOI Amendment, the City is seeking to amend the Adopted Southern SOI Project to include: 1) an amendment to the General Plan land use designations on 237 of the 400 acres; 2) a prezone of 237 of the 400 acres; 3) an amendment to add approximately 31 acres to the City's SOI; and 4) the annexation of approximately 400 acres. This plan would adjust the land use mix from the existing designations but would not directly support or stimulate growth in an area that is not already planned for growth in the City of Grass Valley. The adjustment in land use designations would revise the development potential analyzed in the 2014 SOI EIR such that the area would contain 18 fewer residential dwelling units and an additional 366,928 square-feet of nonresidential development.

The Adopted Southern SOI Project was identified to remove barriers to growth, as it would involve an increase in capacity of infrastructure and would require extension of City services to the annexation area. Annexation of lands within the project area would result in changes to some of the utility providers, which could potentially result in the need for new or expanded infrastructure to serve the project area. The environmental impacts associated with these direct growth-inducing effects are described throughout 2014 SOI EIR. Potential impacts related to the changes in City service providers were evaluated in Section 3.11, "Public Services," of the 2014 SOI EIR.

Approval of the Southern SOI Amendment and future annexation would foster short-term and long-term economic growth as a result of new construction and employment. Construction activities would generate the need for construction workers during this time period and are anticipated to utilize people who are employed in the construction industry in the region. It would be reasonable to expect that construction workers for the project would not relocate to the City for a temporary job. The commercial and industrially designated land uses are expected to employ, at least in part, existing city residents that currently travel outside of the city for work. As described previously, although the project identifies approximately 10 acres for the development of 60 duplex lots and approximately 68 multifamily units, the project would develop 18 fewer residential dwelling units than previously analyzed in the 2014 SOI EIR. Although the project would increase the amount of nonresidential development within the City, the anticipated levels are in accordance with those anticipated in the General Plan. As a result, the project would not foster growth beyond that called for in the General Plan.

The 4 percent reduction in the residential development potential of the project area (516 units instead of 534) would not constitute a substantial reduction in housing. Moreover, as shown in Table 2-1 in Chapter 2, "Project Description," there are nine parcels within the amended SOI that currently include a residence. Of these parcels, six are currently designated as manufacturing industrial and would remain under this zoning designation with the proposed Southern SOI Amendment. Three parcels that have homes on them are currently zoned for commercial use and would be re-zoned for residential development. Therefore, the zoning would be more consistent with existing uses than the current zoning designations. The to the Southern SOI Amendment would not displace substantial numbers of existing people or housing, necessitating the construction or replacement elsewhere.

In conclusion, and consistent with the growth-inducing findings from the General Plan EIR, the proposed Southern SOI Amendment proactively implements the General Plan by amending it to address the community's employment and economic needs, as noted in the project objectives. The project would create opportunities for the private sector to create jobs for local residents and to foster economic development by providing for a range of commercial, business park, and industrial businesses needed both now and into the future. This project is expected to remove obstacles to growth in the project area by expanding the necessary infrastructure into the project area; however, no growth-related impacts beyond those noted in Sections 3.1 through 3.10 of this SEIR are anticipated.

5.4 SIGNIFICANT AND UNAVOIDABLE ADVERSE IMPACTS

The State CEQA Guidelines Section 15126.2(b) requires EIRs to include a discussion of the significant environmental effects that cannot be avoided if the proposed project is implemented. As documented throughout Chapter 3, "Environmental Impacts and Mitigation Measures," and Section 5.2, "Cumulative Impact Analysis," of this Draft SEIR, after implementation of the recommended mitigation measures, most of the impacts associated with the proposed Southern SOI Amendment would be reduced to a less-than-significant level. The following impacts are considered significant and unavoidable; that is, no feasible mitigation is available to reduce the project's impacts to a less-than-significant level.

- Impact 3.1-1: Violate Air Quality Standard or Contribute Substantially to an Air Quality Violation: Short-Term Construction Emissions
- Impact 3.1-2: Violate Air Quality Standard or Contribute Substantially to an Air Quality Violation: Long-Term Operational Emissions
- Impact 3.3-1: Generate Greenhouse Gas Emissions That May Have a Significant Impact on the Environment
- Impact 3.9-1: Conflict or be Inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)
- Cumulative Impact 5-11: Cumulative Vehicle Miles Traveled Impacts

5.5 SIGNIFICANT AND IRREVERSIBLE ENVIRONMENTAL CHANGES

The State CEQA Guidelines require a discussion of any significant irreversible environmental changes that would be caused by the project. Specifically, Section 15126.2(c) of the State CEQA Guidelines states:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generation to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Generally, a project would result in significant irreversible environmental changes if:

- the primary and secondary impacts would generally commit future generations to similar uses;
- the project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project;
- the project would involve a large commitment of nonrenewable resources; or
- the proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

The project would result in the irreversible and irretrievable commitment of energy and material resources during construction and operation, including the following:

- construction materials, including such resources as soil, rocks, wood, concrete, glass, roof shingles, and steel;
- land area committed to new project facilities;
- water supply for project operation; and
- energy expended in the form of electricity, gasoline, diesel fuel, and oil for equipment and transportation vehicles that would be needed for project construction and operation.

The General Plan EIR articulates that non-renewable resources that may be affected by growth and development include wildlife habitat and mineral resources. However, assuming that growth and development occurs in accordance with the goals, objectives, policies, and implementation strategies of the General Plan, the General Plan EIR indicates that significant irreversible environmental changes will be minimized to an acceptable level.

The 2014 SOI EIR discloses that buildout of the Adopted Southern SOI Project would commit land to future development and would also irretrievably commit building materials and energy to the construction and maintenance of buildings and infrastructure. Nonrenewable and limited resources that would likely be consumed as part of project area development would include, but are not limited to, oil, gasoline, lumber, sand and gravel, asphalt, water, steel, and similar materials.

Implementation of the proposed Southern SOI Amendment would also result in the conversion of undeveloped land to commercial, industrial, business park, and residential uses. Once land is annexed, it is expected that some of the developed properties would redevelop or expand as infrastructure facilities become available. Future development in the project area would constitute a long-term commitment to urban land uses.

Effects on nonrenewable resources, including wildlife habitat and mineral resources are evaluated in this Draft SEIR (see Section 3.2, "Biological Resources," and Section 5.6, Effects Not Found to be Significant"). Development of the project would also irretrievably commit building materials and energy to the construction and maintenance of buildings and infrastructure, as identified for the Adopted Southern SOI Project. The use of these nonrenewable resources is expected to account for a minimal portion of the region's resources and would not affect the availability of these resources for other needs within the region. Construction activities would not result in inefficient use of energy or natural resources (see Section 3.8, "Public Utilities and Energy," for a further discussion of the project's energy use).

With respect to operational activities, compliance with all applicable building codes, as well as project mitigation measures or project requirements, would ensure that natural resources are conserved or recycled to the maximum extent feasible. It is also possible that new technologies or systems would emerge, or would become more cost-effective or user-friendly, that would further reduce the site's reliance upon nonrenewable natural resources. Even with implementation of conservation measures, consumption of natural resources would generally increase with implementation of the project, as the project area is currently developed with less intense residential and commercial/industrial development with lesser demand for utilities. Buildout of the Southern SOI Amendment would not, however, result in substantial long-term consumption of energy and natural resources beyond what was evaluated in the 2014 SOI EIR.

5.6 EFFECTS NOT FOUND TO BE SIGNIFICANT

This section includes a discussion of the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in this SEIR (pursuant to State CEQA Guidelines Section 15128). The 2014 SOI EIR determined that the Adopted Southern SOI Project would result in less-than-significant impacts (no mitigation required) in the following resource and issue areas: aesthetic resources; geology, soils, and mineral resources; land use, agriculture and forestry resources; and public services and recreation. As discussed below, the Southern SOI Amendment would not change these conclusions and no further detailed analysis is warranted.

5.6.1 Aesthetic Resources

The 2014 SOI EIR evaluated the potential of future development within the project area to impact scenic vistas, have a negative effect on important scenic corridors or highways, degrade the existing visual character of the site, or introduction of new daytime glare and nighttime lighting. However, the 2014 SOI EIR concluded that all future development, after lands are annexed, would be subject to all City design standards, guidelines, and review requirements. These design and development standards reflect and implement the City's visual and aesthetic goals and mitigate the impacts to visual resources. The goals, objectives, and policies of the General Plan, along with the

City's Development Code and Community Design Guidelines, would ensure the project would have a less than significant impact on aesthetic resources. Similarly, the Southern SOI Amendment would be subject to all City design standards, guidelines, and review requirements. This would ensure that impacts to scenic vistas, important scenic corridors or highways, existing visual character of the site, new daytime glare, and nighttime lighting would continue to be less than significant.

5.6.2 Geology, Soils, and Mineral Resources

The 2014 SOI EIR evaluated the potential for future development within the project area to result in geology, soils, and mineral resource impacts. The 2014 SOI EIR concluded that the exposure of structures and people to seismic-related hazards was a less than significant impact, based on the low seismic potential of the area, the dense bedrock below the surface, and compliance with existing City regulations. The 2014 SOI EIR also concluded that implementation of the Adopted Southern SOI Project would not contribute to groundwater extraction that could result in subsidence elsewhere because excessive groundwater pumping is not present in the project area and the Nevada Irrigation District does not utilize groundwater.

Compliance with Municipal Code Chapter 17.54, Municipal Code Section 17.62.040, applicable building codes, and commonly accepted engineering practices would ensure that future development is engineered and constructed to prevent slope failure. Compliance with Municipal Code Section 17.60.040 will require future development projects on the project site to prepare and submit to the City site-specific soil/geotechnical reports as part of the grading permit application process. Such reports would identify the expansive potential of site soils and provide site design and construction recommendations to mitigate for associated hazard, if necessary. Therefore, the potential to result in structures and/or infrastructure being located on unstable geologic units or soils, or on soils that could become unstable as a result of the project, creating substantial risk to life or property would be less than significant. The 2014 SOI EIR also evaluated the possibility for the project to result in structures and/or infrastructure being located on soils that are unstable due to past mining activity and concluded that compliance with the requirements of Section 17.60.040 and General Plan Policy 4-SP would ensure that mining shafts and other mining features that could undermine the stability of the project area are identified and appropriate measures implemented to mitigate associated hazards prior to development. The potential for the 2014 SOI to result in soil erosion or the loss of topsoil was determined to be less than significant because compliance with the existing state and local regulations (including Municipal Code Chapter 17.62, National Pollutant Discharge Elimination System General Construction Permit and submitting a stormwater pollution prevention plan to the State Water Resources Control Board), would minimize soil erosion in the project area as a result of potential future development.

Finally, the potential for the project to preclude access to significant mineral resources and/or result in the establishment of land uses that may be incompatible with future mining activities was evaluated. The 2014 SOI EIR concluded that because General Plan Mineral Management Element Action 15 and Chapter 17.42 of the City's Development Code allow subsurface mining in all land use designations throughout the City, subject to obtaining a use permit from the Planning Commission and because the Mineral Management Element allows surface access to subsurface mining in compatible General Plan designations, the inclusion of additional land in the City's Sphere of Influence and annexation of land to the City limits would not directly result in the loss of access to any mineral resources. This impact was determined to be less than significant.

Similarly, the Southern SOI Amendment would be subject to all existing state and local regulations. This would ensure that impacts to geology, soils, and mineral resources would continue to be less than significant.

5.6.3 Land Use, Agriculture, and Forestry Resources

The 2014 SOI EIR concluded that the project would not divide an established community because the project proposes to change land use designations and does not include any provisions which would result in a physical division of the area from Grass Valley. Therefore, future development associated with this project would not physically divide an established community, and no impact would occur. The 2014 SOI EIR also concluded that because the

project proposed amendments to the General Plan land use designations and prezone the project area with designations consistent with the General Plan land use designations, it would not result in a conflict with any applicable land use plan, and the impacts were determined to be less than significant. Additionally, there are no adopted habitat conservation plans or natural community conservation plans in Nevada County and there would be no impact related to conflict with such plans.

As related to agricultural resources, the 2014 SOI EIR concluded that because the project area is zoned for urban and rural residential use, and neither the project site nor any of the surrounding parcels are subject to land under a Williamson Act contract, there would be no conflict with any existing zoning or an existing Williamson Act contract, and no impact would occur. Similarly, the project would not involve any other changes in land use that would impact existing farmland on site or in the area. Since the project would not impact any existing farmland, 2014 SOI EIR concluded that there would be no impact to existing farmland.

The 2014 SOI EIR concluded that because the project would not result in the rezoning of any lands zoned for forestland or timberland use, and the land is not zoned for timberland production, no impact would occur. Although portions of the project area meet the definition of forestland, General Plan policies, Development Code standards, and Community Design Guidelines include provisions for the protection and incorporation of existing native tress into a project's site plan. Therefore, the 2014 SOI EIR concluded that this impact would be less than significant.

Similarly, the Southern SOI Amendment would not include any provisions which would result in a physical division of a community, would not conflict with a HCP or NCCP, does not include existing Williamson Act contract lands or involve any other changes in land use that would impact existing farmland, is not on lands currently zoned for forestland or timberland use, and would be required to comply with the City's General Plan policies, Development Code standards, and Community Design Guidelines for the protection and incorporation of existing native tress into a project's site plan. Therefore, impacts related to land use, agriculture, and forestry resources would continue to be less than significant.

5.6.4 Public Services and Recreation

The 2014 SOI EIR evaluated impacts related to fire protection services, police services, school facilities, and recreational facilities. The EIR stated that the existing fire stations have available capacity to accommodate new staff and equipment that would be generated by future development within the project area; should a police substation be needed in the area to be annexed, it will be housed in an existing commercial or office complex. The construction of additional park and recreational facilities, which might have an adverse physical effect on the environment, was addressed and disclosed in the EIR on a programmatic level. Finally, the 2014 SOI EIR concluded that development impact fees, which are required to be paid by developers as growth occurs, in combination sales tax and property, would pay for facility upgrades, resulting in a less than significant impact.

Similarly, the Southern SOI Amendment would be subject to all development fees, building codes, and city ordinances. Additionally, because the proposed Southern SOI Amendment would decrease the total development potential by up to 18 residential dwelling units, this would result in fewer residents requiring public services. Impacts to public services and recreation would continue to be less than significant.

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7 REPORT PREPARERS

City of Grass Valley (Lead Agency)

Thomas Last.....Community Development Director

Ascent Environmental, Inc. (CEQA Compliance)

Pat Angell ..... Principal/Project Director
Jessica Babcock.....Project Manager
Kirsten Burrowes .....Environmental Planner
Alta Cunningham..... Architectural Historian/Environmental Planner
Masury Lynch .....Environmental Planner
Julia Wilson .....Air Quality and Climate Change Specialist
Dimitri Antoniou.....Air Quality, Climate Change, and Noise Specialist
Zachary Miller.....Transportation and Environmental Planner
Allison Fuller .....Wildlife Biologist

GHD (Traffic Technical Study)

Todd Tregenza.....Senior Transportation Project Manager
Kamesh Vedula.....Project Manager
Kenneth Isenhower III.....Transportation Engineer
Roseanna Southern.....Transportation Engineer

Natural Investigations Company (Archaeological Technical Study)

Cindy Arrington.....Project Manager
Tim Spillane..... Principal Investigator

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