



DRAFT

ENVIRONMENTAL IMPACT REPORT

FOR THE

JACKSON GENERAL PLAN UPDATE
(SCH: 2022110545)

JUNE 2023

Prepared for:

City of Jackson
Community Development Department
33 Broadway
Jackson, CA 95642
(209) 223-1646

Prepared by:

De Novo Planning Group
1020 Suncastr Lane, Suite 106
El Dorado Hills, CA 95762
(916) 812-7927

D e N o v o P l a n n i n g G r o u p

A Land Use Planning, Design, and Environmental Firm



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DRAFT EIR

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Appendix A – Notice of Preparation and NOP Comments

Appendix B–Continuous and Short-Term - Ambient Noise Measurement Results

Appendix C: Traffic Noise Calculation - Inputs and Results

Appendix D: Traffic Data and Maps

PURPOSE

The City of Jackson (City) as lead agency, determined that the Jackson General Plan project (General Plan, General Plan, or project) is a "project" within the definition of the California Environmental Quality Act (CEQA), and requires the preparation of an Environmental Impact Report (EIR). This Draft EIR has been prepared to evaluate the environmental impacts associated with implementation of the project. This EIR is designed to fully inform decision-makers in the City, other responsible and trustee agencies, and the general public of the potential environmental consequences of approval and implementation of the General Plan. A detailed description of the proposed project, including the components and characteristics of the project, project objectives, and how the EIR will be used, is provided in Chapter 2.0 (Project Description).

AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

This Draft EIR addresses environmental impacts associated with the project that are known to the City, raised during the Notice of Preparation (NOP) scoping process, or were raised during preparation of the Draft EIR. This Draft EIR addresses the potentially significant impacts associated with aesthetics, agriculture and forest resources, air quality, biological resources, cultural and tribal cultural resources, geology, greenhouse gas emissions and energy, hazards and hazardous materials, hydrology and water quality, land use planning and population/housing, mineral resources, noise, public services and recreation, transportation, utilities and service systems, wildfire, and cumulative impacts.

During the NOP process, 7 comment letters were received from interested agencies and organizations. The comments are summarized in Chapter 1.0 (Introduction), and are also provided in Appendix A.

ALTERNATIVES TO THE PROPOSED PROJECT

The CEQA Guidelines require an EIR to describe a reasonable range of alternatives to the project or to the location of the project which would reduce or avoid significant impacts, and which could feasibly accomplish the basic objectives of the proposed project. The alternatives analyzed in this EIR include the following:

ALTERNATIVE 1: NO PROJECT ALTERNATIVE.

Under the No Project Alternative, the City would not adopt the General Plan Update. The existing Jackson General Plan would continue to be implemented and no changes to the General Plan, including the Land Use Map, goals, policies, or actions would occur. Subsequent projects, such as amending the Municipal Code (including the zoning code/map) and master plans, would not occur. The existing General Plan Land Use Map is shown on Figure 5.0-1.

ALTERNATIVE 2: LAND USE BUFFER ALTERNATIVE.

The Land Use Buffer Alternative would be identical to the proposed project in terms of land uses within the City limits and the SOI. The only differences would be that the Land Use Buffer

Alternative would incorporate a 200 foot-wide agricultural and open space buffer along the inner perimeter of the southern and western portion of the SOI and the southwest portion of the City. This portion of the City and SOI currently abuts County agricultural lands that are used for grazing. In the future, should these lands be converted to more active agricultural uses such as vineyards or other crops, there could be additional conflicts between these uses and Residential Suburban uses proposed in the SOI. The buffer in this area would also provide aesthetic benefits, as the open space and agricultural appearance of lands in the southern area would be retained. The northern and eastern portions of the SOI would not have a buffer as these areas are adjacent to County lands that are developed with large lot residential development. As a result, the potential for conflicts with agricultural uses is less of an issue in the northern area of the City and SOI. This alternative would also include a buffer prohibiting development within the portion of the SOI encompassed by Safety Area 3 (Overflight Zone) for Westover Field. This buffer could reduce land use and noise impacts associated with Westover Airport and would also reduce visual impacts associated with development in the northern area of the SOI. It is anticipated that development in the northern area of the SOI would be reduced; however, overall development in the City and SOI would not be significantly reduced under this alternative, but rather be clustered in areas that remain available for development.

ALTERNATIVE 3: REDUCED INTENSITY ALTERNATIVE.

The Reduced Intensity Alternative would consist of a reduction in the amount of development proposed in the City and SOI. In terms of residential uses, only the amount of single-family uses/intensities would be reduced while the amount of multi-family would remain unchanged in both the City and SOI. The majority of the reduction in single-family uses would be occurring within the SOI. Shopping Center Commercial, General Commercial and Office FAR would all be reduced as part of the Reduced Intensity Alternative. The majority of reductions would occur within the City limits rather than the SOI for the commercial uses. All reductions in Office would occur only within the City limits. For the purposes of this analysis it is assume that these reductions would result in 341 fewer residential units, and a reduction in non-residential development by 150,000 square feet.

A comparative analysis of the proposed General Plan and each of the Project alternatives is provided in Table ES-1 below. The table includes a numerical scoring system, which assigns a score of 1 to 5 to each of the alternatives with respect to how each alternative compares to the proposed project in terms of the severity of the environmental topics addressed in this EIR. A score of “3” indicates that the alternative would have the same level of impact when compared to the proposed project. A score of “1” indicates that the alternative would have a better (or reduced) impact when compared to the proposed project. A Score of “2” indicates that the alternative would have a slightly better (or slightly reduced) impact when compared to the proposed project. A score of “4” indicates that the alternative would have a slightly worse (or slightly increased) impact when compared to the proposed project. A score of “5” indicates that the alternative would have a worse (or increased) impact when compared to the proposed project. The project alternative with the lowest total score is considered the environmentally superior alternative.

TABLE ES-1: COMPARISON OF ALTERNATIVES TO THE PROPOSED PROJECT

ENVIRONMENTAL ISSUE	PROPOSED PROJECT	ALTERNATIVE 1 (NO PROJECT)	ALTERNATIVE 2	ALTERNATIVE 3
Aesthetics	3 – Same	4 – Slightly Worse	2 – Slightly Better	2 – Slightly Better
Agricultural Resources	3 – Same	4 – Slightly Worse	2 – Slightly Better	2 – Slightly Better
Air Quality	3 – Same	4 – Slightly Worse	3 – Same	1 – Better
Biological Resources	3 – Same	4 – Slightly Worse	2 – Slightly Better	2 – Slightly Better
Cultural Resources	3 – Same	4 – Slightly Worse	2 – Slightly Better	2 – Slightly Better
Geology and Soils	3 – Same	4 – Slightly Worse	2 – Slightly Better	2 – Slightly Better
Greenhouse Gases, Climate Change, and Energy	3 – Same	4 – Slightly Worse	3 – Same	2 – Slightly Better
Hazards and Hazardous Materials	3 – Same	4 – Slightly Worse	3 – Same	2 – Slightly Better
Hydrology and Water Quality	3 – Same	4 – Slightly Worse	2 – Slightly Better	2 – Slightly Better
Land Use and Population	3 – Same	3 – Same	3 – Same	2 – Slightly Better
Mineral Resources	3 – Same	3 – Same	3 – Same	3 – Same
Noise	3 – Same	4 – Slightly Worse	2 – Slightly Better	2 – Slightly Better
Public Services and Recreation	3 – Same	4 – Slightly Worse	3 – Same	2 – Slightly Better
Transportation and Circulation	3 – Same	4 – Slightly Worse	3 – Same	2 – Slightly Better
Utilities	3 – Same	3 – Same	3 – Same	2 – Slightly Better
Wildfire	3 – Same	3 – Same	3 – Same	3 – Same
Irreversible Effects	3 – Same	4 – Slightly Worse	3 – Same	3 – Same
SUMMARY	51	65	44	36

Overall, based upon the evaluation described in this section, the Reduced Intensity Alternative (Alternative 3) is considered the environmentally superior alternative. Alternative 3 has no environmental impacts that are worse than those under the proposed project and has better impacts in every issue area. By contrast, Alternative 2 has environmental impacts generally comparable to those of the proposed project, but better in only limited issue areas. Therefore, Alternative 3 is considered the environmentally superior alternative as it would result in less intensive impacts than the proposed project.

SUMMARY OF IMPACTS AND MITIGATION MEASURES

In accordance with the CEQA Guidelines, this EIR focuses on the project's significant effects on the environment. The CEQA Guidelines defines a significant effect as a substantial adverse change in the physical conditions which exist in the area affected by the proposed project. A less than significant effect is one in which there is no long or short-term significant adverse change in environmental conditions. Some impacts are reduced to a less than significant level with the implementation of mitigation measures and/or compliance with regulations. "Beneficial" effect is not defined in the CEQA Guidelines, but for purposes of this EIR a beneficial effect is one in which an environmental condition is enhanced or improved.

The environmental impacts of the proposed project, the impact level of significance prior to any mitigation, the proposed mitigation measures to mitigate an impact, and the impact level of significance after mitigation are summarized in Table ES-2.

TABLE ES-2: PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
AESTHETICS AND VISUAL RESOURCES			
Impact 3.1-1: General Plan implementation would not have a substantial adverse effect on a scenic vista	LS	<i>None Required.</i>	LS
Impact 3.1-2: General Plan implementation would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, within a State scenic highway	LS	<i>None Required</i>	LS
Impact 3.1-3: General Plan implementation would not, in a non-urbanized area, substantially degrade the existing visual character or quality of public views of the site and its surroundings, or in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality	LS	<i>None Required</i>	LS
Impact 3.1-4: General Plan implementation could result in the creation of new sources of nighttime lighting and daytime glare	LS	<i>None Required</i>	LS
AGRICULTURAL AND FOREST RESOURCES			
Impact 3.2-1: General Plan Implementation would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use	LS	<i>None Required</i>	LS
Impact 3.2-2: General Plan Implementation would not conflict with existing zoning for agricultural use, or a Williamson Act Contract	LS	<i>None Required</i>	LS
Impact 3.2-3: General Plan implementation	NI	<i>None Required</i>	NI

CC – cumulatively considerable

LCC – less than cumulatively considerable

LS – less than significant

PS – potentially significant

SU – significant and unavoidable

NI – No Impact

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
would not result in the loss of forest land or conversion of forest land to non-forest use			
Impact 3.2-4: General Plan implementation would involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use	PS	<i>Minimized to the greatest extent feasible through General Plan Policies and Actions. No feasible mitigation is available.</i>	SU
AIR QUALITY			
Impact 3.3-1: General Plan implementation would conflict with or obstruct implementation of the applicable air quality plan, or result in a cumulatively considerable net increase of criteria pollutants	PS	<i>Minimized to the greatest extent feasible through General Plan Policies and Actions. No feasible mitigation is available.</i>	SU
Impact 3.3-2: General Plan implementation would expose sensitive receptors to substantial pollutant concentrations	LS	<i>None Required</i>	LS
Impact 3.3-3: General Plan implementation would not result in other emissions (such as those leading to odors adversely affecting a substantial number of people)	LS	<i>None Required</i>	LS
BIOLOGICAL RESOURCES			
Impact 3.4-1: General Plan implementation could have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service	LS	<i>None Required</i>	LS
Impact 3.4-2: General Plan implementation could have a substantial adverse effect on any riparian habitat or other sensitive natural	LS	<i>None Required</i>	LS

CC – cumulatively considerable

PS – potentially significant

LCC – less than cumulatively considerable

SU – significant and unavoidable

LS – less than significant

NI – No Impact

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service			
Impact 3.4-3: General Plan implementation could 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	LS	None Required	LS
Impact 3.4-4: General Plan implementation would not 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	LS	None Required	LS
Impact 3.4-5: The General Plan would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	LS	None Required	LS
Impact 3.4-6: General Plan implementation would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan	LS	None Required	LS
CULTURAL AND TRIBAL RESOURCES			
Impact 3.5-1: General Plan implementation could cause a substantial adverse change in the significance of a historical or archaeological resource pursuant to Section 15064.5	LS	None Required	LS
Impact 3.5-2: Implementation of the General Plan could lead to the disturbance of any human	LS	None Required	LS

CC – cumulatively considerable

LCC – less than cumulatively considerable

LS – less than significant

PS – potentially significant

SU – significant and unavoidable

NI – No Impact

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
remains			
Impact 3.5-3: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074, and that is: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or a resource determined by the lead agency	LS	None Required	LS
GEOLOGY AND SOILS			
Impact 3.6-1: General Plan implementation has the potential to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides	LS	None Required	LS
Impact 3.6-2: General Plan implementation has the potential to result in substantial soil erosion or the loss of topsoil	LS	None Required	LS
Impact 3.6-3: General Plan implementation has the potential to result in development located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse	LS	None Required	LS
Impact 3.6-4: General Plan implementation has the potential to result in development on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or	LS	None Required	LS

CC – cumulatively considerable

LCC – less than cumulatively considerable

LS – less than significant

PS – potentially significant

SU – significant and unavoidable

NI – No Impact

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
property			
Impact 3.6-5: General Plan implementation does not have the potential to have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water	LS	None Required	LS
Impact 3.6-6: General Plan implementation has the potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	LS	None Required	LS
GREENHOUSE GASES, CLIMATE CHANGE AND ENERGY			
Impact 3.7-1: General Plan implementation has the potential to generate GHG emissions that could have a significant impact on the environment and/or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases	PS	<i>Minimized to the greatest extent feasible through General Plan Policies and Actions. No feasible mitigation is available.</i>	SU
Impact 3.7-2: General Plan implementation has the potential to result in a significant impact due to wasteful, inefficient, or unnecessary consumption of energy resources, or conflict with or obstruct a state or local plan for renewable energy or energy efficiency	LS	None Required	LS
HAZARDS AND HAZARDOUS MATERIALS			
Impact 3.8-1: General Plan implementation has the potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the	LS	None Required	LS

CC – cumulatively considerable

LCC – less than cumulatively considerable

LS – less than significant

PS – potentially significant

SU – significant and unavoidable

NI – No Impact

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
release of hazardous materials into the environment			
Impact 3.8-2: General Plan implementation has the potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school	LS	None Required	LS
Impact 3.8-3: General Plan implementation has the potential to have projects located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5	LS	None Required	LS
Impact 3.8-4: General Plan implementation is not located within an airport land use plan, two miles of a public airport or public use airport, and would not result in a safety hazard for people residing or working in the project area	LS	None Required	LS
Impact 3.8-5: General Plan implementation has the potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	LS	None Required	LS
Impact 3.8-6: General Plan implementation has the potential to expose people or structures to a significant risk of loss, injury or death involving wildland fires	LS	None Required	LS
HYDROLOGY AND WATER QUALITY			
Impact 3.9-1: General Plan implementation could violate water quality standards or waste discharge requirements or otherwise substantially degrade water quality or obstruct implementation of a water quality control plan	LS	None Required	LS
Impact 3.9-2: General Plan implementation could result in the depletion of groundwater	LS	None Required	LS

CC – cumulatively considerable

LCC – less than cumulatively considerable

LS – less than significant

PS – potentially significant

SU – significant and unavoidable

NI – No Impact

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
supplies or interfere substantially with groundwater recharge or conflict with a groundwater management plan			
Impact 3.9-3: General Plan implementation could alter the existing drainage pattern in a manner which would result in substantial erosion, siltation, flooding, impeded flows, or polluted runoff	LS	None Required	LS
Impact 3.9-4: General Plan implementation would not release pollutants due to project inundation by flood hazard, tsunami, or seiche	LS	None Required	LS
LAND USE, POPULATION AND HOUSING			
Impact 3.10-1: General Plan implementation would not physically divide an established community	LS	None Required	LS
Impact 3.10-2: General Plan implementation would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect	LS	None Required	LS
Impact 3.10-3: General Plan implementation would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)	LS	None Required	LS
Impact 3.10-4: General Plan implementation would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere	LS	None Required	LS
MINERAL RESOURCES			
Impact 3.11-1: General Plan implementation	LS	None Required	LS

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ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state			
Impact 3.11-2: General Plan implementation would not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan	LS	None Required	LS
NOISE			
Impact 3.12-1: General Plan implementation may result in exposure to significant traffic noise sources	LS	None Required	LS
Impact 3.12-2: Implementation of the General Plan could result in the generation of excessive stationary noise sources	LS	None Required	LS
Impact 3.12-3: General Plan implementation may result in an increase in construction noise sources	LS	None Required	LS
Impact 3.12-4: General Plan implementation may result in construction vibration	LS	None Required	LS
Impact 3.12-5: General Plan implementation may result in exposure to excessive aircraft noise sources	LS	None Required	LS
PUBLIC SERVICES AND RECREATION			
Impact 3.13-1: General Plan implementation could result in adverse physical impacts on the environment associated with the need for new governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts	LS	None Required	LS
Impact 3.13-2: General Plan implementation	LS	None Required	LS

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<i>ENVIRONMENTAL IMPACT</i>	<i>LEVEL OF SIGNIFICANCE WITHOUT MITIGATION</i>	<i>MITIGATION MEASURE</i>	<i>RESULTING LEVEL OF SIGNIFICANCE</i>
may result in adverse physical impacts associated with the deterioration of existing parks and recreation facilities or the construction of new parks and recreation facilities			

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ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
TRANSPORTATION AND CIRCULATION			
Impact 3.14-1: General Plan implementation may conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)	PS	<i>Minimized to the greatest extent feasible through General Plan Policies and Actions. No feasible mitigation is available.</i>	SU
Impact 3.14-2: General Plan implementation may conflict with a program, plan, policy, or ordinance addressing the circulation system, including transit, bicycle, and pedestrian facilities	LS	<i>None Required</i>	LS
Impact 3.14-3: General Plan implementation may increase hazards due to a design feature or incompatible uses	LS	<i>None Required</i>	LS
Impact 3.14-4: General Plan implementation may cause inadequate emergency access	LS	<i>None Required</i>	LS
UTILITIES AND SERVICE SYSTEMS			
Impact 3.15-1: General Plan implementation would result in sufficient water supplies available to serve the City and reasonably foreseeable future development during normal, dry and multiple dry years	PS	<i>Minimized to the greatest extent feasible through General Plan Policies and Actions. No feasible mitigation is available.</i>	SU
Impact 3.15-2: General Plan implementation would not require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	PS	<i>Minimized to the greatest extent feasible through General Plan Policies and Actions. No feasible mitigation is available.</i>	SU
Impact 3.15-3: General Plan implementation would not have the potential to result in a determination by the wastewater treatment provider which serves or may serve the Project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments	PS	<i>Minimized to the greatest extent feasible through General Plan Policies and Actions. No feasible mitigation is available.</i>	SU

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ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
Impact 3.15-4: General Plan implementation may require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects	PS	<i>Minimized to the greatest extent feasible through General Plan Policies and Actions. No feasible mitigation is available.</i>	SU
Impact 3.15-5: General Plan implementation would not require or result in the relocation or construction of new or expanded storm water drainage facilities, the construction or relocation of which could cause significant environmental effects	LS	<i>None Required</i>	LS
Impact 3.15-6: General Plan implementation would comply with federal, state, and local management and reduction statutes and regulations related to solid waste, would not generate solid waste in excess of State or local standards or otherwise impair the attainment of solid waste reduction goals, and would not exceed of the capacity of local infrastructure	LS	<i>None Required</i>	LS
WILDFIRES			
Impact 3.16-1: General Plan implementation would not have a significant impact related to wildfire risks associated with lands in or near State Responsibility Areas or lands classified as very high fire hazard severity zones	LS	<i>None Required</i>	LS
OTHER CEQA-REQUIRED TOPICS			
Impact 4.1: Cumulative degradation of the existing visual character of the region	LS	<i>None Required</i>	LCC
Impact 4.2: Cumulative impact to agricultural lands and resources	PS	<i>Minimized to the greatest extent feasible through General Plan Policies and Actions. No additional feasible mitigation is available.</i>	CC and SU
Impact 4.3: Cumulative impact on the region's air quality	PS	<i>Minimized to the greatest extent feasible through General Plan Policies and Actions.</i>	CC and SU

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ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
		<i>No additional feasible mitigation is available.</i>	
Impact 4.4: Cumulative loss of biological resources, including habitats and special status species	LS	<i>None Required</i>	LCC
Impact 4.5: Cumulative impacts on known and undiscovered cultural resources	LS	<i>None Required</i>	LCC
Impact 4.6: Cumulative impacts related to geology and soils	LS	<i>None Required</i>	LCC
Impact 4.7: Cumulative impacts related to greenhouse gases, climate change, and energy	PS	<i>Minimized to the greatest extent feasible through General Plan Policies and Actions. No additional feasible mitigation is available.</i>	CC and SU
Impact 4.8: Cumulative impacts related to hazardous materials and human health risks	LS	<i>None Required</i>	LCC
Impact 4.9: Cumulative impacts related to hydrology and water quality	LS	<i>None Required</i>	LCC
Impact 4.10: Cumulative impacts related to local land use, population, and housing	LS	<i>None Required</i>	LCC
Impact 4.11: Cumulative impacts related to mineral resources	LS	<i>None Required</i>	LCC
Impact 4.12: Cumulative impacts related to noise	LS	<i>None Required</i>	LCC
Impact 4.13: Cumulative impacts to public services and recreation	LS	<i>None Required</i>	LCC
Impact 4.14: Cumulative impacts on the transportation network	PS	<i>Minimized to the greatest extent feasible through General Plan Policies and Actions. No additional feasible mitigation is available.</i>	CC and SU
Impact 4.15: Cumulative impacts related to utilities	PS	<i>Minimized to the greatest extent feasible through General Plan Policies and Actions. No additional feasible mitigation is available.</i>	CC and SU
Impact 4.16: Cumulative impact related to wildfire	LS	<i>None Required</i>	LCC
Impact 4.17: Irreversible and adverse effects	PS	<i>Minimized to the greatest extent feasible through General Plan Policies and Actions. No additional feasible mitigation is available.</i>	SU

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1.1 INTRODUCTION

In 2020, Jackson began a multi-year process to update the City's General Plan. State law requires every city and county in California to prepare and maintain a planning document called a general plan. A general plan is a "constitution" or "blueprint" for the future physical development of a county or city. As part of the Jackson General Plan Update process, a General Plan Existing Conditions Report was prepared to establish a baseline of existing conditions in the City. A visioning workshop was held at the onset of the project to identify the challenges facing the community, to provide an opportunity for citizens and policymakers to come together in a process of developing a common vision for the future, and to identify a range of options available to the City as the General Plan was modified and updated.

The updated Jackson General Plan includes a framework of goals, policies, and actions that will guide the community toward its common vision. The General Plan is supported with a variety of maps, including a Land Use Map and Circulation Diagram.

JACKSON GENERAL PLAN UPDATE

General Plan

The Jackson General Plan (General Plan, General Plan Update, or proposed project) is the overarching policy document that guides land use, housing, transportation, open space, public safety, community services, and other policy decisions throughout Jackson. The General Plan includes the elements and topics mandated by State law, to the extent that they are relevant locally, including: Circulation, Conservation, Land Use, Noise, Open Space, and Safety. The Housing Element will be updated separately as part of the Amador Countywide 6th Cycle Housing Element. The General Plan sets out the goals, policies, and actions in each of these areas, serves as a policy guide for how the City will make key planning decisions in the future, and guides how the City will interact with Amador County, surrounding cities, and other local, regional, State, and Federal agencies.

The General Plan contains the goals and policies that will guide future decisions within the City. It also identifies implementation programs, in the form of actions, that will ensure the goals and policies in the General Plan are carried out. As part of the Jackson General Plan Update, the City and the consultant team prepared several support documents that serve as the building blocks for the General Plan and analyze the environmental impacts associated with implementing the General Plan.

The following paragraphs summarize the key component documents that are the building blocks of the Jackson General Plan.

Existing Conditions Report

The Existing Conditions Report takes a “snapshot” of Jackson’s current trends and conditions. It provides a detailed description of a wide range of topics within the City, such as demographic and economic conditions, land use, public facilities, and environmental resources. The Existing Conditions Report provides decision-makers, the public, and local agencies with context for making policy decisions. The Existing Conditions Report also provides the environmental setting and description contained within this Draft Environmental Impact Report (EIR).

Environmental Impact Report

An EIR responds to the requirements of the California Environmental Quality Act (CEQA) as set forth in Sections 15126, 15175, and 15176 of the CEQA Guidelines. The Planning Commission and City Council will use the EIR during the General Plan Update process in order to understand the potential environmental implications associated with implementing the General Plan. This EIR was prepared concurrently with the General Plan policy document in order to facilitate the development of a General Plan that is largely self-mitigating. In other words, as environmental impacts associated with the new General Plan, were identified; policies and actions were incorporated into the General Plan policy document in order to reduce or avoid potential environmental impacts.

1.2 PURPOSE OF THE EIR

The City of Jackson, as lead agency, determined that the Jackson General Plan Update is a "project" within the meaning of CEQA. CEQA requires the preparation of an EIR prior to approving any project that may have a significant impact on the environment. For the purposes of CEQA, the term "project" refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]).

This Draft EIR has been prepared according to CEQA requirements to evaluate the potential environmental impacts associated with the implementation of the Jackson General Plan. A copy of the Public Draft General Plan is located on the Jackson General Plan Update website, at www.ci.jackson.ca.us. The Draft EIR also discusses alternatives to the General Plan, and proposes mitigation measures that will offset, minimize, or otherwise avoid potentially significant environmental impacts. This Draft EIR has been prepared in accordance with CEQA, California Resources Code Section 21000 et seq.; the Guidelines for the California Environmental Quality Act (California Code of Regulations, Title 14, Chapter 3); and the rules, regulations, and procedures for implementing CEQA as adopted by the City of Jackson.

An EIR must disclose the expected direct and indirect environmental impacts associated with a project, including impacts that cannot be avoided, growth-inducing effects, impacts found not to be significant, and significant cumulative impacts, as well as identify mitigation measures and alternatives to the proposed project that could reduce or avoid its adverse environmental impacts. CEQA requires government agencies to consider and, where feasible, minimize significant environmental impacts of proposed development.

1.3 TYPE OF EIR

The State CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a Program EIR pursuant to CEQA Guidelines Section 15168. Section 15168 states:

“A program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either:

- 1) Geographically;
- 2) As logical parts in the chain of contemplated actions;
- 3) In connection with issuance of rules, regulations, plans or other general criteria to govern the conduct of a continuing program; or
- 4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.”

The program-level analysis considers the broad environmental effects of the proposed project. This EIR will be used to evaluate subsequent projects and activities under the proposed project. This EIR is intended to provide the information and environmental analysis necessary to assist public agency decision-makers in considering approval of the proposed project, but not to the level of detail to consider approval of subsequent development projects that may occur after adoption of the General Plan.

Additional environmental review under CEQA may be required for subsequent projects and would be generally based on the subsequent project’s consistency with the General Plan and the analysis in this EIR, as required under CEQA. It may be determined that some future projects or infrastructure improvements may be exempt from environmental review. When individual subsequent projects or activities under the General Plan are proposed, the lead agency that would approve and/or implement the individual project will examine the projects or activities to determine whether their effects were adequately analyzed in this program EIR (CEQA Guidelines Section 15168). If the projects or activities would have no effects beyond those disclosed in this EIR, no further CEQA compliance would be required.

1.4 INTENDED USES OF THE EIR

The City of Jackson, as the lead agency, has prepared this EIR to provide the public and responsible and trustee agencies with an objective analysis of the potential environmental impacts resulting from adoption of the Jackson General Plan and subsequent implementation of projects consistent with the General Plan. The environmental review process enables interested parties to evaluate the proposed project in terms of its environmental consequences, to examine and recommend methods to eliminate or reduce potential adverse impacts, and to consider a reasonable range of alternatives to the project. While CEQA requires that consideration be given to avoiding adverse environmental effects, the lead agency must balance adverse environmental effects against other

1.0 INTRODUCTION

public objectives, including the economic and social benefits of a project, in determining whether a project should be approved.

This EIR will be used as the primary environmental document to evaluate all subsequent planning and permitting actions associated with the General Plan. Subsequent actions that may be associated with the General Plan are identified in Chapter 2.0, Project Description. This EIR may also be used by other agencies within San Joaquin County.

1.5 KNOWN RESPONSIBLE AND TRUSTEE AGENCIES

The term “Responsible Agency” includes all public agencies other than the Lead Agency that have discretionary approval power over the project or an aspect of the project (CEQA Guidelines Section 15381). For the purpose of CEQA, a “Trustee” agency has jurisdiction by law over natural resources that are held in trust for the people of the State of California (CEQA Guidelines Section 15386). While no Responsible Agencies or Trustee Agencies are responsible for approvals associated with adoption of the Jackson General Plan, implementation of future projects within Jackson may require permits and approvals from such agencies, which may include the following:

- California Department of Fish and Wildlife (CDFW);
- California Department of Transportation (Caltrans);
- Regional (Central Valley) Water Quality Control Board (RWQCB);
- U.S. Army Corps of Engineers (ACOE);
- U.S. Fish and Wildlife Service (USFWS);
- Amador County Local Agency Formation Commission (LAFCO);
- Amador County Air Pollution Control District (APCD); and
- Amador County Airport Land Use Commission (ALUC).

1.6 ENVIRONMENTAL REVIEW PROCESS

The review and certification process for the EIR has involved, or will involve, the following general procedural steps:

NOTICE OF PREPARATION

The City of Jackson circulated a Notice of Preparation (NOP) of an EIR for the proposed project on November 23, 2022 to trustee and responsible agencies, the State Clearinghouse, and the public. A scoping meeting was held on December 5, 2022 at the City of Jackson City Hall Council Chambers. No public or agency comments on the NOP related to the EIR analysis were presented or submitted during the scoping meeting. However, during the 30-day public review period for the NOP, which ended on December 27, 2022, seven written comment letters were received on the NOP. A summary of the NOP comments is provided later in this chapter. The NOP and all comments received on the NOP are presented in Appendix A.

DRAFT EIR

This document constitutes the Draft EIR. The Draft EIR contains a description of the project, description of the environmental setting, identification of the project's direct and indirect impacts on the environment and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. This Draft EIR identifies issues determined to have no impact or a less than significant impact, and provides detailed analysis of potentially significant and significant impacts. Comments received in response to the NOP were considered in preparing the analysis in this EIR. Upon completion of the Draft EIR, the City of Jackson will file the Notice of Completion (NOC) with the State Clearinghouse of the Governor's Office of Planning and Research to begin the public review period.

PUBLIC NOTICE/PUBLIC REVIEW

Concurrent with the NOC, the City of Jackson will provide a public notice of availability for the Draft EIR, and invite comment from the general public, agencies, organizations, and other interested parties. Consistent with CEQA requirements, the review period for this Draft EIR is forty-five (45) days. Public comment on the Draft EIR will be accepted in written form. All comments or questions regarding the Draft EIR should be addressed to:

Susan Peters, AICP
City of Jackson
33 Broadway Jackson, CA 95642
GeneralPlan@ci.jackson.ca.us

RESPONSE TO COMMENTS/FINAL EIR

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to both oral and written comments received during the public review period.

CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

The City of Jackson City Council will review and consider the Final EIR. If the City finds that the Final EIR is "adequate and complete," the City Council may certify the Final EIR in accordance with CEQA. As set forth by CEQA Guidelines Section 15151, the standards of adequacy require an EIR to provide a sufficient degree of analysis to allow decisions to be made regarding the proposed project that intelligently take account of environmental consequences.

Upon review and consideration of the Final EIR, the City Council may take action to approve, revise, or deny the project. If the EIR determines that the project would result in significant adverse impacts to the environment that cannot be mitigated to less than significant levels, the City Council would be required to adopt a statement of overriding considerations as well as written findings in accordance with State CEQA Guidelines Sections 15091 and 15093. If additional mitigation measures are required (beyond the General Plan policies and actions that reduce potentially significant impacts, as identified throughout this EIR), a Mitigation Monitoring and

Reporting Program (MMRP) would also be adopted in accordance with Public Resources Code Section 21081.6(a) and CEQA Guidelines Section 15097 for mitigation measures that have been incorporated into or imposed upon the project to reduce or avoid significant effects on the environment. The MMRP would be designed to ensure that these measures are carried out during project implementation, in a manner that is consistent with the EIR.

1.7 ORGANIZATION AND SCOPE

Sections 15122 through 15132 of the State CEQA Guidelines identify the content requirements for Draft and Final EIRs. An EIR must include a description of the environmental setting, an environmental impact analysis, and any mitigation measures for any significant impacts, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. The EIR prepared reviews environmental and planning documentation developed for the project, environmental and planning documentation prepared for recent projects located within the city of Jackson, and responses to the Notice of Preparation (NOP).

This Draft EIR is organized in the following manner:

EXECUTIVE SUMMARY

The Executive Summary summarizes the characteristics of the proposed project, known areas of controversy and issues to be resolved, and provides a concise summary matrix of the project's environmental impacts and possible mitigation measures. This chapter identifies alternatives that reduce or avoid at least one significant environmental effect of the proposed project.

CHAPTER 1.0 - INTRODUCTION

Chapter 1.0 briefly describes the proposed project, the purpose of the environmental evaluation, identifies the lead, trustee, and responsible agencies, summarizes the process associated with preparation and certification of an EIR, identifies the scope and organization of the Draft EIR, and summarizes comments received on the NOP.

CHAPTER 2.0 - PROJECT DESCRIPTION

Chapter 2.0 provides a detailed description of the proposed project, including the location, intended objectives, background information, the physical and technical characteristics, including the decisions subject to CEQA, subsequent projects and activities, and a list of related agency action requirements.

CHAPTER 3.0 - ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

Chapter 3.0 contains an analysis of environmental topic areas as identified below. Each subchapter addressing a topical area is organized as follows:

Environmental Setting. A description of the existing environment as it pertains to the topical area.

Regulatory Setting. A description of the regulatory environment that may be applicable to the project.

Impacts and Mitigation Measures. Identification of the thresholds of significance by which impacts are determined, a description of project-related impacts associated with the environmental topic, identification of appropriate mitigation measures, and a conclusion as to the significance of each impact.

The following environmental topics are addressed in this section:

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

CHAPTER 4.0 - OTHER CEQA-REQUIRED TOPICS

Chapter 4.0 evaluates and describes the following CEQA required topics: impacts considered less-than-significant, significant and irreversible impacts, growth-inducing effects, cumulative impacts, and significant and unavoidable environmental effects.

CHAPTER 5.0 - ALTERNATIVES

Chapter 5.0 provides a comparative analysis between the merits of the proposed project and the selected alternatives. State CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the project, which could feasibly attain the basic objectives of the project and avoid and/or lessen any significant environmental effects of the project.

CHAPTER 6.0 - REPORT PREPARERS

Chapter 6.0 lists all authors and agencies that assisted in the preparation of the Draft EIR, by name, title, and company or agency affiliation.

APPENDICES

This section includes all notices and other procedural documents pertinent to the Draft EIR, as well as technical material prepared to support the analysis.

1.8 COMMENTS RECEIVED ON THE NOTICE OF PREPARATION

The City received seven comment letters on the NOP. Copies of these letters are provided in Appendix A of this Draft EIR, and are listed below:

- Native American Heritage Commission (November 30, 2022)
- Koyo Land Conservancy dba Colfax Todds Valley Consolidated Tribe (December 8, 2022)
- Shingle Springs Band of Miwok Indians (December 13, 2022)
- California Governor's Office of Emergency Services (December 22, 2022)
- Department of Fish and Wildlife (December 22, 2022)
- Department of Toxic Substances Control (December 23, 2022)
- California Department of Transportation (December 27, 2022)

2.1 BACKGROUND AND OVERVIEW

STATE GENERAL PLAN LAW

California Government Code Section 65300 et seq. requires all counties and cities to prepare and maintain a general plan for the long-term growth, development, and management of the land within the jurisdiction's planning boundaries. The general plan acts as a "constitution" for development and is the jurisdiction's lead legal document in relation to growth, development, and resource management issues. Development regulations (e.g., zoning and subdivision standards) are required by law to be consistent with the general plan.

General plans must address a broad range of topics, including, at a minimum, the following mandatory elements: land use, circulation, housing, conservation, open space, noise, and safety. General plans must also address the topics of environmental justice and climate change and resiliency planning, either as separate elements or as part of other required elements. At the discretion of each jurisdiction, the general plan may combine these elements and may add optional elements relevant to the physical features of the jurisdiction.

The California Government Code also requires that a general plan be comprehensive, internally consistent, and plan for the long term. The general plan should be clearly written, easy to administer, and available to all those concerned with the community's development.

State planning and zoning law (California Government Code Section 65000 et seq.) establishes that zoning ordinances are required to be consistent with the general plan and any applicable specific plans, area plans, master plans, and other related planning documents. When amendments to the general plan are made, corresponding changes in the zoning ordinance may be required within a reasonable time to ensure consistency between the revised land use designations in the general plan (if any) and the permitted uses or development standards of the zoning ordinance (Gov. Code Section 65860, subd. [c]).

USING THE GENERAL PLAN

The General Plan is used by the City Council, Planning Commission, and City staff on a regular basis to make decisions with direct and indirect land use implications. It also provides a framework for inter-jurisdictional coordination of planning efforts among officials and staff of the City and other government agencies such as the County and State and Federal agencies.

The General Plan is the basis for a variety of regulatory mechanisms and administrative procedures. California planning law requires consistency between the General Plan and its implementation programs. Implementation programs and regulatory systems of the General Plan include zoning and subdivision ordinances, capital improvement programs, specific plans, environmental impact procedures, and building and housing codes.

Over time, the City's population will change, its goals will be redefined, and the physical environment in which its residents live and work will be altered. In order for the General Plan to

be a useful document, it must be monitored and periodically revised to respond to and reflect changing conditions and needs. As such, a general plan should be comprehensively updated approximately every 10-15 years to reflect current conditions and emerging trends.

The City's General Plan should also be user-friendly. To this end, the Jackson General Plan Update will be divided into two primary documents: the Existing Conditions Report and the General Plan Goals and Policy document (or "General Plan").

The Existing Conditions Report provides a summary of a range of conditions in Jackson and provides the baseline framework for the development of the General Plan's goals, policies, and implementation programs.

The General Plan Goals and Policies document is the essence of the General Plan. It contains the goals and policies that will guide future decisions within the City. It also identifies a full set of implementation programs that will ensure the goals and policies in the General Plan are carried out.

GENERAL PLAN UPDATE PROCESS

The City of Jackson's current General Plan has been periodically amended, including updates to the Housing Element in 2015, the Land Use and Circulation Element in 2008, updates to the Noise, and Open Space and Conservation Elements in 1987, and updates to the Safety Element in 1981.

The process to update the General Plan began in 2021 and is scheduled to be completed with the adoption of the updated General Plan by the City Council in Summer/Fall of 2023. The Jackson General Plan Update (General Plan Update or proposed General Plan) was developed with community input and reflects the community's vision for Jackson. A summary of the community outreach and public participation process is provided below.

Visioning Workshops

The City hosted two General Plan Update Visioning Workshops in March and June of 2021. The Workshops focused on a variety of topics, and included a brief overview of the General Plan, including why it's important and why the City is updating its Plan, some background information on the evening's topic, and a series of facilitated activities to solicit input on key topics or ideas.

The topics explored in each Workshop along with summaries of the input provided by the community are provided in the Outreach Summary Report, which is available for review on the City's website. For information on outreach, and view project documents, please visit: www.ci.jackson.ca.us

Online Survey

The City staff and consultant team developed an online survey to gather additional information from the public related to the approach to addressing the community's vision and land use preferences.

Survey responses were administered online via the City’s website and the SurveyMonkey web platform. During the time period that the survey was active (May 17, 2021 through July 15, 2021), there were 489 responses to the eighteen primary questions related to the General Plan update. The questions involved a wide range of response formats that are synthesized in the Outreach Summary Report. The survey responses provide insight into the demographics and opinions of the City of Jackson community members concerning goals and topics related to the update of the City’s General Plan.

City Council and Planning Commission Briefings

The City Council and Planning Commission received periodic briefings from City staff and the Consultant team to review input from the Visioning Workshops, receive information relevant to the specific topics addressed at meetings, and provide specific direction and guidance to staff and the consultant team regarding how goals should be achieved, how to address current issues, and land use preferences which are analyzed in this Environmental Impact Report (EIR).

Scoping Meeting

The City of Jackson circulated a Notice of Preparation (NOP) of an EIR for the proposed General Plan Update on November 23, 2022 to trustee and responsible agencies, the State Clearinghouse, and the public. A scoping meeting was held at the Jackson City Hall Council Chambers on December 5, 2022 to provide an opportunity for agency representatives and the public to assist the City in determining the scope and content of the EIR.

Public Outreach

For all public workshops and meetings, the City conducted extensive outreach, using a wide variety of methods and tools, to inform and encourage the community to participate in the General Plan Update process. The following is a list of methods and tools used to inform the public of meetings, workshops, and the status of the General Plan Update work efforts.

- City Website: The City utilized its website to provide project information and updates informing the public about, and encouraging participation in, the General Plan Update process.
- E-mail distribution list: This list was developed and maintained over time, and included local and regional agencies, organizations, stakeholders, and individuals.
- Social Media: The City regularly posted meeting notices and project updates to its social media platforms.
- Flyers: Flyers were posted at City Hall and at key locations throughout the community advertising the Visioning Workshops and online survey.

2.2 PROJECT LOCATION

REGIONAL SETTING

Amador County is located in the Mother Lode of California, which includes the central and eastern portion of California and extends from the Central Valley/Sierra Nevada foothills east, almost to

2.0 PROJECT DESCRIPTION

the state line. El Dorado County borders the County on the north, Calaveras County borders Amador County on the south, Sacramento and the San Joaquin Counties border on the west, and to the east is Alpine County. There are five incorporated cities in the County, which include the City of Ione, Amador City, the City of Plymouth, the City of Sutter Creek, and the City of Jackson (the County seat).

The City of Jackson, incorporated December 5, 1905. Jackson is located in the central portion of Amador County, at the intersection of State Routes 49 and 88 (SR 49/88) in the Sierra Nevada foothills. Figure 2.0-1 depicts the regional location of Jackson.

ENVIRONMENTAL IMPACT REPORT STUDY AREA

There are three key boundary lines addressed by the General Plan, which make up the study area for the General Plan EIR. These include the City Limits, the Sphere of Influence (SOI), and the Planning Area, as shown on Figure 2.0-2 and described below.

City Limits: The city limits include the area within a City's corporate boundary, over which the City exercises land use authority and provides public services.

Sphere of Influence: A Sphere of Influence (SOI) is the probable physical boundary and service area of a local agency, as adopted by a Local Agency Formation Commission (LAFCO). An SOI includes both incorporated and unincorporated areas within which a city or special district will have primary responsibility for the provision of public facilities and services.

Planning Area: For the purposes of the Jackson General Plan Update, the Planning Area is defined as all lands within the Jackson City Limits and SOI.

2.3 PROJECT OBJECTIVES

The Jackson General Plan is intended to reflect the desires and vision of residents, businesses, the Planning Commission, City Council, and other decision-makers for the future development and operation of Jackson.

The following objectives are identified for the proposed update to the General Plan:

- Develop a long-term vision for the City of Jackson
- Engage a broad spectrum of the community members
- Engage key stakeholders to perpetuate long-term involvement
- Establish a greater connection between the General Plan and current planning issues
- Educate the public on the City's existing conditions and the General Plan Update process
- Provide a range of high-quality housing options
- Attract and retain businesses and industries that provide high-quality and high-paying jobs

- Continue to maintain and improve multimodal transportation opportunities
- Maintain strong fiscal sustainability and continue to provide efficient and adequate public services
- Address new requirements of State law

2.4 DESCRIPTION OF PROPOSED GENERAL PLAN PROJECT

The City of Jackson is preparing a comprehensive update to its existing General Plan. The City of Jackson's current General Plan has been periodically amended, including updates to the Housing Element in 2015, the Land Use and Circulation Element in 2008, updates to the Noise, and Open Space and Conservation Elements in 1987, and updates to the Safety Element in 1981.

The General Plan Update is expected to be complete in Summer/Fall of 2023 and will guide the City's development and conservation of its resources. The Plan is intended to be an expression of the community's vision for the City and Planning Area and constitutes the policy and regulatory framework by which future development projects will be reviewed and public improvements will be implemented. The City will implement the Plan by requiring development, infrastructure improvements, and other projects to be consistent with its policies and by implementing the actions included in the Plan. The key components of the General Plan will include broad goals for the future of Jackson, and specific policies and actions that will help implement the stated goals.

State law requires the City to adopt a comprehensive, long-term general plan for the physical development of its planning area. The Plan must include land use, circulation, housing, conservation, open space, noise, and safety elements, as specified in Government Code Section 65302, to the extent that the issues identified by State law exist in the City's planning area. Additional elements that relate to the physical development of the City may also be addressed in the Plan. The degree of specificity and level of detail of the discussion of each Plan element need only reflect local conditions and circumstances. The Plan has been prepared to address the requirements of State law and the relevant items addressed in Government Code Section 65300 et seq.

This EIR analyzes potential impacts to the environment associated with implementation and buildout of the proposed General Plan, which includes future development projects, infrastructure improvements, and the implementation of policies and actions included in the proposed General Plan. These proposed General Plan components are described in greater detail below.

GENERAL PLAN ELEMENTS

The Proposed General Plan will include a comprehensive set of goals, policies, and actions (implementation measures), as well as a Land Use Map (see Figure 2.0-2). The State requires that the General Plan contain seven mandatory elements: Land Use, Circulation, Housing, Open Space, Noise, Safety, and Conservation, as well as address issues related to climate adaptation and resiliency planning and environmental justice, either as separate Elements or as components of the required Element framework. The Plan includes all of the State-mandated elements, including

2.0 PROJECT DESCRIPTION

Land Use (addresses Environmental Justice), Circulation, Conservation (combines Open Space, Conservation, and Air Quality topics), and Safety (also addresses Climate Adaptation), and Noise as well as an optional Implementation chapter. As previously noted, the Housing Element was adopted in 2015, and is currently being updated as part of a separate regional planning process. Below includes a brief description of each element:

- The **Land Use Element** designates the general distribution and intensity of residential, commercial, industrial, open space, public/semi-public, and other categories of public and private land uses, and addressed issues such as environmental justice. The Land Use Element includes the Land Use Map, which identifies land use designations for each parcel in the city limits and Planning Area (Figure 2.0-2).
- The **Circulation Element** correlates closely with the Land Use Element and identifies the general locations and extent of existing and proposed major thoroughfares, transportation routes, and alternative transportation facilities necessary to support a multi-modal transportation system. This element is intended to facilitate mobility of people and goods throughout Jackson by a variety of transportation modes, including bicycle, pedestrian, and transit.
- The **Conservation and Open Space Element** addresses conservation topics including: development and use of natural resources, and protections for riparian environments, native plant and animal species, soils, cultural/historical resources, air quality, and opportunities for energy conservation.
- The **Safety Element** provides the framework to reduce risks associated with a range of environmental and human-caused hazards that may pose a risk to life and property in Jackson. This element addresses hazards such as fires, geologic hazards, as well as hazardous materials, climate resiliency and adaptation
- The **Noise Element** addresses noise-generating and noise-sensitive uses such as residences and schools. This element also addresses the required topics related to noise, including standards and policies to protect the community from the harmful and annoying effects of exposure to excessive noise levels. This element includes strategies to reduce land use conflicts that may result in exposure to unacceptable noise levels.
- The **Housing Element** has not been updated as part of the larger General Plan Update process.

GOALS, POLICIES, AND ACTIONS

Each element of the Jackson General Plan contains an introduction, several goals and related policies, and a description of related plans, programs and legislation. The goals and policies provide guidance to the City on how to direct change, manage growth, and manage resources over the 20- to 30-year life of the General Plan. In order to ensure that the goals and policies in the General Plan are effectively implemented, a series of actions, or implementation measures, have

been developed. The following provides a description of each and explains the relationship of each:

- A **goal** is the broadest statement of community values. It is a generalized ideal which provides a sense of direction for action and statement of the desired future conditions.
- A **policy** is a specific statement that guides decision-making as the City works to achieve its goals. Once adopted, policies represent statements of City regulations. The General Plan's policies set out the standards that will be used by City staff, the Planning Commission, and the City Council in their review of land development projects, resource protection activities, infrastructure improvements, and other City actions. Policies are on-going and require no specific action on behalf of the City.
- An **action** is an implementation measure, procedure, technique, or specific program to be undertaken by the City to help achieve a specified goal or implement an adopted policy. The City must take additional steps to implement each action in the General Plan. An action is something that can and will be completed.

GENERAL PLAN LAND USE MAP

The proposed General Plan Land Use Map identifies land use designations for each parcel within the City Limits, SOI, and Planning Area. The proposed General Plan Land Use Map is included on Figure 2.0-2.

GENERAL PLAN LAND USE DESIGNATIONS

The Land Use Element of the proposed General Plan defines various land use designations by their allowable uses, minimum parcel sizes, and maximum development densities. The following describes the proposed land use designations for the General Plan. Table 2.0-1 shows the total acreage for each land use designation shown on the proposed Land Use Map.

Residential Land Use Designations

The following residential land use designations were developed with the intent to provide for a wide range of housing opportunities for the residents of the City of Jackson. For added flexibility for property owners, these designations are also intended to be hierarchical. Hierarchical means less dense residential uses will be progressively allowed in each residential designation. For example, single family residences will be allowed in areas designated Residential Medium Density.

Residential Suburban (RS)

The Residential Suburban (RS) designation is applied to lands for residential use, but with large lot sizes in order to promote and maintain the rural character of the area. The RS designation is also applied to areas characterized by terrain which is less suitable for higher residential densities. Minimum lot size is 1 acre. Population density and building intensity is one household and one single family dwelling per acre.

Residential Low Density (RL)

The Residential Low Density (RL) designation is intended to provide a semi-rural residential land use. The minimum lot size is ½ acre. Population density and building intensity is one household and one single family dwelling unit per ½ acre.

Residential Single Family (RSF)

The Residential Single Family (RSF) designation has been applied to areas in which urban services already exist or where they can easily be extended. The minimum lot size for RSF is 8,000 square feet. The population density and building intensity is one household and one single family dwelling per 8,000 square feet. When combined with the Planned Development (pd) designation the Planning Commission, at its discretion, may reduce the minimum lot size to 6,000 square feet as long as the following findings are made:

1. Average slopes per lot are less than 15%;
2. Surrounding transportation infrastructure can accommodate the increased density; and
3. Surrounding land uses are compatible with more dense single family residential.

Residential Duplex (RD)

The Residential Duplex (RD) designation is intended to be applied to properties predominately with duplexes, however, two detached residential units would also be allowed. The minimum lot size for RD development is 8,000 square feet. Population density and building intensity is one dwelling unit per 4,000 square feet of lot area.

Residential Medium Density (RM)

The Residential Medium Density (RM) designation is placed on lands where more intense residential uses, such as fourplexes, would be acceptable. The minimum parcel or lot size for RM development is 8,000 square feet with the building intensity limited to one dwelling unit per 3,000 square feet.

Residential High Density (RH)

The Residential High Density (RH) designation is placed on lands which are suitable for multi-family housing. Minimum parcel or lot size is 4,000 square feet. The maximum allowable density and building intensity is one dwelling unit per 2,000 square feet.

Commercial, Office, and Industrial Land Use Designations

The following land use designations encompass a wide variety of commercial types from industrial and intense retail to personal services. This level of specificity is intended to relieve issues which may occur where commercial and residential land use designations are in the same area.

Commercial land use designations are hierarchical. Hierarchical means less intense commercial uses will be allowed in each designation. Residential uses will be allowed as specified in each designation.

Professional Office (PO)

The Professional Office (PO) designation is intended for low intensity “soft commercial” land uses such as administrative, business, and professional offices (e.g., for attorneys, dentists, counselors, engineers, etc.). A more detailed list of allowable uses is specified in the City’s Development Code. Minimum parcel or lot size is 8,000 square feet. Dwelling units shall be allowed within this designation.

Limited Commercial (LC)

The Limited Commercial (LC) designation is intended to accommodate existing business within predominately residential neighborhoods. LC allows for any use allowed in the Commercial (C) designation with the exception of those which generate high volumes of traffic or noise. A detailed list of allowable uses is specified in the City’s Development Code. Minimum parcel or lot size is 8,000 square feet. Dwelling units are allowed in areas with the LC designation.

Historic Commercial (HC)

The Historic Commercial (HC) designation is applied to the downtown area of the City where the bulk of the commercial activities are related to tourism and the buildings are historic. Permitted uses in the HC land use designation include any use allowed in the Limited Commercial and Professional Office designations along with retail or wholesale stores or businesses not involving any kind of manufacture, processing, or treatment of products other than that which is clearly incidental to the retail business conducted on the premises. A detailed list of allowable land uses is specified in the City’s Development Code. Residential uses are allowed within this designation.

Commercial (C)

The Commercial (C) designation is applied to those areas of the City where retail, commercial, and professional business services are acceptable. Minimum lot size is 8,000 square feet. Residential uses are allowed only with a Conditional Use Permit.

Industrial (I)

The Industrial (I) designation is intended for land which is suitable for manufacturing and light industrial uses. Residential uses may be allowed in an area designated industrial with a Conditional Use Permit. Minimum lot size is 8,000 square feet.

Other Land Uses

Along with residential, commercial, and industrial land uses, other land uses provide important amenities to City residents, as well as meet the needs of the surrounding community.

Public (P)

The Public (P) designation applies to lands with public or quasi-public uses such as schools, hospitals, churches, and City and County offices.

Recreation (R)

The Recreation (R) designation is applied to lands where recreational facilities are to be located and protected from conflicting uses.

Open Space (OS)

Areas with an Open Space (OS) designation are intended to be undeveloped and left in a natural state. Some landscaped areas, pedestrian pathways, and plazas may be allowed.

Overlay Land Uses

Four overlay land uses designations have been developed primarily for the purpose of providing extra protection to sensitive areas which the city officials and citizens wish to have preserved or avoided. The overlay designations provide additional development requirements to properties located within the overlays beyond the requirements of the base or combined land use designation. Should any dispute arise in regard to implementation of these requirements, the dispute may be taken to the Planning Commission for review and interpretation.

Planned Development (pd) Overlay

The Planned Development (pd) Overlay is applied to lands that are presently largely undeveloped where planned unit developments (PUDs) or neighborhood developments are encouraged. Development in the (pd) Overlay shall require Planning Commission approval of development plans that show how projects in these areas will conform to all General Plan goals, policies, objectives, and design guidelines.

The (pd) Overlay is a “combined” land use designation meaning that it will always be combined with one of the City’s other primary land use designations. The (pd) Overlay is also intended to encourage planned developments with a mixture of land uses including different densities of residential units, professional office uses, commercial uses, and public and recreational uses.

When the (pd) Overlay is combined with another land use designation (e.g., pd/OS) it is intended that the planned development include some of that use in the development design.

Creek/Floodplain (cf) Overlay

The purpose of the Creek/Floodplain (cf) Overlay is to promote open space along the City’s numerous creeks, to encourage public use of many of these creeks, and to discourage development in areas designated as a floodplain.

The boundary of the Creek/Floodplain (cf) Overlay shall be contiguous with the Federal Emergency Management Agency's (FEMA) 100-year Floodplain Boundary (i.e. the most recent Flood Insurance Rate Map) for the City of Jackson.

Visual Corridor (vc) Overlay

The purpose of the Visual Corridor (vc) Overlay is to protect the scenic views enjoyed by everyone as they enter the City of Jackson from both the north and south of town. The intent of the (vc) Overlay is not to restrict development in these areas, but to provide development guidelines to promote development in an aesthetically pleasing manner which will neither add nor detract from the viewshed. The (vc) Overlay may be combined with any residential, commercial, manufacturing/industrial, or special purpose zoning district.

Historic Corridor (hc) Overlay

The purpose of the Historic Corridor (hc) Overlay is to protect historic features which exist within the City. The (hc) Overlay may be combined with any residential, commercial, manufacturing/industrial, or special purpose zoning district. The (hc) Overlay shall be applied to those areas of the City with concentrations of historic buildings and structures that contribute to the City's historic character. All new construction or redevelopment within the Historic Corridor (hc) Overlay shall be consistent with the late nineteenth century character of the Jackson area.

Sphere of Influence/Urban Reserve Designation

The sphere of influence (SOI) designates the City's probable future boundary and service area. State policy recognizes that cities are better equipped than counties to provide housing for all income levels and other urban uses and amenities. The land within the SOI is outside city limits and is zoned and governed by the County. The City must place a land use designation on land within the SOI consistent with the probable future use of this area.

Recognizing that proposals for development in the SOI will likely require significant review and studies to determine the ability to provide urban services in the undeveloped areas, an "Urban Reserve Designation" shall be applied to all lands within the City's SOI. The Urban Reserve Designation is intended to preserve undeveloped lands surrounding the City until such time that conversion to urban/suburban uses are determined appropriate and feasible. A General Plan amendment will be required for any projects in the SOI area desiring to annex to the City of Jackson for municipal services, at which time specific City land use and zoning designations will be determined. To achieve a gradual transition between areas in the SOI annexing to the City and neighboring agricultural land uses, properties in the annexing area shall be planned with the most intense development located closest to the City with increasingly reduced densities as development moves away from the City's core, closer to agricultural uses.

2.0 PROJECT DESCRIPTION

TABLE 2.0-1: ACREAGE BY LAND USE DESIGNATION IN THE PROPOSED LAND USE MAP – CITY LIMITS AND SOI

LAND USE	TOTAL PLANNING AREA ACREAGE	PERCENT OF AREA
JACKSON CITY LIMITS		
Commercial	378.6	16.5%
Historic Commercial	16.8	0.7%
Industrial	29.2	1.3%
Limited Commercial	152.9	6.7%
Open Space	0.6	0.0%
Public	130.0	5.7%
Professional Office	106.9	4.7%
Recreation	169.7	7.4%
Residential Duplex	24.6	1.1%
Residential High Density	38.1	1.7%
Residential Low Density	36.0	1.6%
Residential Medium Density	35.9	1.6%
Right-of-Way	187.8	8.2%
Residential Suburban	443.9	19.3%
Residential Single Family	543.1	23.7%
Total City Limits	2,294.3	
JACKSON SOI		
Limited Commercial	0.3	0.0%
Public	3.6	0.3%
Right-of-Way	5.1	0.4%
SOI (undesignated) ¹	36.9	3.0%
SOI-Open Space (Urban Reserve)	1,171.2	96.2%
Total SOI	1,217.1	
Grand Total - City Limits and SOI	3,511.3	

1: PORTIONS OF THE CITY'S SOI HAVE NOT BEEN ASSIGNED A LAND USE DESIGNATION ON THE EXISTING GENERAL PLAN LAND USE MAP. SOURCES: AMADOR COUNTY, 2021; GIS LAND USE DATA FILE; DE NOVO PLANNING GROUP, 2021.

Correlation Between Land Use and Zoning Categories

Since the Land Use Element and the associated Land Use Map so specifically designate properties within the City of Jackson, the correlation between the land use designations and the zoning categories will be direct. With the adoption of this Land Use Element and the associated Land Use Map, there is no need for a separate zoning classification map. The Development Code will be periodically updated to keep the zoning classifications consistent with the Land Use Element and the Land Use Map.

2.5 GENERAL PLAN BUILDOUT ANALYSIS AND GROWTH PROJECTIONS

The EIR evaluates the anticipated development that could occur within the Planning Area if the City developed at the rates expected under the proposed General Plan. While no specific development projects are proposed as part of the General Plan Update, the proposed General Plan will accommodate future growth in Jackson, including new businesses, expansion of existing businesses, and new residential uses. The analysis anticipates development to occur in the Planning Area, consistent with the proposed Land Use Map.

State General Plan law requires that the General Plan indicate the maximum densities and intensities permitted within the Land Use Plan. The Minimum and maximum allowable development on individual parcels of land is governed by these measures of density or intensity as described in the land use descriptions for each land use type.

Table 2.0-2 below summarizes the range of growth, including residential units (single family and multifamily) and non-residential square footage (commercial, office, industrial, governmental, public/quasi-public) that would be anticipated to occur under cumulative 2040 conditions. These figures are based on the land use designations for the City shown on the proposed Land Use Map (see Figure 2.0-2) known land use constraints, the ACTC travel model, and Department Of Finance countywide 2040 growth projections.

As shown in Table 2.0-2, the General Plan by 2040 would be anticipated to result in 681 dwelling units accommodating an additional 1,435 residents, and approximately 300,000 square feet of nonresidential development that would accommodate an additional 457 jobs within Jackson.

TABLE 2.0-2: GROWTH PROJECTIONS - PROPOSED GENERAL PLAN LAND USE MAP

	<i>POPULATION</i>	<i>DWELLING UNITS</i>	<i>NONRESIDENTIAL SQUARE FOOTAGE</i>	<i>JOBS</i>	<i>JOBS PER HOUSING UNIT</i>
EXISTING CONDITIONS					
	5,071	2,406	1,827,500	2,987	1.24
NEW GROWTH POTENTIAL					
General Plan – city limits and SOI	1,435	681	300,000	457	0.67
TOTAL GROWTH: EXISTING PLUS NEW GROWTH POTENTIAL					
General Plan – cumulative buildout	6,506	3,087	2,127,500	3,444	1.12

SOURCES: COUNTY ASSESSOR 2020; CALIFORNIA DEPARTMENT OF FINANCE 2020; U.S CENSUS ONTHEMAP; ESRI 2020, DE NOVO PLANNING GROUP 2022.

Growth projections should not be considered a precise prediction for growth, as the actual amount of development that will occur throughout the 20-year planning horizon of the General Plan is based on many factors outside of the City’s control. Actual future development would depend on future real estate and labor market conditions, property owner preferences and decisions, site-specific constraints, and other factors. Additionally it should be noted that historic growth rates have been much lower than the total growth allowed under the General Plan and that the General Plan Update did not included substantial map revisions that would result in growth allowed in

excess of the what is allowed under the Existing General Plan Map. Furthermore, the California Department of Finance (DoF)¹ projects that Amador County will grow from a population of 37,577 persons in 2020 to 39,743 persons by 2040. This represents a 5.7% increase in growth and the addition of 2,166 persons. Table 2.0-2 shows that new growth projected in the City of Jackson and its SOI could result in the addition of 1,435 persons. This represents a 28.3% population growth rate, which far exceeds the overall growth rate projected by the DoF for Amador County. The analyses that follow are therefore considered conservative as they are based on a much higher rate of growth within the City of Jackson versus what the DoF expected for Amador County as a whole.

2.6 USES OF THE EIR AND REQUIRED AGENCY APPROVALS

This EIR may be used for the following direct and indirect approvals and permits associated with adoption and implementation of the proposed project.

CITY OF JACKSON

The City of Jackson is the lead agency for the proposed project. The proposed General Plan Update will be presented to the Planning Commission for review and recommendation and to the City Council for comment, review, and consideration for adoption. The City Council has the sole discretionary authority to approve and adopt the Jackson General Plan. In order to approve the proposed project, the City Council would consider the following actions:

- Certification of the General Plan EIR;
- Adoption of required CEQA findings and Statement of Overriding Considerations for the above action;
- Adoption of a Mitigation Monitoring and Reporting Program; and
- Approval of the General Plan Update.

SUBSEQUENT USE OF THE EIR

This EIR provides a review of environmental effects associated with implementation of the proposed General Plan. When considering approval of subsequent activities under the proposed General Plan, the City of Jackson would utilize this EIR as the basis in determining potential environmental effects and the appropriate level of environmental review, if any, of a subsequent activity. Projects or activities successive to this EIR may include, but are not limited to, the following:

- Approval and funding of major projects and capital improvements;
- Future Specific Plan, Planned Unit Development, or Master Plan approvals;
- Annexations;

¹ Projections | Department of Finance (ca.gov)

- Revisions to the Jackson Municipal Code and Zoning Ordinance;
- Development plan approvals, such as tentative subdivision maps, variances, conditional use permits, and other land use permits;
- Development Agreements;
- Property rezoning consistent with the General Plan;
- Permit issuances and other approvals necessary for public and private development projects; and
- Issuance of permits and other approvals necessary for implementation of the General Plan.

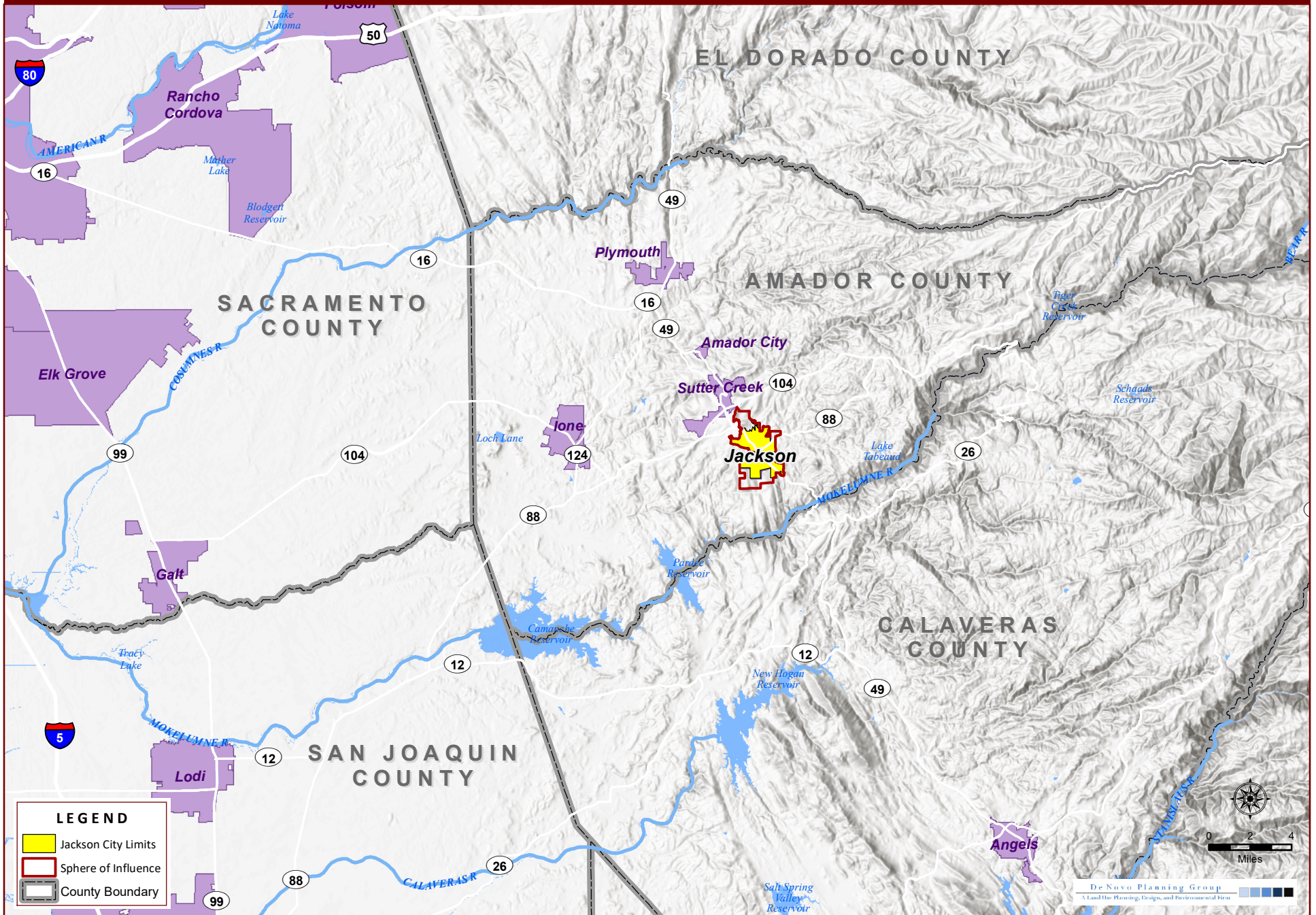
OTHER GOVERNMENTAL AGENCY APPROVALS

City approval of the proposed project would not require any actions or approvals by other public agencies. Subsequent projects and other actions to support implementation of the proposed project would require actions, including permits and approvals, by other public agencies that may include, but are not necessarily limited to:

- California Department of Fish and Wildlife (CDFW) approval of potential future streambed alteration agreements, pursuant to Fish and Game Code. Approval of any future potential take of State-listed wildlife and plant species covered under the California Endangered Species Act.
- California Department of Transportation (Caltrans) approval of projects and encroachment permits for projects affecting State highway facilities.
- Regional Water Quality Control Board (RWQCB) approval for National Pollution Discharge Elimination System compliance, including permits and Storm Water Pollution Prevention Plan approval and monitoring.
- Amador County Air Pollution Control District (APCD) approval of construction-related air quality permits, authority to Construct, Permits, permits for stationary sources of air pollution and other district related permitting.
- U.S. Fish and Wildlife Service (USFWS) approvals involving any future potential take of Federally listed wildlife and plant species and their habitats, pursuant to the Federal Endangered Species Act.
- Amador Local Agency Formation Commission (LAFCO) approval of Sphere of Influence modifications and annexations.

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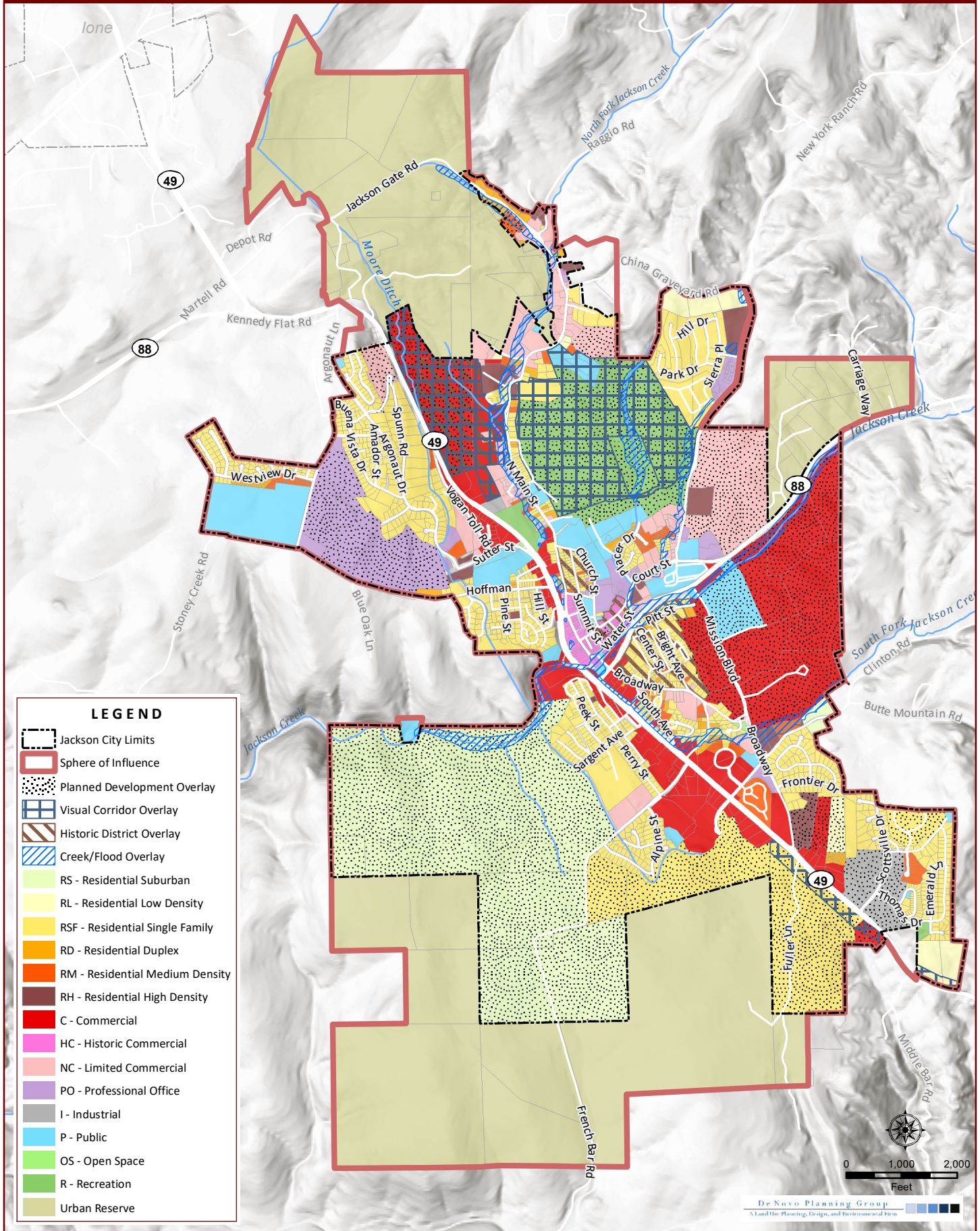
Figure 2.0-1. Regional Location Map



Sources: California State Geoportal; ArcGIS Online World Elevation/Terrain Image Service. Map date: September 19, 2022.

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Figure 2.0-2. General Plan Land Uses



Sources: City of Jackson; ACTC; FEMA 6-30-2022; ArcGIS Online World Elevation/Terrain Image Service. Map date: October 11, 2022.

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The City of Jackson possesses multiple scenic resources, and there are also scenic resources within the unincorporated areas of Amador County. These resources enhance the quality of life for Jackson residents, and provide for outdoor recreational uses. Landscapes can be defined as a combination of four visual elements: landforms, water, vegetation, and man-made structures. Scenic resource quality is an assessment of the uniqueness or desirability of a visual element.

This section was prepared based on existing reports and literature for Jackson and the surrounding areas in Amador County. Additional sources of information included the California Department of Transportation's (Caltrans) Designated Scenic Route map for Amador County.

This section provides a background discussion of the scenic highways and corridors, and natural scenic resources such as creeks, wildlife areas, and prominent visual features found in the Jackson Planning Area. This section is organized with an existing setting, regulatory setting, and impact analysis.

There were no comments received during the NOP comment period related to this environmental topic.

CONCEPTS AND TERMINOLOGY

The aesthetic value of an area is a measure of its visual character and quality, combined with the viewer response to the area. Scenic quality can best be described as the overall impression that an individual viewer retains after driving through, walking through, or flying over an area. Viewer response is a combination of viewer exposure and viewer sensitivity. Viewer exposure is a function of the number of viewers, number of views seen, distance of the viewers, and viewing duration. Viewer sensitivity relates to the extent of the public's concern for a particular viewshed. These terms and criteria are described in detail below.

Visual Character. Natural and artificial landscape features contribute to the visual character of an area or view. Visual character is influenced by geologic, hydrologic, botanical, wildlife, recreational, and urban features. Urban features include those associated with landscape settlements and development, including roads, utilities, structures, earthworks, and the results of other human activities. The perception of visual character can vary significantly seasonally, even hourly, as weather, light, shadow, and elements that compose the viewshed change. The basic components used to describe visual character for most visual assessments are the elements of form, line, color, and texture of the landscape features. The appearance of the landscape is described in terms of the dominance of each of these components.

Visual Quality. Visual quality is evaluated using the well-established approach to visual analysis adopted by the Federal Highway Administration, employing the concepts of vividness, intactness, and unity, which are described below.

- Vividness is the visual power or memorability of landscape components as they combine in striking and distinctive visual patterns.

3.1 AESTHETICS AND VISUAL RESOURCES

- Intactness is the visual integrity of the natural and human-built landscape and its freedom from encroaching elements; this factor can be present in well-kept urban and rural landscapes, and in natural settings.
- Unity is the visual coherence and compositional harmony of the landscape considered as a whole; it frequently attests to the careful design of individual components in the landscape.

Visual quality is evaluated based on the relative degree of vividness, intactness, and unity, as modified by visual sensitivity. High-quality views are highly vivid, relatively intact, and exhibit a high degree of visual unity. Low-quality views lack vividness, are not visually intact, and possess a low degree of visual unity.

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

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

Visual sensitivity depends on the number and type of viewers and the frequency and duration of views. Visual sensitivity is also modified by viewer activity, awareness, and visual expectations in relation to the number of viewers and viewing duration. For example, visual sensitivity is generally higher for views seen by people who are driving for pleasure, people engaging in recreational activities such as hiking, biking, or camping, and homeowners. Sensitivity tends to be lower for views seen by people driving to and from work or as part of their work. Commuters and non-recreational travelers have generally fleeting views and tend to focus on commute traffic, not on surrounding scenery; therefore, they are generally considered to have low visual sensitivity. Residential viewers typically have extended viewing periods and are concerned about changes in the views from their homes; therefore, they are generally considered to have high visual sensitivity. Viewers using recreation trails and areas, scenic highways, and scenic overlooks are usually assessed as having high visual sensitivity.

Judgments of visual quality and viewer response must be made based on a regional frame of reference. The same landform or visual resource appearing in different geographic areas could have a different degree of visual quality and sensitivity in each setting. For example, a small hill

may be a significant visual element on a flat landscape but have very little significance in mountainous terrain.

Scenic Highway Corridor. The area outside of a highway right-of-way that is generally visible to persons traveling on the highway.

Scenic Highway/Scenic Route. A highway, road, drive, or street that, in addition to its transportation function, provides opportunities for the enjoyment of natural and human-made scenic resources and access or direct views to areas or scenes of exceptional beauty (including those of historic or cultural interest). The aesthetic values of scenic routes often are protected and enhanced by regulations governing the development of property or the placement of outdoor advertising. Until the mid-1980's, general plans in California were required to include a Scenic Highways Element.

View Corridor. A view corridor is a highway, road, trail, or other linear feature that offers travelers a vista of scenic areas within a city or county.

3.1.1 ENVIRONMENTAL SETTING

REGIONAL SCENIC RESOURCES

Visual resources are generally classified into two categories: scenic views and scenic resources. Scenic views are elements of the broader viewshed such as mountain ranges, valleys, and ridgelines. They are usually mid-ground or background elements of a viewshed that can be seen from a range of viewpoints, often along a roadway or other corridor. Scenic resources are specific features of a viewing area (or viewshed) such as trees, rock outcroppings, and historic buildings. They are specific features that act as the focal point of a viewshed and are usually foreground elements.

Aesthetically significant features occur in a diverse array of environments within the region, ranging in character from urban centers to rural agricultural lands to natural water bodies. Features of the built environment that may also have visual significance include individual or groups of structures that are distinctive due to their aesthetic, historical, social, or cultural significance or characteristics. Examples of the visually significant built environment may include bridges or overpasses, architecturally appealing buildings or groups of buildings, landscaped freeways, and a location where a historic event occurred.

SCENIC HIGHWAYS AND CORRIDORS

Scenic highways and corridors make major contributions to the quality of life enjoyed by the residents of a region. The development of community pride, the enhancement of property values, and the protection of aesthetically-pleasing open spaces reflecting a preference for the local lifestyle are all ways in which scenic corridors are valuable to residents. Scenic highways and corridors can also strengthen the tourist industry. For many visitors, highway corridors will provide their only experience of the region. Enhancement and protection of these corridors ensures that

the tourist experience continues to be a positive one and, consequently, provides support for the tourist-related activities of the region's economy.

Scenic Highways

A scenic highway is generally defined by Caltrans as a public highway that traverses an area of outstanding scenic quality, containing striking views, flora, geology, or other unique natural attributes. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.

Only one highway section in Amador County is listed as an officially Designated Scenic Highway by the Caltrans Scenic Highway Mapping System; the segment of State Route 88 in the eastern portion of the county along the southern boundary of Amador County. This route traverses the Sierra Nevada Mountains to the east. The City of Jackson is not visible from this roadway segment. SR 88 and SR 49 through Jackson are also listed "eligible" but are not currently officially designated.

Scenic Corridors

A scenic corridor is the view from the road that may include a distant panorama and/or the immediate roadside area. A scenic corridor encompasses the outstanding natural features and landscapes that are considered scenic. It is the visual quality of the man-made or natural environments within a scenic corridor that are responsible for its scenic value. Commonly, the physical limits of a scenic corridor are broken down into foreground views (zero to one quarter mile) and distant views (over one quarter mile). In addition to distinct foreground and distant views, the visual quality of a scenic corridor is defined by special features, which include:

- Focal points - prominent natural or man-made features which immediately catch the eye.
- Transition areas - locations where the visual environment changes dramatically.
- Gateways - locations which mark the entrance to a community or geographic area.

The City of Jackson General Plan does not specifically designate any scenic corridors within the city. However, it does mention a variety of aesthetics and cultural resources to the community. These include The Wheels parks in the mother lode region, Kennedy Impoundment Dam park, and the St. Sava Mission (which the land use plan encourages the Mission to maintain a desirable campground operation). Caltrans provides an Vista Point on the western side of highway 49/88 at the northern entrance to the city.

Visual Character and Other Scenic Resources Areas

The visual character of the City of Jackson can be characterized into two primary landform types: 1) mountains (mountainsides, slopes, ridges and peaks) and 2) valley (open meadow within the valley floor and gently rolling hills). Both the mountain and the valley classifications are visually sensitive areas with regard to development potential.

In general, the dominant scenic/visual features within the City of Jackson are the hills and the surrounding ridges and peaks. Views of these resources are mostly available from roads located on elevated hills. Jackson Creek and the old quartz mines are among the most significant visual features viewed from within the valley.

Views approaching the City and SOI from southbound SR 49/88 to the east are of vegetation, and mining structures associated with the Kennedy Mine, with a backdrop of hills and ridges. Butte Mountain is the dominant feature visible approaching the City's northern entrance. Views to the west are generally obscured by steep roadside slopes. A Vista Point is located on the west side of SR 49/88 just before entering the City and views of the valley and open space, Kennedy Mine structures backed by ridges and Butte Mountain are predominant from this location. Entering the City, views are of residential and commercial development to the west, and a mix of developed uses to the east.

Views approaching the City and SOI from northbound SR 49 are of open, rolling hills to the west with rural levels of development. To the west, hills and vegetation adjacent the roadside obscure some views. Views looking north are of development (primarily industrial and commercial uses) in the southern portion of the City.

Approaching the City from westbound SR 88, views are of rolling hills to the north and of riparian habitat and oak woodland to the south. In the central portion of the City, views to the east are of the older section of the City with many historic-type structures and the City exhibits historical charm.

LIGHT AND GLARE

During the day, sunlight reflecting from structures is a primary source of glare, while nighttime light and glare can be divided into both stationary and mobile sources. Stationary sources of nighttime light include structure illumination, interior lighting, decorative landscape lighting, and streetlights. The principal mobile source of nighttime light and glare is vehicle headlight illumination. This ambient light environment can be accentuated during periods of low clouds or fog.

The variety of urban land uses in the Planning Area are the main source of daytime and nighttime light and glare. They are typified by single and multi-family residences, commercial structures, industrial areas, and streetlights. These areas and their associated human activities (inclusive of vehicular traffic) characterize the existing light and glare environment present during daytime and nighttime hours in the urbanized portions of the Planning Area. Current lighting conditions in the City of Jackson are related to the development conditions within the City. The city is developed both east and west of State Route 49, which runs through the city from north to south from the Scenic Vista Point to the north to just south of Scottsville Drive to the south.

The central business district extends along SR 49 south to Broadway, north to Vogan Toll Road, east to the junction of Court and Water Streets, and west to the rear of the business area along State Route 49/88. This area includes approximately 25 acres of commercially zoned property and 8 acres of land used for public and institutional purposes and streams. Highway-oriented commercial areas are located along State Route 49-88, north and south of the central business

district from the city limits on the south to the Martell area on the north. A small highway oriented commercial area is located on State Route 88 at the eastern City limits. Within the City limits approximately 97 acres of land is highway-oriented and zoned commercial.

At nighttime, the City of Jackson has areas with distinct lighting. The central business district has a generally high ambient light level, with the outlying areas of the city consisting of lower ambient levels of nighttime lighting. Sky glow is the effect created by light reflecting into the night sky. Sky glow is of particular concern in areas surrounding observatories, where darker night sky conditions are necessary, but is also of concern in more rural or natural areas where a darker night sky is either the norm or is important to wildlife. Due to the more urban nature of the city limits, a number of existing light sources affect residential areas and illuminate the night sky. Isolating impacts of particular sources of light or glare is therefore not appropriate or feasible for the project.

3.1.2 REGULATORY SETTING

FEDERAL

There are no Federal regulations that apply to the proposed project related to visual resources in the study area.

STATE

Caltrans California Scenic Highway Program

California's Scenic Highway Program was created by the Legislature in 1963 to preserve and protect scenic highway corridors from change, which would diminish the aesthetic value of lands adjacent to highways. The State laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. These highways are identified in Section 263 of the Streets and Highways Code. A list of California's scenic highways and map showing their locations may be obtained from the Caltrans Scenic Highway Coordinators. If a route is not included on a list of highways eligible for scenic highway designation in the Streets and Highways Code Section 263 et seq., it must be added before it can be considered for official designation. A highway may be designated scenic depending on the extent of the natural landscape that can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.

LOCAL

City of Jackson Historic Design Review Ordinance

Chapter 17.77, Historic Design Review, of the City's Development Code developing contains ordinance with the purpose of preserving a continuity of pictorial design in all projects that require a land use or building permit or will affect the exterior appearance of any building or property within the historic zone. In addition, public projects such as sidewalk installation, traffic circle

installation, and other streetscape and pedestrian / bicycle improvement projects within the historic district shall be subject to Historic Design review.

City of Jackson Site Plan Review

Chapter 17.73, Site Plan Review, of the City's Development Code contains several sections that regulate standards for development in the City. Each development site plan submitted to the City shall be analyzed by the Site Plan Review Committee to ensure that the application is consistent with the content, purpose, and intent of this Chapter, this Development Code, any applicable design guidelines, the landscaping ordinance, the General Plan and any applicable Specific or Master Plans.

City of Jackson Architectural Regulations

Chapter 17.24, Architectural Regulations, of the City's Development Code contains several sections that regulate aesthetic or visual standards for development in the City. The purpose of this Chapter is to ensure that the City of Jackson's goals for attaining high quality development that is sensitive to the City's unique character are met. Architectural regulations have been developed which will be used during the review of land use permit applications as additional criteria for project review.

City of Jackson Overlay Zoning Districts

Chapter 17.20, Overlay Zoning Districts, of the City's Development Code contains several sections that provide guidance for development and new land uses in addition to the standards and regulations of the primary zoning districts, where important site, neighborhood, or compatibility issues require particular attention in project planning. This includes the Visual Corridor (Vc) Overlay which is intended to protect the scenic views enjoyed by everyone as they enter the City of Jackson from both the north and south of town.

City of Jackson Lighting Regulations

Chapter 17.43, Lighting Regulations, of the City's Development Code contains several sections that provide regulations for the reduction and restriction of unnecessary and excessive stray light as given off by exterior lighting sources on commercial and residential buildings during the nighttime hours.

3.1.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on aesthetics if it will:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway;

3.1 AESTHETICS AND VISUAL RESOURCES

- In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality; and/or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

IMPACTS AND MITIGATION MEASURES

Impact 3.1-1: General Plan implementation would not have a substantial adverse effect on a scenic vista (Less than Significant)

While the Jackson Planning Area contains numerous areas and viewsheds with scenic value, there are no officially designated scenic vista points or viewsheds in the Planning Area. However, a Vista Point is located on the west side of SR 49/88 just before entering the City. Significant visual resources in the Planning Area generally consist of distant foothill views, and views of agricultural lands, and historic districts. The Vista Point offers views of past mining areas and the foothill region.

The proposed Land Use Map does not convert any open space designated lands to urban uses. However, land uses allowed by the proposed Land Use Map could result in the conversion of agricultural lands to more development commercial and residential uses. Additionally, in some undeveloped areas that are designated for urban uses the general plan would also allow development of these areas, thus changing the visual appearance of these areas.

As described in greater detail in the Project Description chapter (Chapter 2.0), implementation of the proposed General Plan could lead to new and expanded development throughout the city. This new development may result in limited visual changes throughout the Planning Area, which may obstruct or interfere with views of visual features surrounding the Planning Area. Furthermore, buildout under the proposed General Plan and implementation of the General Plan Land Use Map has the potential to result in new and expanded development along roadway corridors with scenic value.

The implementation of the policies and actions contained in the General Plan listed below would ensure that new residential and non-residential development in the Planning Area is located in and around existing developed areas and developed to be visually compatible with surrounding areas and nearby open space resources. Through implementation of the policies and actions included in the General Plan, and listed below, implementation of the proposed General Plan would result in a **less than significant impact**.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

POLICIES

LU-1.3: Encourage infill development and logical development patterns. The City should discourage leap-frog development and undue conversion of open space and agricultural lands. Jackson should

encourage greater density of new development in the center core areas of the City and lesser density in the peripheral areas.

LU-2.2: Promote high-quality design and site planning that is compatible with surrounding development, public spaces, and natural and historical resources.

LU-2.4: Promote the scenic development of the Jackson Creek corridor.

LU-4.7: Encourage open space designations at the southern (near Scottsville) and northern (near the Kennedy Mine property) entrances for the purpose of maintaining a visual town boundary.

ACTIONS

LU-2g: Conduct design review of all applicable projects and ensure consistency with the City's Design Standards; balance design considerations with the preservation of surrounding development, public spaces, and natural and historical resources.

LU-5a: Encourage land use decisions and design features for development or redevelopment in the downtown that:

- a. Enhance and restore historical resources;*
- b. Are compatible with and complementary to the historic feel of the downtown;*
- c. Provide thoughtful solutions to the existing lack of parking;*
- d. Provide sidewalks and other pedestrian-oriented amenities;*
- e. Increase landscaping for shading, beautification, and screening; and*
- f. Support efforts to keep the majority of County facilities in the downtown.*

Impact 3.1-2: General Plan implementation would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, within a State scenic highway (Less than Significant)

As discussed in the Existing Setting section, no adopted State scenic highway is located in Jackson. Only one highway section in Amador County is listed as an Officially Designated Scenic Highway by the Caltrans Scenic Highway Mapping System; the segment of SR 88 along the southern boundary of Amador County, outside of the City of Jackson. This route traverses the Sierra Nevada Mountain Range to the east. However, this officially designated scenic highway does not provide views of Jackson or the immediate surrounding areas. However, it should be noted that sections of SR 49 and SR 88 in the Jackson vicinity are considered eligible for Scenic Highway designation.

Given that no adopted State scenic highways are located within the Planning Area or provide views of the Planning Area, State scenic highway impacts associated with General Plan implementation would be **less than significant**.

Impact 3.1-3: General Plan implementation would not, in a non-urbanized area, substantially degrade the existing visual character or quality of public views of the site and its surroundings, or in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality (Less than Significant)

CEQA Guidelines Section 15387 defines an urbanized area as a central city or a group of contiguous cities with a population of 50,000 or more, together with adjacent densely populated areas having a population density of at least 1,000 persons per square mile

Section 21071 of the Public Resources Code states: “Urbanized area” means either of the following:

(a) An incorporated city that meets either of the following criteria:

(1) Has a population of at least 100,000 persons.

(2) Has a population of less than 100,000 persons if the population of that city and not more than two contiguous incorporated cities combined equals at least 100,000 persons.

In addition, to be considered an urbanized area according to CEQA, projects must also be within the boundary of a map prepared by the U.S. Bureau of the Census which designates the area as urbanized area. According to the U.S. Bureau of the Census, the planning area is not mapped and designated as urbanized area and does not meet the qualifications for an urbanized area.

Chapter 17.20, Overlay Zoning Districts, of the City’s Development Code contains several sections that provide guidance for development for the purpose of preserving the visual environment. As mentioned before, this includes the Visual Corridor (Vc) Overlay which is intended to preserve scenic views by establishing standards for architecture, height, landscaping and other requirements for development within scenic corridors.

Furthermore, policies in the proposed General Plan are intended to complement and further the regulating of scenic quality and resources, and any development occurring under the proposed General Plan would be subject to compliance with these guidelines, as well as the applicable regulations set forth in the Jackson Development Code. The proposed General Plan does not propose any development projects that would substantially degrade the existing visual character or quality of public views of the Sphere of Influence and its surroundings. Scenic quality-related impacts associated with General Plan implementation would thus be **less than significant**. In order to further ensure that future development allowed under the General Plan would not degrade the existing visual character of the environment, the City has included policies and actions in the General Plan (as described under Impact 3.1-1) and included below.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS**POLICIES**

LU-1.3: Encourage infill development and logical development patterns. The City should discourage leap-frog development and undue conversion of open space and agricultural lands. Jackson should encourage greater density of new development in the center core areas of the City and lesser density in the peripheral areas.

LU-2.2: Promote high-quality design and site planning that is compatible with surrounding development, public spaces, and natural and historical resources.

LU-2.3: Require that development is located and designed to ensure compatibility among land uses, addressing such elements as building orientation and setbacks; buffering; visibility and privacy; automobile and truck access; impacts of noise, lighting, and glare; landscape quality; and aesthetics.

LU-2.4: Promote the scenic development of the Jackson Creek corridor.

LU-3.2: Encourage residential development to occur in a balanced and efficient pattern that reduces sprawl, preserves open space, and creates convenient connections to other land uses.

LU-4.3: Promote attractive commercial uses that are functional, well-maintained, and of high-quality design. As feasible, support and encourage property maintenance and the revitalization of economically disadvantaged and poorly maintained commercial sites.

LU-4.7: Encourage open space designations at the southern (near Scottsville) and northern (near the Kennedy Mine property) entrances for the purpose of maintaining a visual town boundary.

LU-5.1: Require design review for all downtown projects to ensure compatibility with other architectural styles contiguous or in proximity to the development.

ACTIONS

LU-2g: Conduct design review of all applicable projects and ensure consistency with the City's Design Standards; balance design considerations with the preservation of surrounding development, public spaces, and natural and historical resources.

LU-5g: Encourage land use decisions and design features for development or redevelopment in the downtown that:

- a. Enhance and restore historical resources;*
- b. Are compatible with and complementary to the historic feel of the downtown;*
- c. Provide thoughtful solutions to the existing lack of parking;*
- d. Provide sidewalks and other pedestrian-oriented amenities;*
- e. Increase landscaping for shading, beautification, and screening; and*
- f. Support efforts to keep the majority of County facilities in the downtown.*

Impact 3.1-4: General Plan implementation could result in the creation of new sources of nighttime lighting and daytime glare (Less than Significant)

The primary sources of daytime glare are generally sunlight reflecting from structures and other reflective surfaces and windows. Implementation of the proposed General Plan would introduce new sources of daytime glare into previously developed areas of the Planning Area and increase the amount of daytime glare in existing urbanized areas. The General Plan Land Use Map identifies areas for the future development of residential, commercial, industrial, recreational, and public uses. Such uses may utilize materials that produce glare. Daytime glare impacts would be most severe in the limited areas of the city that have not been previously disturbed, including the limited number of vacant parcels designated for urbanized land uses, and in areas that receive a high level of daily viewership.

The primary sources of nighttime lighting are generally from exterior building lights, street lights, and vehicle headlights. Exterior lighting around commercial and industrial areas may be present throughout the night to facilitate extended employee work hours, ensure worker safety, and to provide security lighting around structures and facilities. Nighttime lighting impacts would be most severe in areas that do not currently experience high levels of nighttime lighting. Increased nighttime lighting can reduce visibility of the night sky, resulting in fewer stars being visible and generally detracting from the quality of life in Jackson. This is considered a potential impact, which would be minimized through the implementation of the policies and actions listed below.

Future development would be required to be consistent with the General Plan, as well as lighting and design requirements in the Jackson Municipal Code, including Chapter 17.43, Citywide Lighting Regulations. The proposed General Plan contains policies and actions, listed below, related to the regulation and reduction of daytime glare and nighttime lighting, including requirements that residential, commercial, and employment-generating projects are designed to address lighting and glare impacts. Through the implementation of these actions during the development review process, the City can ensure that adverse impacts associated with daytime glare and nighttime lighting are minimized and, thus would result in a **less than significant** impact.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

POLICIES

LU-2.2: Promote high-quality design and site planning that is compatible with surrounding development, public spaces, and natural and historical resources.

LU-2.3: Require that development is located and designed to ensure compatibility among land uses, addressing such elements as building orientation and setbacks; buffering; visibility and privacy; automobile and truck access; impacts of noise, lighting, and glare; landscape quality; and aesthetics.

ACTIONS

LU-2g: Conduct design review of all applicable projects and ensure consistency with the City's Design Standards; balance design considerations with the preservation of surrounding development, public spaces, and natural and historical resources.

LU-5a: Encourage land use decisions and design features for development or redevelopment in the downtown that:

- a. Enhance and restore historical resources;*
- b. Are compatible with and complementary to the historic feel of the downtown;*
- c. Provide thoughtful solutions to the existing lack of parking;*
- d. Provide sidewalks and other pedestrian-oriented amenities;*
- e. Increase landscaping for shading, beautification, and screening; and*
- f. Support efforts to keep the majority of County facilities in the downtown.*

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This section provides a background discussion of agricultural lands, agricultural resources, and forest/timber resources found in the Jackson Planning Area. This section is organized with an environmental setting, regulatory setting, and impact analysis.

No comments on this environmental topic were received during the NOP comment period.

3.2.1 ENVIRONMENTAL SETTING

AGRICULTURAL RESOURCES

The County’s Agricultural Commissioner’s most recent published Agricultural Reports (2017 and 2018) contains the following information relating to agriculture in the county.

The gross value of agricultural production in Amador County for 2019 was \$42,482,433 which represents a 18.3 percent decrease from 2018 when gross production value totaled \$52,018,609. Table 5.9-1 lists the top eight commodities in Amador County in 2018 and 2019.

TABLE 3.2-1: SUMMARY COMPARISON OF CROP VALUES

<i>PRODUCT TYPE</i>	<i>2018 Value in Dollars</i>	<i>2019 Value in Dollars</i>
Field Crops	\$6,445,174	\$6,816,876
Vegetable Crops	--	\$160,000
Fruit and Nut Crops	\$26,927,885	\$22,305,264
Nursery Products	--	\$205,887
Livestock and Poultry	\$15,118,771	\$13,000,100
Timber and Related Products	\$2,943,940	\$322,658
Apiary Products	\$18,620	\$43,350
Field Crops	\$6,445,174	\$6,816,876

SOURCE: AMADOR COUNTY AGRICULTURAL REPORT, 2018 AND 2019.

Agricultural Capability

The California Department of Conservation Farmland Mapping and Monitoring Program identifies lands that have agriculture value and maintains a statewide map of these lands called the Important Farmlands Inventory (IFI). IFI classifies land based upon the productive capabilities of the land, rather than the mere presence of ideal soil conditions.

The suitability of soils for agricultural use is just one factor for determining the productive capabilities of land. Suitability is determined based on many characteristics, including fertility, slope, texture, drainage, depth, and salt content. A variety of classification systems have been devised by the state to categorize soil capabilities. The two most widely used systems are the Capability Classification System and the Storie Index. The Capability Classification System classifies soils from Class I to Class VIII based on their ability to support agriculture with Class I being the highest quality soil. The Storie Index considers other factors such as slope and texture to arrive at a rating. The IFI is in part based upon both of these two classification systems.

3.2 AGRICULTURAL AND FOREST RESOURCES

Soil Capability Classification

The Soil Capability Classification System takes into consideration soil limitations, the risk of damage when soils are used, and the way in which soils respond to treatment. Capability classes range from Class 1 soils, which have few limitations for agriculture, to Class 8 soils that are unsuitable for agriculture. Generally, as the rating of the capability classification increases, yields and profits are more difficult to obtain. A general description of soil classifications, as defined by the Natural Resources Conservation Service (NRCS) is provided in Table 3.2-2 below.

A Custom Soil Survey was completed for the Planning Area using the NRCS Web Soil Survey program. Table 3.2-3 identifies the soils and soil classifications found in the Planning Area. The NRCS Soils Map is provided on Figure 3.6-2.

TABLE 3.2-2: SOIL CAPABILITY CLASSIFICATION

CLASS	DEFINITION
1	Soils have slight limitations that restrict their use.
2	Soils have moderate limitations that restrict choice plants or that require moderate conservation practices.
3	Soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.
4	Soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.
5	Soils are not likely to erode but have other limitations; impractical to remove that limits their use largely to pasture or range, woodland, or wildlife habitat.
6	Soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife habitat.
7	Soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife habitat.
8	Soils and landforms have limitations that preclude their use for commercial plans and restrict their use to recreation, wildlife habitat, water supply, or aesthetic purposes.

SOURCE: USDA SOIL CONSERVATION SERVICE.

TABLE 3.2-3: SOIL CLASSIFICATION

NAME	ACRES IN AOI	PERCENT OF AOI	CAPABILITY CLASSIFICATION*	STORIE INDEX
Argonaut very rocky loam, 3 to 31 percent slopes	0.1	0.0%	4-4	4
Auburn silt loam, 0 to 31 percent slopes	22.2	35.0%	4-4	4
Auburn very rocky silt loam, 3 to 31 percent slopes	776.5	0.6%	4-4	2
Auburn very rocky silt loam, 31 to 51 percent slopes	12.7	0.6%	6	2
Auburn very rocky silt loam, moderately deep, 3 to 31 percent slopes	74.2	3.3%	4-4	3
Auburn very rocky silt loam, moderately deep, 31 to 51 percent slopes	125.2	5.6%	6	2
Auburn extremely rocky silt loam, 3 to 31 percent slopes	7.9	0.4%	4	2

NAME	ACRES IN AOI	PERCENT OF AOI	CAPABILITY CLASSIFICATION*	STORIE INDEX
Auburn extremely rocky silt loam, moderately deep, 31 to 71 percent slopes	0.4	0.0%	7	4
Auburn-Argonaut very rocky silt loams, 3 to 31 percent slopes	162.8	7.3%	4	4
Exchequer and Auburn very rocky loams, 3 to 31 percent slopes	353.2	15.9%	7	--
Exchequer and Auburn very rocky loams, 31 to 51 percent slopes	11.5	0.5%	7	3
Josephine-Maymen complex, 16 to 51 percent slopes	8.0	0.4%	6	3
Loamy alluvial land	9.4	0.4%	7	5
Mariposa very rocky loam, 9 to 31 percent slopes	31.1	1.4%	4-4	2
Mariposa-Maymen complex, 16 to 51 percent slopes	91.3	4.1%	6	3
Maymen-Mariposa complex, 16 to 51 percent slopes	87.0	3.9%	7	1
Mine tailings and Riverwash	95.0	4.3%	7	4
Mixed alluvial land	86.6	3.9%	4-4	3
Mine pits	3.5	0.2%	--	2
Pardee cobbly loam, 3 to 31 percent slopes	137.4	6.2%	6	2
Placer diggings and Riverwash	118.4	5.3%	4-4	--
Water	2.5	0.1%	--	2
Total	2,217	100.0%	--	--

NOTES: AOI = AREA OF INTEREST. * DEPICTS IRRIGATED VS NON-IRRIGATED CAPABILITY RATING.

SOURCE: NRCS CUSTOM WEB SOIL SURVEY, 2020.

Important Farmlands

The Farmland Mapping and Monitoring Program (FMMP) is a farmland classification system administered by the California Department of Conservation. Important farmland maps are based on the Land Inventory and Monitoring criteria, which classify a land’s suitability for agricultural production based on both the physical and chemical characteristics of soils, and the actual land use. The system maps five categories of agricultural land, which include important farmlands (prime farmland, farmland of statewide importance, unique farmland, and farmland of local importance) and grazing land, as well as three categories of non-agricultural land, which include urban and built-up land, other land, and water area. Farmlands within the City of Jackson and vicinity are shown in Figure 3.2-1

The State of California Department of Conservation Farmland Mapping and Monitoring Program were used to identify the farmland characteristics for the Planning Area. The farmland classifications within the plan area are described below.

3.2 AGRICULTURAL AND FOREST RESOURCES

Farmland of Local Importance is land of importance to the local agricultural economy, as determined by each county's board of supervisors and a local advisory committee.

Grazing Land is land on which the existing vegetation is suited to the grazing of livestock. This category is used only in California and was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities.

Urban and Built-up Land includes Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

Other Land consists Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than forty acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

Water Area: This category consists of bodies of water.

Farmland Conservation

The Williamson Act authorizes each County to establish an agricultural preserve. Land that is within the agricultural preserve is eligible to be placed under a contract between the property owner and County that would restrict the use of the land to agriculture in exchange for a tax assessment that is based on the yearly production yield. The contracts have a 10-year term that is automatically renewed each year, unless the property owner requests a non-renewal or the contract is cancelled. If the contract is cancelled the property owner is assessed a fee of up to 12.5 percent of the property value. Approximately 18.64 acres of the city's SOI are identified as Non-Prime Agricultural Land under Williamson Act and shown in Figure 3.2-2.

FOREST RESOURCES

Forest land is defined by Public Resources Code Section 12220(g), and includes *"land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits."*

Timber land is defined by Public Resources Code Section 4526, and means *"land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis."*

There are no forest lands or timber lands located within the Jackson Planning Area.

3.2.2 REGULATORY SETTING

FEDERAL

Farmland Protection Policy Act

The Natural Resources Conservation Service (NRCS), an agency within the U.S. Department of Agriculture, is responsible for implementation of the Farmland Protection Policy Act (FPPA). The purpose of the FPPA is to minimize Federal programs' contribution to the conversion of farmland to non-agricultural uses by ensuring that Federal programs are administered in a manner that is compatible with state, local, and private programs designed to protect farmland. The NRCS provides technical assistance to Federal agencies, state and local governments, tribes, and nonprofit organizations that desire to develop farmland protection programs and policies. The NRCS summarizes FPPA implementation in an annual report to Congress.

Farm and Ranch Lands Protection Program

The NRCS administers the Farm and Ranch Lands Protection Program (FRPP), a voluntary program aimed at keeping productive farmland in agricultural uses. Under the FRPP, the NRCS provides matching funds to state, local, or tribal government entities and nonprofit organizations with existing farmland protection programs to purchase conservation easements. According to the 1996 Farm Bill, the goal of the program is to protect between 170,000 and 340,000 acres of farmland per year. Participating landowners agree not to convert the land to non-agricultural use and retain all rights to use the property for agriculture. A conservation plan must be developed for all lands enrolled based upon the standards contained in the NRCS Field Office Technical Guide. A minimum of 30 years is required for conservation easements and priority is given to applications with perpetual easements. The NRCS provides up to 50 percent of the fair market value of the easement being conserved (NRCS, 2004). To qualify for a conservation easement, farm or ranch land must meet several criteria. The land must be:

- Prime, Unique, or other productive soil, as defined by NRCS based on factors such as water moisture regimes, available water capacity, developed irrigation water supply, soil temperature range, acid-alkali balance, water table, soil sodium content, potential for flooding, erodibility, permeability rate, rock fragment content, and soil rooting depth;
- Included in a pending offer to be managed by a nonprofit organization, state, tribal, or local farmland protection program;
- Privately owned;
- Placed under a conservation plan;
- Large enough to sustain agricultural production;
- Accessible to markets for the crop that the land produces; and
- Surrounded by parcels of land that can support long-term agricultural production.

STATE

California Department of Conservation

The DOC administers and supports a number of programs, including the Williamson Act, the California Farmland Conservancy Program (CFCP), the Williamson Act Easement Exchange Program (WAEEP), and the FMMP. These programs are designed to preserve agricultural land and provide data on conversion of agricultural land to urban use. The DOC has authority for the approval of agreements entered into under the WAEEP. Key DOC tools available for land conservation planning are conservation grants, tax incentives to keep land in agriculture or open space, and farmland mapping and monitoring.

Williamson Act

The California Land Conservation Act, also known as the Williamson Act, was adopted in 1965 to encourage the preservation of the state's agricultural lands and to prevent their premature conversion to urban uses. In order to preserve these uses, the Act established an agricultural preserve contract procedure by which any county or city taxes landowners at a lower rate, using a scale based on the actual use of the land for agricultural purposes, as opposed to its unrestricted market value. In return, the owners guarantee that these properties remain under agricultural production for a 10-year period. The contract is self-renewing; however, the landowner may notify the county or city at any time of the intent to withdraw the land from its preserve status. There are two means by which the landowner may withdraw the land from its contract preserve status. First, the landowner may seek to cancel the contract. This takes the land out of the contract quickly with a minimal waiting period but the landowner pays a statutory penalty to the State. Second, the landowner may notice a non-renewal or seek a partial non-renewal of the contract. Land withdrawal through the non-renewal process involves a 9- or 10-year period (depending on the timing of the notice) of tax adjustment to full market value before protected open space can be converted to urban uses.

Williamson Act subvention payments to local governments have been suspended since the fiscal year 2009-10 due to the State's fiscal constraints. The Williamson Act contracts between landowners and local governments remain in force, regardless of the availability of subvention payments.

Farmland Security Zones

A Farmland Security Zone is an area created within an agricultural preserve by a board of supervisors (board) or city council (council) upon request by a landowner or group of landowners. An agricultural preserve defines the boundary of an area within which a city or county will enter into contracts with landowners. The boundary is designated by resolution of the board or council having jurisdiction. Agricultural preserves must generally be at least 100 acres in size. Farmland Security Zone contracts offer landowners greater property tax reduction. Land restricted by a Farmland Security Zone contract is valued for property assessment purposes at 65% of its Williamson Act valuation or 65% of its Proposition 13 valuation, whichever is lower.

Forest Practices Rules

The California Department of Forestry and Fire Protection (CalFire) implements the laws that regulate timber harvesting on privately-owned lands. These laws are contained in the Z'berg-Nejedly Forest Practice Act of 1973 which established a set of rules known as the Forest Practice Rules (FPRs) to be applied to forest management related activities (i.e., timber harvests, timberland conversions, fire hazard removal, etc.). They are intended to ensure that timber harvesting is conducted in a manner that will preserve and protect fish, wildlife, forests, and streams. Under the Forest Practice Act, a Timber Harvesting Plan (THP) is submitted to CalFire by the landowner outlining what timber is proposed to be harvested, harvesting method, and the steps that will be taken to prevent damage to the environment. If the landowner intends to convert timberland to non-timberland uses, such as a winery or vineyard, a Timberland Conversion Permit (TCP) is required in addition to the THP. It is CalFire's intent that a THP will not be approved which fails to adopt feasible mitigation measures or alternatives from the range of measures set out or provided for in the Forest Practice Rules, which would substantially lessen or avoid significant adverse environmental impacts resulting from timber harvest activities. THPs are required to be prepared by Registered Professional Foresters (RPFs) who are licensed to prepare these plans (CalFire, 2007). For projects involving TCPs, CalFire acts as lead agency under CEQA, and the county or city acts as a responsible agency.

LOCAL

Local Agency Formation Commission Boundary Controls

The Amador Local Agency Formation Commission (LAFCO) is responsible for coordinating orderly amendments to local jurisdictional boundaries, including annexations. Annexation to the City of Jackson would be subject to LAFCO approval, and LAFCO's decision is governed by state law (Gov't Code § 56001 et seq.) and the local LAFCO Policies and Procedures. State law requires LAFCOs to consider agricultural land and open space preservation in all decisions related to expansion of urban development. LAFCO's definition of Prime agricultural land refers to California Government Code Section 56064.3, which is described above under the State Regulatory Setting.

3.2.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on agricultural and forest resources if it will:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract;
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland zoned Timberland Production (as defined in Public Resources Code section 51104 (g));

3.2 AGRICULTURAL AND FOREST RESOURCES

- Result in the loss of forest land or conversion of forest land to non-forest use; or
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

There are no forest lands or timber lands located within the Jackson Planning Area. There are also no parcels that are currently zoned as forest land, timber, or timber production. Therefore, implementation of the proposed General Plan would have no impact on forest land, timber, or timber production and this impact will not be discussed further.

IMPACTS AND MITIGATION MEASURES

Impact 3.2-1: General Plan Implementation would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use (Less than Significant)

As shown on Figure 3.2-1, the Planning Area is designated as has Urban and Built-Up, Grazing Land, Farmland of Local Importance, and Other Land. While the proposed General Plan Land Use Map specifically identifies Open Space lands that would not be converted to urban uses, it also designates a range of planned development, residential, commercial, industrial, public/quasi-public, and other uses that could convert farmland to urban and built up land. Therefore, the proposed Jackson General Plan has the potential to convert farmland to non-agricultural uses. However, the proposed General Plan emphasizes and prioritizes infill development, logical growth extending outward from existing development, and establishes Urban Reserve areas as part of its strategy to preserve and protect the greatest amount of agricultural land feasible.

A large portion of the Planning Area is currently zoned for urban land uses (i.e., residential single family, multi-family, public and institutional, mixed use and commercial) and proposes zoning changes similar to the existing land uses. Land uses surrounding the Planning Area consist of light industrial, commercial general, commercial, open space, single family residential, rural residential, single family residential agricultural, limited agriculture, exclusive agriculture, and other similar land uses.

The proposed General Plan includes policies and action, identified below, that are intended to reduce the conversion of farmlands, including Prime Farmland, Unique Farmland, and Farmland of Statewide Importance, to non-agricultural uses. These include policies that encourage the development of vacant lands within City boundaries prior to conversion of agricultural lands and ensure that urban development near existing agricultural lands will not unnecessarily constrain agricultural practices or adversely affect the economic viability of nearby agricultural operations. Overall, the policies and actions included in the proposed General Plan are intended to support and preserve the agricultural heritage of Jackson as development continues to occur within the Planning Area.

The Jackson General Plan has taken a proactive approach towards focusing new growth and development towards infill locations, and protecting open space areas and agricultural lands

throughout the Planning Area to the greatest extent feasible. The applicable policies and actions that provide protection and preservation of agricultural lands are identified below. With implementation of the following policies, this is considered a **less than significant** impact.

GENERAL PLAN ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

POLICIES

LU 1.3: Encourage infill development and logical development patterns. The City should discourage leap-frog development and undue conversion of open space and agricultural lands. Jackson should encourage greater density of new development in the center core areas of the City and lesser density in the peripheral areas.

LU 1.4: Require an urban agricultural transition area for developments that are on the edge of the City. These urban agricultural transition areas may include fencing or other barriers as deemed appropriate depending upon the neighboring use.

COS 1.6: Maintain an urban agricultural transition area at the edge of the City to serve as an urban/rural separator, minimize conflicts between land uses, and provide public open space.

COS 1.7: Encourage the maintenance of existing agricultural lands as open space conservation areas.

COS 3.1: Preserve and enhance biological communities that contribute to the City's and the region's biodiversity including, but not limited to, grasslands, wetlands, vernal pools, riparian areas, aquatic habitat, oak woodlands, and agricultural lands.

ACTIONS

COS-1b: Work with the Local Agency Formation Commission (LAFCO) on issues of mutual concern including the conservation of open space and agricultural land through consistent use of LAFCO policies, particularly those related to conversion of agricultural lands and establishment of adequate buffers between agricultural and non-agricultural uses, and the designation of a reasonable and logical Sphere of Influence (SOI) boundary for the City.

Impact 3.2-2: General Plan Implementation would not conflict with existing zoning for agricultural use, or a Williamson Act Contract (Less than Significant)

While lands within the City are not zoned for agricultural use, areas adjacent to the planning area includes lands zoned for agricultural use by Amador County. These include lands that are designated as Agricultural General (AG) and Agricultural Transition (AT) by the Amador County General Plan and zoned for Agriculture uses. However, the proposed General Plan does designate an additional existing agricultural parcel zoned by the county to a non-agricultural use. The area outside the City's limit in the SOI are primarily designated Urban Reserve. Therefore, implementation of the General Plan will not have the potential to conflict with lands zoned for agricultural uses. The Planning Area also includes lands that are under a Williamson Act Contract. Under the proposed General Plan Land Use Map, the approximately 18.64 acres of Non-Prime Agricultural Land Williamson Act Contract land, located outside the city limits and within the City's SOI, will remain undesignated by the proposed Land Use Map and are not proposed to be designated to an urban or non-agricultural use. Therefore, the implementation of the proposed

3.2 AGRICULTURAL AND FOREST RESOURCES

General Plan would not conflict with existing Williamson Act Contracts because it would not result in non-agricultural uses being allowed on the existing Contract land. As a result, the proposed project would result in a less than significant impact on existing Williamson Act Contract land.

The proposed General Plan includes policies and actions, listed previously under Impact 3.1-1, that are intended to reduce conflict between existing agricultural and Williamson Act lands with new development as a result of the proposed General Plan. These include policies which help explicitly minimize conflicts between agricultural and urban land uses including promoting the establishment of adequate buffers between agricultural and urban land uses. Therefore, implementation of the proposed General Plan would result in a *less than significant* impact.

Impact 3.2-3: General Plan implementation would not result in the loss of forest land or conversion of forest land to non-forest use (No Impact)

The Planning Area does not contain parcels designated as forest land and the proposed General Plan does not propose uses that would convert existing forest land to non-forest use. Therefore, the project would result in *no impact* regarding the loss of forest land or conversion of forest land to non-forest use.

Impact 3.2-4: General Plan implementation would involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use (Significant and Unavoidable)

As discussed in Impact 3.2-1, future development in accordance with the proposed General Plan could result in the conversion of existing farmland to a non-agricultural use. Future development in areas within the Planning Area may involve other changes in the existing environment that could result in the conversion of farmland. However, as mentioned previously the proposed General Plan includes policies which would reduce the impact of development resulting in the conversion of existing farmland. This includes policies which encourage agricultural land uses in areas outside of Jackson while supporting the continuation of agricultural operations and activities on lands adjacent to the SOI and with the City and SOI.

Furthermore, although the Planning Area does not include any designated Prime Farmlands the Planning Area does contain prime soil types as defined by the California Department of Conservation, Agricultural Conservation and Mitigation Program. According to the Agricultural Conservation and Mitigation Program Farmland shall be considered prime farmland if it meets the definition of "prime agricultural land" in Government Code Section 51201. Government Code Section 51201 states that prime agricultural land means any of the following:

- (1) All land that qualifies for rating as class I or class II in the Natural Resource Conservation Service land use capability classifications.
- (2) Land which qualifies for rating 80 through 100 in the Storie Index Rating.
- (3) Land which supports livestock used for the production of food and fiber and which has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture.

- (4) Land planted with fruit- or nut-bearing trees, vines, bushes, or crops which have a nonbearing period of less than five years and which will normally return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than two hundred dollars (\$200) per acre.
- (5) Land which has returned from the production of unprocessed agricultural plant products an annual gross value of not less than two hundred dollars (\$200) per acre for three of the previous five years.

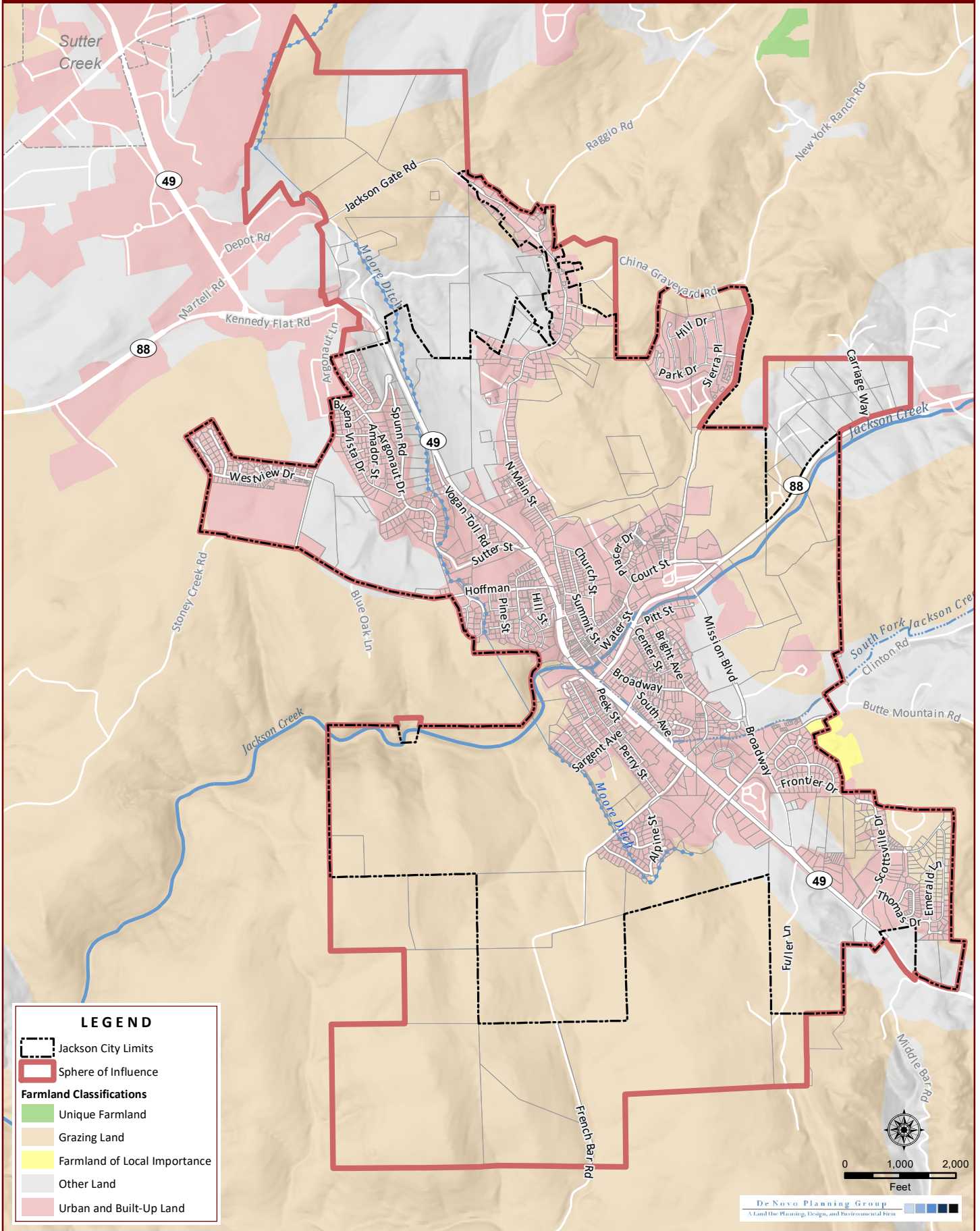
As described in Table 3.2-3, a majority of the soils within the Planning Area have a capability classification higher than class 3 or 4 which does not qualify as prime agricultural land under the Agricultural Conservation and Mitigation Program. However, the majority of soils have a storie index of 2, which correlates to a rating of 60-80, meaning soils within the Planning Area may be suitable for most crops, but have minor limitations that narrow the choice of crops, have a few special management needs and could potentially qualify as prime agricultural land as defined by the Agricultural Conservation and Mitigation Program. In addition, a small portion of the planning area (approximately 87.0 acres or 3.9 percent of the planning area) have a storie index of 1, which correlates to a rating of 80-100, which qualifies as prime agricultural land as defined by the Agricultural Conservation and Mitigation Program.

Additionally, lands within the planning area are designated for, or are suitable for grazing activities. As such, conversion of farmland as a result of Plan implementation is considered a ***potentially significant*** impact.

As described above, implementation of the Jackson General Plan may lead to the conversion of Farmland, including grazing lands and land which may contain prime soil characteristics, to non-agricultural uses due to changes in the environment within the planning area. The policies and actions listed under impact 3.2-1 would minimize this impact, however, this impact would remain a **significant and unavoidable** impact.

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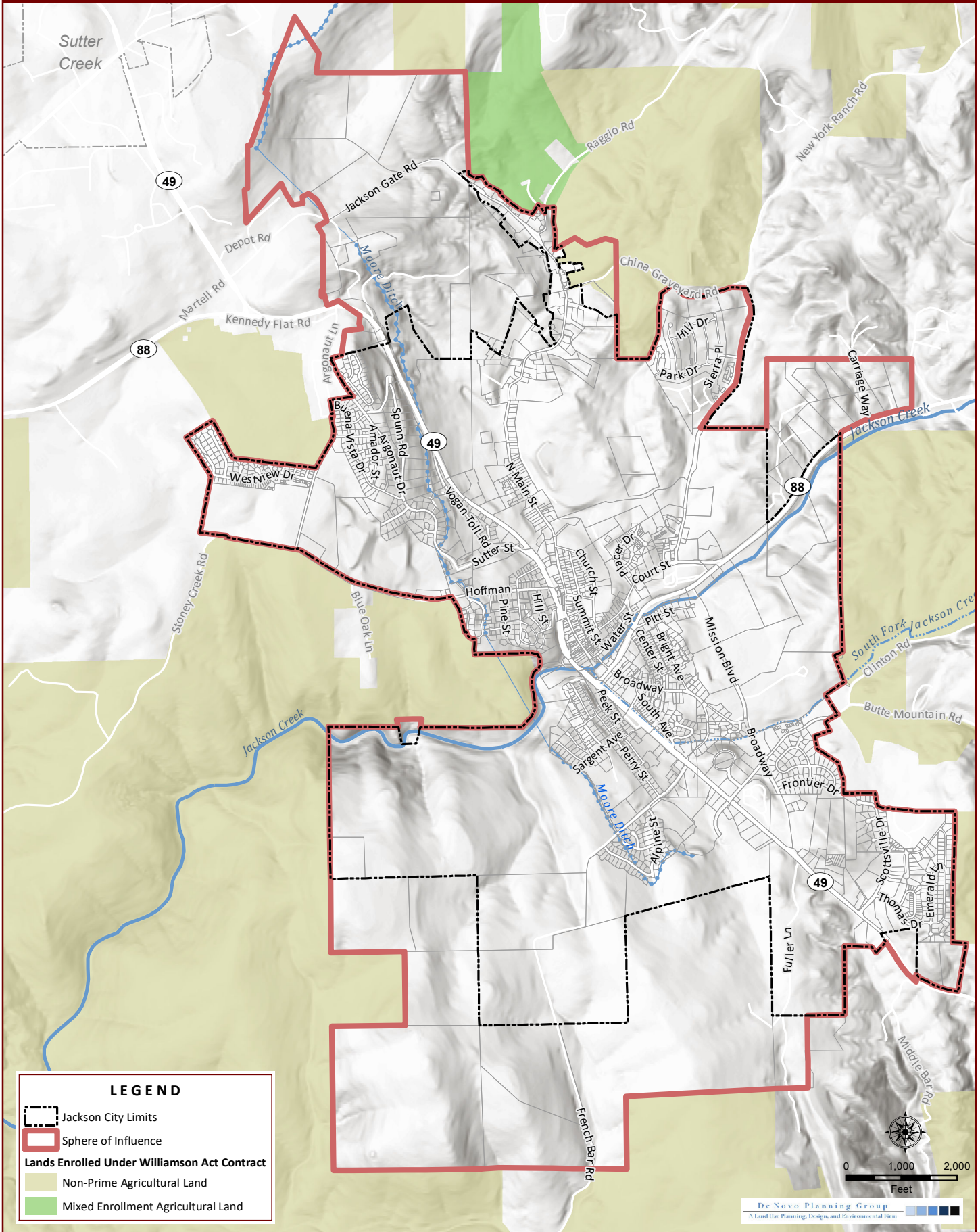
Figure 3.2-1. Farmlands



Sources: California Department of Conservation, Division of Land Resource Protection, Amador County 2016, City of Jackson; ACTC; ArcGIS Online World Elevation/Terrain Image Service. Map date: April 13, 2021.

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Figure 3.2-2. Williamson Act Lands



Sources: California Department of Conservation, Division of Land Resource Protection, 2017, City of Jackson; ACTC, ArcGIS Online World Elevation/Terrain Image Service. Map date: April 13, 2021.

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This section describes the regional air quality, current attainment status of the applicable air basin, local sensitive receptors, emission sources, and impacts that are likely to result from proposed project implementation.

No comments were received during the NOP comment period regarding this environmental topic.

3.3.1 ENVIRONMENTAL SETTING

Mountain Counties Air Basin (MCAB)

The Mountain Counties Air Basin (MCAB) is comprised of Plumas, Sierra, Nevada, Placer (middle portion), El Dorado (western portion), Amador, Calaveras, Tuolumne, and Mariposa Counties. The MCAB lies along the northern Sierra Nevada mountain range, close to or contiguous with the Nevada border, and covers an area of roughly 11,000 square miles. The California air basins are shown as Figure 3.3-1.

Topography

The MCAB, an area of approximately 11,000 square miles, consists of Plumas, Sierra, Nevada, Amador, Calaveras, Tuolumne, and Mariposa counties, in addition to the west slope of El Dorado County and the central portion of Placer County. The majority of the MCAB is located in the northern Sierra Nevada area with the western boundary of the basin extending into the Sacramento Valley. The topography in the MCAB is quite variable because of mountain peaks and valleys that differ substantially in elevation from approximately 100 to 10,000 feet.

Climate & Precipitation

The climate of the MCAB is influenced by the foothill and mountainous terrain unique to the counties included in the MCAB. The general climate of the MCAB varies considerably with elevation and proximity to the Sierra ridge. The terrain features of the MCAB make it possible for various climates to exist in relatively close proximity. The pattern of mountains and hills causes a wide variation in rainfall, temperature, and localized winds throughout the MCAB. Temperature variations have an important influence on basin wind flow, dispersion along mountain ridges, vertical mixing, and photochemistry.

In the winter, the Sierra Nevada Range receives large amounts of precipitation from storms moving in from the Pacific. In the summer, it receives lighter amounts of precipitation from intermittent “monsoonal” moisture flows from the south and cumulus buildup. Precipitation levels are high in the highest mountain elevations but decline rapidly toward the western portion of the MCAB. Winter temperatures in the mountains can be below freezing for weeks at a time and substantial depths of snow can accumulate, but in the western foothills, winter temperatures rarely dip below freezing and precipitation is mixed as rain or light snow. In the summer, temperatures in the mountains are mild, with daytime peaks in the 70s to low 80s F, while temperatures in the western end of El Dorado County can routinely exceed 100 F.

The annual temperature, humidity, precipitation, and wind patterns reflect the topography of the MCAB and the strength and location of a semi-permanent, subtropical high-pressure cell. The Amador area generally has warm, dry summers and mild winters. During the summer, in the western portion of the MCAB, temperatures that often exceed 100°F coupled with clear sky conditions are favorable for ozone formation. Temperatures of more than 100 degrees F occur every year, and temperatures drop below freezing during winter months. The seasonal rain totals range from less than 20 inches at lower elevations to more than 40 inches at higher elevations (National Climatic Data Center). In the lower foothills region surrounding the site, there is little snowfall, but at higher elevations, the amount of snowfall is fairly large.

Seasonal Pollution Variations

Due to the combination of topography and meteorology of the MCAB, local conditions predominate in determining the effect of emissions in the MCAB. Regional air flows are affected by the mountains and hills, which direct surface air flows, cause shallow vertical mixing and hinder dispersion, creating areas of high pollutant concentrations. Inversion layers, in which warm air overlays cooler air, frequently occur and trap pollutants close to the ground. In the winter, these conditions can lead to CO “hotspots” along heavily traveled roads and at busy intersections. During summer’s longer daylight hours, stagnant air, high temperatures, and plentiful sunshine provide the conditions and energy necessary for the photochemical reaction between reactive organic compounds (ROG) and oxides of nitrogen (NOx). This reaction results in the formation of ozone (O3). Because of its long formation time, ozone is a regional pollutant rather than a local hotspot problem.

In the summer, the strong upwind valley air flowing into the MCAB from the Central Valley to the west is an effective transport medium for ozone precursors and for ozone generated in the Bay Area and the Sacramento and San Joaquin Valleys. These transported pollutants are the predominant cause of ozone in the MCAB and are largely responsible for the exceedances of the State and federal ozone Ambient Air Quality Standards (AAQS) in the MCAB. The California Air Resources Board (ARB) has officially designated the MCAB as “ozone impacted” due to transport from those areas.

Sunlight

The presence and intensity of sunlight are necessary prerequisites for the formation of photochemical smog. Under the influence of the ultraviolet radiation of sunlight, certain original or “primary” pollutants (mainly reactive hydrocarbons and oxides of nitrogen) react to form “secondary” pollutants (primarily oxidants). Since this process is time dependent, secondary pollutants can be formed many miles downwind from the emission sources. Because of the prevailing daytime winds and time delayed nature of photochemical smog, oxidant concentrations are highest in the inland areas of California.

Temperature Inversions

A temperature inversion is a reversal in the normal decrease of temperature as altitude increases. In most parts of the country, air near ground level is warmer than the air above it. Semi-

permanent systems of high barometric pressure fronts establish themselves over the basin, deflecting low-pressure systems that might otherwise bring cleansing rain and winds. The height of the base of the inversion is known as the "mixing height" and controls the volume of air available for the mixing and dispersion of air pollutants.

The interrelationship of air pollutants and climatic factors are most critical on days of greatly reduced atmospheric ventilation. On days such as these, air pollutants accumulate because of the simultaneous occurrence of three favorable factors: low inversions, low maximum mixing heights and low wind speeds. Although these conditions may occur throughout the year, the months of July, August and September generally account for more than 40 percent of these occurrences.

The potential for high contaminant levels varies seasonally for many contaminants. During late spring, summer, and early fall, light winds, low mixing heights, and sunshine combine to produce conditions favorable for the maximum production of oxidants, mainly ozone. When strong surface inversions are formed on winter nights, especially during the hours before sunrise, coupled with near-calm winds, carbon monoxide from automobile exhausts becomes highly concentrated. The highest yearly concentrations of carbon monoxide and oxides of nitrogen are measured during November, December and January.

CRITERIA POLLUTANTS

All criteria pollutants can have human health and environmental effects at certain concentrations. The United States Environmental Protection Agency (U.S. EPA) uses six "criteria pollutants" as indicators of air quality and has established for each of them a maximum concentration above which adverse effects on human health may occur. These threshold concentrations are called National Ambient Air Quality Standards (NAAQS). In addition, California establishes ambient air quality standards, called California Ambient Air Quality Standards (CAAQS). California law does not require that the CAAQS be met by a specified date as is the case with NAAQS.

The ambient air quality standards for the six criteria pollutants (as shown in Table 3.3-1) are set to public health and the environment within an adequate margin of safety (as provided under Section 109 of the Federal Clean Air Act). Epidemiological, controlled human exposure, and toxicology studies evaluate potential health and environmental effects of criteria pollutants, and form the scientific basis for new and revised ambient air quality standards. Principal characteristics and possible health and environmental effects from exposure to the six primary criteria pollutants generated by the project are discussed below.

Ozone (O₃) is a photochemical oxidant and the major component of smog. While O₃ in the upper atmosphere is beneficial to life by shielding the earth from harmful ultraviolet radiation from the sun, high concentrations of O₃ at ground level are a major health and environmental concern. O₃ is not emitted directly into the air but is formed through complex chemical reactions between precursor emissions of volatile organic compounds (ROG) and oxides of nitrogen (NO_x) in the presence of sunlight. These reactions are stimulated by sunlight and temperature so that peak O₃ levels occur typically during the warmer times of the year. Both ROGs and NO_x are emitted by transportation and industrial sources. ROGs are emitted from sources as diverse as autos, chemical

manufacturing, dry cleaners, paint shops and other sources using solvents. Relatedly, reactive organic compounds (ROG) are defined as the subset of ROG that are reactive enough to contribute substantially to atmospheric photochemistry.

The reactivity of O₃ causes health problems because it damages lung tissue, reduces lung function and sensitizes the lungs to other irritants. Scientific evidence indicates that ambient levels of O₃ not only affect people with impaired respiratory systems, such as asthmatics, but healthy adults and children as well. Exposure to O₃ for several hours at relatively low concentrations has been found to significantly reduce lung function and induce respiratory inflammation in normal, healthy people during exercise. This decrease in lung function generally is accompanied by symptoms including chest pain, coughing, sneezing and pulmonary congestion.

Studies show associations between short-term ozone exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to ozone may increase the risk of respiratory-related deaths (U.S. EPA, 2019a). The concentration of ozone at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding no symptoms to the least responsive individual after a 2-hour exposure to 400 parts per billion of ozone and a 50 percent decrement in forced airway volume in the most responsive individual. Although the results vary, evidence suggest that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum ozone concentration reaches 80 parts per billion (U.S. EPA, 2019b). The average background level of ozone in the California and Nevada is approximately 48.3 parts per billion, which represents approximately 77 percent of the total ozone in the western region of the U.S. (NASA, 2015).

In addition to human health effect, ozone has been tied to crop damage, typically in the form of stunted growth, leaf discoloration, cell damage, and premature death. O₃ can also act as a corrosive and oxidant, resulting in property damage such as the degradation of rubber products and other materials.

Carbon monoxide (CO) is a colorless, odorless and poisonous gas produced by incomplete burning of carbon in fuels. Carbon monoxide is harmful because it binds to hemoglobin in the blood, reducing the ability of blood to carry oxygen. This interferes with oxygen delivery to the body's organs. The most common effects of CO exposure are fatigue, headaches, confusion, and dizziness due to inadequate oxygen delivery to the brain. For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress. Inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies whose mothers experience high levels of CO exposure during pregnancy are at risk of adverse developmental effects. Exposure to CO at high concentrations can also cause fatigue, headaches, confusion, dizziness, and chest pain. There are no ecological or environmental effects to ambient CO (CARB, 2019a).

Very high levels of CO are not likely to occur outdoors. However, when CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease. These

people already have a reduced ability for getting oxygenated blood to their hearts in situations where the heart needs more oxygen than usual. They are especially vulnerable to the effects of CO when exercising or under increased stress. In these situations, short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain also known as angina (U.S. EPA, 2016). Such acute effects may occur under current ambient conditions for some sensitive individuals, while increases in ambient CO levels increases the risk of such incidences.

Nitrogen oxides (NO_x) is a brownish, highly reactive gas that is present in all urban atmospheres. The main effect of increased NO₂ is the increased likelihood of respiratory problems. Under ambient conditions, NO₂ can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections. Nitrogen oxides are an important precursor both to ozone (O₃) and acid rain and may affect both terrestrial and aquatic ecosystems. Longer exposures to elevated concentrations of NO₂ may contribute to the development of asthma and potentially increase susceptibility to respiratory infections. People with asthma, as well as children and the elderly are generally at greater risk for the health effects of NO₂.

The major mechanism for the formation of NO₂ in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NO_x). NO_x plays a major role, together with ROG_s, in the atmospheric reactions that produce O₃. NO_x forms when fuel is burned at high temperatures. The two major emission sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers.

Sulfur dioxide (SO₂) is one of the multiple gaseous oxidized sulfur species and is formed during the combustion of fuels containing sulfur, primarily coal and oil. The largest anthropogenic source of SO₂ emissions in the U.S. is fossil fuel combustion at electric utilities and other industrial facilities. SO₂ is also emitted from certain manufacturing processes and mobile sources, including locomotives, large ships, and construction equipment.

SO₂ affects breathing and may aggravate existing respiratory and cardiovascular disease in high doses. Sensitive populations include asthmatics, individuals with bronchitis or emphysema, children and the elderly. SO₂ is also a primary contributor to acid deposition, or acid rain, which causes acidification of lakes and streams and can damage trees, crops, historic buildings and statues. In addition, sulfur compounds in the air contribute to visibility impairment in large parts of the country. This is especially noticeable in national parks. Ambient SO₂ results largely from stationary sources such as coal and oil combustion, steel mills, refineries, pulp and paper mills and from nonferrous smelters.

Short-term exposure to ambient SO₂ has been associated with various adverse health effects. Multiple human clinical studies, epidemiological studies, and toxicological studies support a causal relationship between short-term exposure to ambient SO₂ and respiratory morbidity. The observed health effects include decreased lung function, respiratory symptoms, and increased emergency department visits and hospitalizations for all respiratory causes. These studies further suggest that people with asthma are potentially susceptible or vulnerable to these health effects. In addition, SO₂ reacts with other air pollutants to form sulfate particles, which are constituents of fine particulate matter (PM_{2.5}). Inhalation exposure to PM_{2.5} has been associated with various

cardiovascular and respiratory health effects (U.S. EPA, 2017). Increased ambient SO₂ levels would lead to increased risk of such effects.

SO₂ emissions that lead to high concentrations of SO₂ in the air generally also lead to the formation of other sulfur oxides (SO_x). SO_x can react with other compounds in the atmosphere to form small particles. These particles contribute to particulate matter (PM) pollution. Small particles may penetrate deeply into the lungs and in sufficient quantity can contribute to health problems.

Particulate matter (PM) includes dust, dirt, soot, smoke and liquid droplets directly emitted into the air by sources such as factories, power plants, cars, construction activity, fires and natural windblown dust. Particles formed in the atmosphere by condensation or the transformation of emitted gases such as SO₂ and ROG_s are also considered particulate matter. PM is generally categorized based on the diameter of the particulate matter: PM₁₀ is particulate matter 10 micrometers or less in diameter (known as respirable particulate matter), and PM_{2.5} is particulate matter 2.5 micrometers or less in diameter (known as fine particulate matter).

Based on studies of human populations exposed to high concentrations of particles (sometimes in the presence of SO₂) and laboratory studies of animals and humans, there are major effects of concern for human health. These include effects on breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular disease, alterations in the body's defense systems against foreign materials, damage to lung tissue, carcinogenesis and premature death. Small particulate pollution causes health impacts even at very low concentrations – indeed no threshold has been identified below which no damage to health is observed.

Respirable particulate matter (PM₁₀) consists of small particles, less than 10 microns in diameter, of dust, smoke, or droplets of liquid which penetrate the human respiratory system and cause irritation by themselves, or in combination with other gases. Particulate matter is caused primarily by dust from grading and excavation activities, from agricultural activities (as created by soil preparation activities, fertilizer and pesticide spraying, weed burning and animal husbandry), and from motor vehicles, particularly diesel-powered vehicles. PM₁₀ causes a greater health risk than larger particles, since these fine particles can more easily penetrate the defenses of the human respiratory system.

PM_{2.5} consists of fine particles, which are less than 2.5 microns in size. Similar to PM₁₀, these particles are primarily the result of combustion in motor vehicles, particularly diesel engines, as well as from industrial sources and residential/agricultural activities such as burning. It is also formed through the reaction of other pollutants. As with PM₁₀, these particulates can increase the chance of respiratory disease, and cause lung damage and cancer. In 1997, the U.S. EPA created new Federal air quality standards for PM_{2.5}.

The major subgroups of the population that appear to be most sensitive to the effects of particulate matter include individuals with chronic obstructive pulmonary or cardiovascular disease or influenza, asthmatics, the elderly and children. Particulate matter also impacts soils and damages materials and is a major cause of visibility impairment.

Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms. Studies show that every 1 microgram per cubic meter reduction in PM_{2.5} results in a one percent reduction in mortality rate for individuals over 30 years old (Bay Area Air Quality Management District, 2017). Long-term exposures, such as those experienced by people living for many years in areas with high particle levels, have been associated with problems such as reduced lung function and the development of chronic bronchitis – and even premature death. Additionally, depending on its composition, both PM₁₀ and PM_{2.5} can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain (U.S. EPA, 2019c).

Lead (Pb) exposure can occur through multiple pathways, including inhalation of air and ingestion of Pb in food, water, soil or dust. Once taken into the body, lead distributes throughout the body in the blood and is accumulated in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems and the cardiovascular system. Lead exposure also affects the oxygen carrying capacity of the blood. Excessive Pb exposure can cause seizures, mental retardation and/or behavioral disorders. Low doses of Pb can lead to central nervous system damage. Recent studies have also shown that Pb may be a factor in high blood pressure and subsequent heart disease.

Lead is persistent in the environment and can be added to soils and sediments through deposition from sources of lead air pollution. Other sources of lead to ecosystems include direct discharge of waste streams to water bodies and mining. Elevated lead in the environment can result in decreased growth and reproductive rates in plants and animals, and neurological effects in vertebrates.

Lead exposure is typically associated with industrial sources; major sources of lead in the air are ore and metals processing and piston-engine aircraft operating on leaded aviation fuel. Other sources are waste incinerators, utilities, and lead-acid battery manufacturers. The highest air concentrations of lead are usually found near lead smelters. As a result of the U.S. EPA's regulatory efforts, including the removal of lead from motor vehicle gasoline, levels of lead in the air decreased by 98 percent between 1980 and 2014 (U.S. EPA, 2019d). Based on this reduction of lead in the air over this period, and since most new developments do not generate an increase in lead exposure, the health impacts of ambient lead levels are not typically monitored by the California Air Resources Board (CARB).

AMBIENT AIR QUALITY STANDARDS

Both the U.S. Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants. These ambient air quality standards represent safe levels of contaminants that avoid specific adverse health effects associated with each pollutant.

The federal and California state ambient air quality standards are summarized in Table 3.3-1 for important pollutants. The federal and state ambient standards were developed independently,

3.3 AIR QUALITY

although both processes attempted to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent. This is particularly true for ozone and particulate matter between 2.5 and 10 microns in diameter (PM₁₀).

The U.S. Environmental Protection Agency established new national air quality standards for ground-level ozone and for fine particulate matter in 1997. The 1-hour ozone standard was phased out and replaced by an 8-hour standard of 0.075 PPM. Implementation of the 8-hour standard was delayed by litigation, but was determined to be valid and enforceable by the U.S. Supreme Court in a decision issued in February of 2001. In April 2005, the Air Resources Board approved a new eight-hour standard of 0.070 ppm and retained the one-hour ozone standard of 0.09 after an extensive review of the scientific literature. The U.S. EPA signed a final rule for the Federal ozone eight-hour standard of 0.070 ppm on October 1, 2015, and was effective as of December 28, 2015.

TABLE 3.3-1: FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS

POLLUTANT	AVERAGING TIME	FEDERAL PRIMARY STANDARD	STATE STANDARD
Ozone	1-Hour	--	0.09 ppm
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.03 ppm
	1-Hour	0.100 ppm	0.18 ppm
Sulfur Dioxide	Annual	0.03 ppm	--
	24-Hour	0.14 ppm	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
PM ₁₀	Annual	--	20 ug/m ³
	24-Hour	150 ug/m ³	50 ug/m ³
PM _{2.5}	Annual	12 ug/m ³	12 ug/m ³
	24-Hour	35 ug/m ³	--
Lead	30-Day Avg.	--	1.5 ug/m ³
	3-Month Avg.	0.15 ug/m ³	--

NOTES: PPM = PARTS PER MILLION, $\mu\text{G}/\text{M}^3$ = MICROGRAMS PER CUBIC METER

SOURCES: CALIFORNIA AIR RESOURCES BOARD, 2023.

In 1997, new national standards for fine particulate matter diameter 2.5 microns or less (PM_{2.5}) were adopted for 24-hour and annual averaging periods. The current PM₁₀ standards were to be retained, but the method and form for determining compliance with the standards were revised.

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated despite the absence of criteria documents. The identification, regulation and monitoring of TACs is relatively recent compared to that for criteria pollutants. Unlike criteria pollutants, TACs are regulated on the basis of risk rather than specification of safe levels of contamination.

Existing air quality concerns within the project area is related to increases of regional criteria air pollutants (e.g., ozone and particulate matter), exposure to toxic air contaminants, odors, and increases in greenhouse gas emissions contributing to climate change. The primary source of ozone (smog) pollution is motor vehicles which account for 70 percent of the ozone in the region.

Particulate matter is caused by dust, primarily dust generated from construction and grading activities, and smoke which is emitted from fireplaces, wood-burning stoves, and agricultural burning.

Attainment Status

In accordance with the California Clean Air Act (CCAA), the CARB is required to designate areas of the state as attainment, nonattainment, or unclassified with respect to applicable standards. An “attainment” designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A “nonattainment” designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria.

Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with extreme nonattainment being the most severe of the classifications. An “unclassified” designation signifies that the data do not support either an attainment or nonattainment status. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The U.S. EPA designates areas for ozone, CO, and NO₂ as “does not meet the primary standards,” “cannot be classified,” or “better than national standards.” For SO₂, areas are designated as “does not meet the primary standards,” “does not meet the secondary standards,” “cannot be classified,” or “better than national standards.” However, the CARB terminology of attainment, nonattainment, and unclassified is more frequently used.

Amador County has a State designation of nonattainment for O₃ and is either Unclassified or Attainment for all other criteria pollutants. The County has a national designation of Nonattainment for O₃ and PM_{2.5}. The County is designated nonattainment for O₃ and is either attainment or unclassified for the remaining national standards. Table 3.3-2 presents the State and national attainment status for Amador County.

TABLE 3.3-2: STATE AND NATIONAL ATTAINMENT STATUS

<i>CRITERIA POLLUTANTS</i>	<i>STATE DESIGNATIONS</i>	<i>NATIONAL DESIGNATIONS</i>
Ozone	Nonattainment	Nonattainment
PM ₁₀	Unclassified	Unclassified
PM _{2.5}	Unclassified	Unclassified
Carbon Monoxide	Unclassified	Unclassified/Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified/Attainment
Sulfates	Attainment	
Lead	Attainment	
Hydrogen Sulfide	Unclassified	
Visibility Reducing Particles	Unclassified	

SOURCE: CALIFORNIA AIR RESOURCES BOARD (2023). WWW.ARB.CA.GOV/DESIG/ADM/ADM.HTM

3.3 AIR QUALITY

Mountain Counties Air Basin Monitoring

The MCAB consists of nine counties, from Plumas in the north to Mariposa County in the south. CARB maintains numerous air quality monitoring sites throughout each County in the Air Basin to measure O₃. It is important to note that the Federal ozone 1-hour standard was revoked by the EPA and is no longer applicable for Federal standards. Data obtained from the MCAB monitoring sites over the last 3-year period is shown in Table 3.3-3.

TABLE 3.3-3: MCAB AMBIENT AIR QUALITY MONITORING DATA SUMMARY - OZONE

Year	Days > Standard				1-Hour Observations			8-Hour Averages				Year Coverage	
	State		National		Max.	State	Nat'l	State		National			
	1-Hr	8-Hr	1-Hr	8-Hr		D.V. ¹	D.V. ²	Max.	D.V. ¹	Max.	D.V. ²	Min	Max
2021	11	53	0	49	0.104	0.104	0.102	0.097	0.123	0.096	0.081	63	100
2020	3	39	1	36	0.129	0.129	0.11	0.096	0.123	0.122	0.084	70	100
2019	1	16	0	15	0.102	0.102	0.11	0.1016	0.102	0.077	0.085	96	100

NOTES: ALL CONCENTRATIONS EXPRESSED IN PARTS PER MILLION. THE NATIONAL 1-HOUR OZONE STANDARD WAS REVOKED IN JUNE 2005 AND IS NO LONGER IN EFFECT. STATISTICS RELATED TO THE REVOKED STANDARD ARE SHOWN IN ITALICS. D.V.¹ = STATE DESIGNATION VALUE. D.V.² = NATIONAL DESIGN VALUE.

SOURCE: CALIFORNIA AIR RESOURCES BOARD (AEROMETRIC DATA ANALYSIS AND MANAGEMENT SYSTEM OR IADAM) AIR POLLUTION SUMMARIES.

Mountain Counties Air Quality Monitoring

AAD and CARB maintain one air quality monitoring site in Amador County that collect data for O₃, the Jackson-Clinton Road monitoring site. The Federal ozone 1-hour standard was revoked by the EPA in 2005, but subsequent litigation reinstated portions of implementation requirements under the revoked standard. As a result, the AAD adopted the 2013 Plan for the Revoked 1-Hour Ozone Standard in September 2013 to address the reinstated requirements for this standard. Data obtained from the monitoring sites between 2019 through 2021 is shown in Tables 3.3-4.

TABLE 3.3-4: AMBIENT AIR QUALITY MONITORING DATA (JACKSON-CLINTON)

Pollutant	Cal.	Fed.	Year	Max Concentration	Days Exceeded State/Fed Standard
	Primary Standard				
Ozone (O ₃) (1-hour)	0.09 ppm for 1 hour	NA	2021	0.094	0/0
			2020	0.109	2/0
			2019	0.084	0/0
Ozone (O ₃) (8-hour)	0.07 ppm for 8 hour	0.07 ppm for 8 hour	2021	0.081	6/4
			2020	0.089	3/3
			2019	0.076	2/2
Particulate Matter (PM ₁₀)**	50 ug/m ³ for 24 hours	150 ug/m ³ for 24 hours	2021	118.0	8/0
			2020	79.6	43/14
			2019	181.7	*/*
Fine Particulate Matter (PM _{2.5})**	No 24 hour State Standard	35 ug/m ³ for 24 hours	2021	31.8	29/21
			2020	31.1	40/13
			2019	55.2	17/10

SOURCES: CALIFORNIA AIR RESOURCES BOARD (ADAM) AIR POLLUTION SUMMARIES, 2019-2021.

NOTES:

PPM = PARTS PER MILLION.

UG/M3 = MICRONS PER CUBIC METER.

NA= NOT APPLICABLE

**= THERE WAS INSUFFICIENT (OR NO) DATA AVAILABLE TO DETERMINE THE VALUE*

***= THERE WAS NO DATA FOR PM₁₀ OR PM_{2.5} AVAILABLE AT ANY NEARBY MONITORING STATION, INCLUDING THE JACKSON-CLINTON MONITORING STATION. THEREFORE, DATA FROM THE MOUNTAIN COUNTIES AIR BASIN WAS UTILIZED FOR PM₁₀ AND PM_{2.5}.*

ODORS

Typically, odors are 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).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell 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; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another.

It is also important to note that 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.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air.

When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

SENSITIVE RECEPTORS

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases. A sensitive receptor is a location where human populations, especially children, seniors, and sick persons, are present and where there is a reasonable expectation of continuous human exposure to pollutants. Examples of sensitive receptors include residences, hospitals, and schools. The closest sensitive receptors to the Planning Area include existing residences and other sensitive receptors such as schools that located within the Planning Area itself.

3.3.2 REGULATORY SETTING

FEDERAL

Clean Air Act

The Federal Clean Air Act (FCAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The FCAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: NAAQS for criteria air pollutants, hazardous air pollutant standards, state attainment plans, motor vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The EPA is responsible for administering the FCAA. The FCAA requires the EPA to set NAAQS for several problem air pollutants based on human health and welfare criteria. Two types of NAAQS were established: primary standards, which protect public health, and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

The law recognizes the importance for each state to locally carry out the requirements of the FCAA, as special consideration of local industries, geography, housing patterns, etc. are needed to have full comprehension of the local pollution control problems. As a result, the EPA requires each state to develop a State Implementation Plan (SIP) that explains how each state will implement the FCAA within their jurisdiction. A SIP is a collection of rules and regulations that a particular state will implement to control air quality within their jurisdiction. CARB is the state agency that is responsible for preparing the California SIP.

U.S. Environmental Protection Agency

At the Federal level, EPA has been charged with implementing national air quality programs. EPA's air quality mandates are drawn primarily from the Federal Clean Air Act (FCAA), which was enacted in 1963. The FCAA was amended in 1970, 1977, and 1990.

The FCAA required EPA to establish primary and secondary national ambient air quality standards (NAAQS). The FCAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The Federal Clean Air Act Amendments of 1990 (FCAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA has responsibility to review all state SIPs to determine conformity to the mandates of the FCAAA and determine if implementation will achieve air quality goals. If the EPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area that imposes additional control measures. Failure to submit an approvable SIP or to implement the plan within the mandated timeframe may result in sanctions being applied to transportation funding and stationary air pollution sources in the air basin.

Federal Hazardous Air Pollutant Program

Title III of the FCAA requires the EPA to promulgate national emissions standards for hazardous air pollutants (NESHAPs). The NESHAP may differ for major sources than for area sources of HAPs (major sources are defined as stationary sources with potential to emit more than 10 tons per year [TPY] of any HAP or more than 25 TPY of any combination of HAPs; all other sources are considered area sources). The emissions standards are to be promulgated in two phases. In the first phase (1992–2000), the EPA developed technology-based emission standards designed to produce the maximum emission reduction achievable. These standards are generally referred to as requiring maximum available control technology (MACT). These Federal rules are also commonly referred to as MACT standards, because they reflect the Maximum Achievable Control Technology. For area sources, the standards may be different, based on generally available control technology. In the second phase (2001–2008), the EPA is required to promulgate health risk–based emissions standards were deemed necessary to address risks remaining after implementation of the technology-based NESHAP standards. The FCAAA required the EPA to promulgate vehicle or fuel standards containing reasonable requirements that control toxic emissions, at a minimum to benzene and formaldehyde. Performance criteria were established to limit mobile-source emissions of toxics, including benzene, formaldehyde, and 1,3-butadiene. In addition, §219 required the use of reformulated gasoline in selected U.S. cities (those with the most severe ozone nonattainment conditions) to further reduce mobile-source emissions.

Transportation Control Measures

One particular aspect of the SIP development process is the consideration of potential control measures as a part of making progress towards clean air goals. While most SIP control measures are aimed at reducing emissions from stationary sources, some are typically also created to address mobile or transportation sources. These are known as transportation control measures (TCMs). TCM strategies are designed to reduce vehicle miles traveled and trips, or vehicle idling and associated air pollution. These goals are achieved by developing attractive and convenient alternatives to single-occupant vehicle use. Examples of TCMs include ridesharing programs, transportation infrastructure improvements such as adding bicycle and carpool lanes, and expansion of public transit.

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STATE

CARB Mobile-Source Regulation

The State of California is responsible for controlling emissions from the operation of motor vehicles in the state. Rather than mandating the use of specific technology or the reliance on a specific fuel, the CARB's motor vehicle standards specify the allowable grams of pollution per mile driven. In other words, the regulations focus on the reductions needed rather than on the manner in which they are achieved. Towards this end, the CARB has adopted regulations which required auto manufacturers to phase in less polluting vehicles.

California Clean Air Act

The California Clean Air Act (CCAA) was first signed into law in 1988. The CCAA provides a comprehensive framework for air quality planning and regulation, and spells out, in statute, the state's air quality goals, planning and regulatory strategies, and performance. CARB is the agency responsible for administering the CCAA. CARB established ambient air quality standards pursuant to the California Health and Safety Code (CH&SC) [§39606(b)], which are similar to the federal standards. The Sacramento Valley Air Pollution Control District is one of 35 air quality management districts that have prepared air quality management plans to accomplish a five percent annual reduction in emissions documenting progress toward the state ambient air quality standards.

Air Quality Standards

NAAQS are determined by the EPA. The standards include both primary and secondary ambient air quality standards. Primary standards are established with a safety margin. Secondary standards are more stringent than primary standards and are intended to protect public health and welfare. States have the ability to set standards that are more stringent than the federal standards. As such, California established more stringent ambient air quality standards.

Federal and state ambient air quality standards have been established for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, PM₁₀, and lead. In addition, California has created standards for pollutants that are not covered by federal standards. The state and federal primary standards for major pollutants are shown in Table 5.3-1.

Tanner Air Toxics Act

California regulates TACs primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal

procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB can designate a substance as a TAC. To date, ARB has identified more than 21 TACs and has adopted EPA's list of HAPs as TACs. Most recently, diesel PM was added to the ARB list of TACs. Once a TAC is identified, ARB then adopts an Airborne Toxics Control Measure (ATCM) for sources that emit that particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate BACT to minimize emissions.

The AB 2588 requires that existing facilities that emit toxic substances above a specified level prepare a toxic-emission inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures. ARB has adopted diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators). In February 2000, ARB adopted a new public-transit bus-fleet rule and emission standards for new urban buses. These rules and standards provide for (1) more stringent emission standards for some new urban bus engines, beginning with 2002 model year engines; (2) zero-emission bus demonstration and purchase requirements applicable to transit agencies; and (3) reporting requirements under which transit agencies must demonstrate compliance with the urban transit bus fleet rule. Upcoming milestones include the low-sulfur diesel-fuel requirement, and tighter emission standards for heavy-duty diesel trucks (2007) and off-road diesel equipment (2011) nationwide.

Transport of Pollutants

The California Clean Air Act, Section 39610 (a), directs the CARB to "identify each district in which transported air pollutants from upwind areas outside the district cause or contribute to a violation of the ozone standard and to identify the district of origin of transported pollutants." The information regarding the transport of air pollutants from one basin to another was to be quantified to assist interrelated basins in the preparation of plans for the attainment of State ambient air quality standards. Numerous studies conducted by the CARB have identified air basins that are impacted by pollutants transported from other air basins (as of 1993). Among the air basins affected by air pollution transport from the SFBAAB are the North Central Coast Air Basin, the Mountain Counties Air Basin, the San Joaquin Valley Air Basin, and the Sacramento Valley Air Basin. The SFBAAB was also identified as an area impacted by the transport of air pollutants from the Sacramento region.

LOCAL

Amador Air District

The Amador Air District (AAD) is the local agency with primary responsibility for compliance with both the federal and state standards and for ensuring that air quality conditions are maintained. They do this through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues.

Activities of the AAD include the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, issuance of permits for stationary sources of air pollution, inspection of stationary sources of air pollution and response to citizen complaints, monitoring of ambient air quality and meteorological conditions, and implementation of programs and regulations required by the FCAA and CCAA.

3.3.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed General Plan will have a significant impact on the environment associated with air quality if it will:

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

METHODOLOGY

The analysis presented below was completed to include a qualitative approach to address consistency with current air quality plan control measures. The qualitative analysis discusses the proposed General Plan's consistency with the Regulations of the Amador Air District (AAD), and the proposed General Plan's VMT projections. The VMT analysis is described in greater detail in Chapter 3.14, Transportation and Circulation.

IMPACTS AND MITIGATION MEASURES

Impact 3.3-1: General Plan implementation would conflict with or obstruct implementation of the applicable air quality plan, or result in a cumulatively considerable net increase of criteria pollutants (Significant and Unavoidable)

CEQA requires lead agencies to determine whether a project is consistent with all applicable air quality plans. Under the existing state and federal environmental regulatory structure, the federal government's Environmental Protection Agency is granted primary authority to establish health-based ambient air quality standards and specific technology and emission requirements for sources of air pollution, regulate selected sources of air pollution, and mandate that states comply with these requirements. The federal government has the authority to withhold transportation funds from the state if certain requirements are not met. Under the state of California regulatory structure, the state's California Air Resources Board maintains primary authority to regulate mobile sources of air pollution (e.g. establish vehicle and engine emission standards), and possess regulatory oversight authority over local and regional air pollution control agencies. Local and

regional agencies maintain primary authority to regulate stationary sources of air pollution (e.g. permitting industry activities and regulating open burning).

As described previously, Amador County has a State designation of nonattainment for O₃ and is either Unclassified or Attainment for all other criteria pollutants. The County has a national designation of Nonattainment for O₃ and PM_{2.5}. The County is designated nonattainment for O₃ and is either attainment or unclassified for the remaining national standards. The Amador County Air Pollution Control District does not provide criteria pollutant thresholds for General Plans (such as the proposed Project). As such, there is no programmatic threshold of significance established for criteria pollutants for which to compare the proposed General Plan.

This EIR acknowledges that the proposed General Plan will allow new residential and non-residential growth, as described in detail in Chapter 2.0 (Project Description). This new growth will undoubtedly result in increases in the emissions of criteria pollutants, most notably from mobile-source and area-source emissions increases associated with increased growth and development in Jackson. Additionally, the implementation of individual projects within the General Plan would have the potential to conflict with Amador Air District's requirements for criteria pollutants at the project-level.

The proposed General Plan includes policies and actions that are specifically aimed at improving air quality throughout the City and region. These policies and actions (provided below) limit impacts to air quality by reducing the number and length of vehicle trips, encourage non-automobile travel modes, support green and sustainable building development, promote the use of renewable energy, and encourage the conservation of resources.

The policies and actions included throughout the proposed General Plan cover the full breadth of air quality issues. If approval of the proposed General Plan would cause the disruption, delay, or otherwise hinder the implementation of any air quality plan control measure, it may be inconsistent with the applicable air quality plans. The proposed General Plan does not cause the disruption, delay, or otherwise hinder the implementation of any quality plan or control measure; therefore, it is consistent with the applicable air quality plans. All future development and infrastructure projects within the Planning Area would be subject to the General Plan goals, policies, and actions described above and include below, which were adopted to reduce emissions and air quality impacts. However, the proposed General Plan includes higher levels and rates of growth than those that would be facilitated under the existing General Plan. As such, total emissions levels associated with Project buildout would increase, which may indirectly hinder the efforts to reduce total emissions of criteria pollutants.

The Planning Area is surrounded by a variety of existing rural, commercial, residential, open space, and agricultural uses, and includes California State Routes 88 (SR 88) and 49 (SR 49). The proposed General Plan includes polices and land uses that promote development patterns that emphasizes alternative transportation access and multi-modal connectivity throughout the Planning Area and surrounding areas.

Implementation of the proposed General Plan, which is consistent with all federal and state guidelines, and would be consistent with the applicable air quality plans, but would still be anticipated to lead to overall increases in emissions of criteria pollutants, given the total growth in vehicle trips projected upon full buildout of the proposed General Plan. Nevertheless, as described in Chapter 3.14 (Transportation and Circulation) of this DEIR, under Impact 3.14-1, the proposed General Plan would result in reduced per capita VMT in the City of Jackson.

As described previously, the policies and actions included throughout the proposed General Plan cover the full breadth of air quality issues and promote air quality and vehicle trip reductions throughout the city. With implementation of the General Plan policies and actions that would reduce criteria pollutant emissions, air quality impact would be limited. However, the proposed General Plan would create new development that would increase overall criteria air pollutant emissions within the City of Jackson, due to an increase in vehicle trips in the City in the cumulative year 2040 buildout scenario, compared to the existing condition. Therefore, this impact is considered **significant and unavoidable**.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

CONSERVATION AND OPEN SPACE ELEMENT POLICIES

COS 5.1: Require all development projects to comply with the mandatory energy efficiency requirements of the California Green Building Standards Code (CALGreen) and Building and Energy Efficiency Standards.

COS 5.2: Support and encourage the implementation of innovative and green building best management practices (BMPs) including, but not limited to, sustainable site planning, solar opportunities, LEED certification, and exceeding the most current “green” development standards in the California Code of Regulations (CCR), Title 24, as feasible.

COS 5.3: Promote energy efficiency throughout City operations and install, as feasible, energy-efficient lighting, appliances, and alternative-energy infrastructure in City facilities during routine maintenance and as upgrades are needed.

COS 5.4: As City fleet vehicles are replaced, procure alternative energy and fuel-efficient City vehicles and equipment that meet or surpass state emissions requirements, to the extent feasible.

COS 5.5: Promote incentives from local, state, and federal agencies for improving energy efficiency and expanding renewable energy installations.

COS 6.1: Provide adequate waste disposal, recycling, and reuse services for present and future residents and businesses, including programs that improve public access to solid waste collection and recycling facilities.

COS 6.2: Participate in source reduction and recycling efforts to reduce the amount of solid waste sent to the landfill and extend the life of the landfill.

COS 6.3: Comply with Assembly Bill 939 source reduction and recycling requirements of 50 percent diversion of solid waste from landfills. Continue to strengthen local recycling efforts in order to

assist the State in meeting the statewide source reduction, recycling, and composting requirements established by Assembly Bill 341.

COS 6.4: Increase the City's role in the source reduction and recycling components of waste management through recycling programs at City facilities to reduce the quantity of City-generated waste.

CIRCULATION ELEMENT POLICIES

CIRC 2.1: The City shall maintain an average daily Level of Service (LOS) "C" on all roadways. Projects may exceed the desired threshold if one of the following findings can be made:

- 1. The project is providing a public benefit which offsets the project's adverse traffic effects.*
- 2. The project will fund and construct traffic improvements which will offset the majority of the project's traffic effects.*
- 3. The project provides significant contributions to infill, mixed use, and non-automobile features or facilities.*

The following are examples of projects that may be permitted:

- a. Minor lot splits or housing developments involving five or less units and which are consistent with the City's General Plan.*
- b. Affordable housing projects that help achieve Housing Element goals and objectives.*
- c. Non-commercial public services, buildings, and facilities.*
- d. Infill, mixed use, or transit oriented developments that provide for significant reductions to automobile use by their residents, occupants, or visitors.*

CIRC 2.3: The City shall require that new development's internal circulation plans include provisions for pedestrians, bicycles, automobiles, parking, and bus facilities as well as Neighborhood Electric Vehicles (NEVs), if deemed feasible and beneficial, consistent with separately adopted alternative transportation plans and/or guidelines.

CIRC 2.6: Shuttle service shall be utilized wherever feasible during special events/activities to effectively minimize circulation conflicts.

CIRC 2.11: The City shall require that new developments design, construct, dedicate, and/or finance their fair share of off-site transportation improvements and facilities needed to manage additional traffic generated by the development.

CIRC 2.13: The City shall continue to solicit Amador Transit and Amador County School District for their comments on any development projects which may have an impact on the service area and ridership.

3.3 AIR QUALITY

CIRC 2.18: Consider all modes of travel in planning, design, and construction of all transportation projects to create safe, livable, and inviting environments for pedestrians, bicyclists, motorists, and public transit users of all ages and capabilities.

CIRC 5.1: The City shall encourage alternatives to single-occupant vehicle trips and make alternatives available to the extent deemed practical and economical.

CIRC 5.2: The City shall require new development to construct or contribute financially for transit facilities, as deemed necessary, for purposes of public convenience and fuel conservation, and to ensure transportation for the elderly and disabled.

CIRC 5.3: The City shall promote ridesharing and the use of park-and-ride facilities.

CIRC 5.4: The City shall actively promote the use of transit during special community events.

CIRC 5.5: The City shall encourage the design of public and private outdoor seating to double as bus stop seating, where appropriate.

CIRC 6.1: The City shall implement best practices to improve the pedestrian and bicycle environment.

CIRC 6.12: The City shall continue to encourage the coordination of bicycle use with mass transit by equipping all buses with bicycle racks.

CIRC 8.1: Support land use with increased densities and mixed uses, consistent with the Land Use Element, to reduce vehicle miles traveled (VMT) and promote the use of walking, biking, and transit.

CIRC 8.2: Encourage employers to provide programs for carpooling/transit/biking/walking subsidies, bicycle facilities, ridesharing, telecommuting, and working at/from home.

CIRC 8.3: Monitor the deployment of new transportation technologies and services and develop policies that implement best practices to ensure these technologies and services benefit the public and the multimodal transportation system.

CIRC 8.4: Support the creation of electric vehicle charging stations at commercial, government, and other employment and community destinations.

CONSERVATION AND OPEN SPACE ELEMENT ACTIONS

COS-5a: Continue to review development projects to ensure that all new public and private development complies with the California Code of Regulations (CCR), Title 24 and CalGreen standards as well as the energy efficiency standards established by the General Plan and the Development Code.

COS-5b: Consider offering reduced permit fees and or expedited permit applications on solar installation projects and promote state, federal, and private rebate programs.

COS-5c: Consider the use of alternative fuel vehicles or electric vehicles for City use. If deemed appropriate, identify vehicle purchase needs in any fleet replacement plan.

COS-5d: Provide a conservation page (or similar page) on the City's website that provides links to resource agencies and provides information regarding local and regional conservation and energy upgrade and efficiency programs.

COS-6a: Continue existing, and develop new, diversion strategies (including source reduction, recycling, composting and yard waste programs) to reduce solid waste disposal volume to meet the State-mandated level.

COS-6b: Pursue public funding sources, such as grants, to reduce fiscal impacts of continued implementation of recycling programs.

CIRCULATION ELEMENT ACTIONS

CIR-2b: Review and revise roadway standards for community and rural areas to ensure that the standards are adequate to accommodate complete streets, addressing the following factors as applicable: number of travel lanes, lane width, medians, drainage control, shoulder width, pavement striping and markings, parking lanes, bike lanes, fire and emergency response standards, curb and gutter design, landscaped strip, and sidewalk width. Standards shall serve as evaluation criteria to determine whether development impacts on streets constrained by width, historic value, steepness or other factors exceed acceptable limits.

CIR-2f: Continue to work with ACTC to amend, as necessary, and implement the Regional Traffic Mitigation Fee program that requires new development to pay fees for its fair share of improvements to the regional transportation system.

CIR-2g: Continue to amend, as necessary, and implement the Local Development Impact Fee (DIF) Program which requires new development to pay fees for its fair share of improvements to the City's local transportation system.

CIR-5b: Continue to expand the use of Amador Transit public transit service including special event shuttle service during significant Main Street activities.

CIR-5c: Partner with Amador Transit and other regional transit providers to conduct regular service reviews to advance convenient transit service to employment centers, County and City service centers, other government centers, and regional destinations (i.e. Sacramento International Airport), as funding allows.

CIR-5d: Enhance transit stops through high quality, well-maintained shelters and provide transit timetables.

CIR-5e: Consider alternatives to conventional bus systems, such as smaller shuttle buses (micro-transit), on-demand transit services, or transportation networking company services that connect residential communities to regional activity centers with greater cost efficiency.

CIR-6a: Work with ACTC to implement the Amador Countywide Pedestrian and Bicycle Transportation Plan, and Pedestrian and Bicycle Design Guidelines and Recommended Standards.

3.3 AIR QUALITY

The City should also hold public workshops to update and refine the City's part in the countywide plan to clarify or expand upon the City's specific pedestrian and/or bicycle needs. These may include:

- *New roads to accommodate bicyclists and pedestrians;*
- *A designated bicycle route stop located along SR 49 in downtown Jackson to include such facilities as bike racks and lockers for storage;*
- *Pedestrian-actuated signal crossings at key locations such as Busi Municipal Parking Lot, French Bar Road, and Sutter Street;*
- *Parking facilities at trailheads; safe, well-lit, unobstructed walking routes; and quick and convenient services located street-side;*
- *Over- or underpass walkway between the Central Business District and City-owned Busi Municipal Parking Lot; and*
- *Bicycle lanes along new or reconstructed arterial and collector routes in, or adjacent to, the City, wherever possible.*

CIR-6b: Implement and build on recommendations for pedestrian and bicycle improvements included in the Amador Countywide Pedestrian and Bicycle Plan (2017).

CIR-6c: Work with appropriate agencies to implement a regional bikeway system that connects the City to other communities, recreation destinations, and scenic areas in Amador County.

CIR-6d: Pursue funding for construction and maintenance of bikeways and sidewalks, including off-road bikeways, where feasible.

CIR-6e: Add planned bicycle and pedestrian facilities in conjunction with road rehabilitation, reconstruction, or re-striping projects whenever feasible.

CIR-8b: Explore the feasibility of a VMT impact fee program to fund transportation demand management (TDM) strategies that are proven to reduce VMT.

CIR-8c: Require proposed development projects that could have a potentially significant VMT impact to consider reasonable and feasible project modifications and other measures during the project design and environmental review stage of project development that would reduce VMT effects in a manner consistent with state guidance on VMT reduction.

CIR-8d: Consider requiring new development to incorporate electric vehicle charging in accordance with the California Green Building Standards Code and/or commit to using electric vehicles for a certain percentage of its vehicle fleet. Encourage installation of electric vehicle charging stations at existing development.

Impact 3.3-2: General Plan implementation would expose sensitive receptors to substantial pollutant concentrations (Less than Significant)

Local communities' risks from air pollutants may include exposure to TACs and PM_{2.5} concentrations. TACs are a defined set of airborne pollutants that may pose a present or potential

hazard to human health and PM_{2.5} can cause a wide range of health effects (e.g., aggravating asthma and bronchitis, causing visits to the hospital for respiratory and cardiovascular systems, and contributing to heart attacks and deaths). Common stationary source types of TAC and PM_{2.5} emissions include gasoline stations, dry cleaners, and other sources, which are subject to Amador Air District's requirements. The other, often more significant, common source type is on-road motor vehicles on freeways and roads such as trucks and cars, and off-road sources such as construction equipment, ships, and trains. Implementation of the proposed General Plan would have the potential of introducing new sources of TAC and PM_{2.5} emissions within the City as well as siting new sensitive receptors, such as new homes in close proximity to existing sources of TAC and PM_{2.5} emissions.

The proposed General Plan includes policies and actions that would minimize exposure to emissions, TAC, and PM_{2.5} concentrations within the City. These policies and actions are included within various elements of the proposed General Plan. For example, Policy CIRC-2.3 requires that the City shall require that new development's internal circulation plans include provisions for pedestrians, bicycles, automobiles, parking, and bus facilities as well as Neighborhood Electric Vehicles (NEVs), if deemed feasible and beneficial, consistent with separately adopted alternative transportation plans and/or guidelines.

Individual projects will be required to determine air quality impacts from the construction and operation of their projects. In the event that future individual projects may result in exposure to pollutants including TACs by sensitive receptors, these future projects would be required to implement mitigation measures to reduce the impact to the greatest extent feasible. Therefore, compliance with the applicable policies and programs in the proposed General Plan as well applicable Amador Air District (AAD) rules and regulations, would minimize the potential exposure of sensitive receptors to substantial concentrations of TACs and PM_{2.5} within the City, and impacts at the program level would be **less than significant**.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

COS 5.1: Require all development projects to comply with the mandatory energy efficiency requirements of the California Green Building Standards Code (CALGreen) and Building and Energy Efficiency Standards.

COS 5.2: Support and encourage the implementation of innovative and green building best management practices (BMPs) including, but not limited to, sustainable site planning, solar opportunities, LEED certification, and exceeding the most current "green" development standards in the California Code of Regulations (CCR), Title 24, as feasible.

COS 5.3: Promote energy efficiency throughout City operations and install, as feasible, energy-efficient lighting, appliances, and alternative-energy infrastructure in City facilities during routine maintenance and as upgrades are needed.

COS 5.4: As City fleet vehicles are replaced, procure alternative energy and fuel-efficient City vehicles and equipment that meet or surpass state emissions requirements, to the extent feasible.

3.3 AIR QUALITY

COS 5.5: Promote incentives from local, state, and federal agencies for improving energy efficiency and expanding renewable energy installations.

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CIRC 2.13: The City shall continue to solicit Amador Transit and Amador County School District for their comments on any development projects which may have an impact on the service area and ridership.

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3.3 AIR QUALITY

CONSERVATION AND OPEN SPACE ELEMENT ACTIONS

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CIRCULATION ELEMENT ACTIONS

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- New roads to accommodate bicyclists and pedestrians;*
- A designated bicycle route stop located along SR 49 in downtown Jackson to include such facilities as bike racks and lockers for storage;*
- Pedestrian-actuated signal crossings at key locations such as Busi Municipal Parking Lot, French Bar Road, and Sutter Street;*
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CIR-8d: Consider requiring new development to incorporate electric vehicle charging in accordance with the California Green Building Standards Code and/or commit to using electric vehicles for a certain percentage of its vehicle fleet. Encourage installation of electric vehicle charging stations at existing development.

Impact 3.3-3: General Plan implementation would not result in other emissions (such as those leading to odors adversely affecting a substantial number of people) (Less than Significant)

ODORS

Objectionable odors can be generated from certain types of commercial and/or industrial land uses. Common sources of odors include wastewater treatment plants, landfills, composting facilities, refineries, and chemical plants. In general, residential land uses are not associated with odor generation, but they do serve as sensitive receptors. Odors rarely have direct health impacts, but they can be very unpleasant and can lead to anger and concern over possible health effects among the public.

The proposed General Plan does not propose any specific development projects, but could result in additional development that may trigger the need for public and quasi-public facilities that could include expanded wastewater treatment facilities, and other potential odor sources. Similarly, lands designated for Industrial uses could include new or expanded uses that could result in odors, including chemical manufacturing, materials manufacturing, food and beverage processing, and other uses that may involve odors. Similarly, existing agricultural uses may include on-site processing or confined animal facilities that may result in odors. Individual projects that have the potential to generate significant objectionable odors would be required to undergo individual CEQA review.

The Amador Air District responds to complaints about odors, dust or chemical air pollutants emitted by industrial plants, refineries, neighborhood businesses, gas station nozzles, idling trucks, locomotives and buses. It also processes complaints about smoke from agricultural fires, controlled burns, non-cooking backyard fires and outdoor trash burning.

With respect to other emissions, future development under the proposed General Plan would be required to comply with Amador Air District, SIP, and CARB, regulations, Title 24 energy efficiency standards, and the proposed General Plan policies and actions.

The proposed General Plan included policies and actions that support compatible land uses and does not propose any development that includes potential source of objectionable odors. Individual projects that have the potential to generate significant objectionable odors would be required to undergo individual project level environmental review. In addition, the General Plan policies and actions listed below would further minimize the potential for other emissions (such as odors) to adversely affect a substantial number of people. Therefore, implementation of the proposed General Plan would have a **less than significant** impact relative to this topic.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

COS 5.1: *Require all development projects to comply with the mandatory energy efficiency requirements of the California Green Building Standards Code (CALGreen) and Building and Energy Efficiency Standards.*

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CIRC 2.18: Consider all modes of travel in planning, design, and construction of all transportation projects to create safe, livable, and inviting environments for pedestrians, bicyclists, motorists, and public transit users of all ages and capabilities.

CIRC 5.1: The City shall encourage alternatives to single-occupant vehicle trips and make alternatives available to the extent deemed practical and economical.

CIRC 5.2: The City shall require new development to construct or contribute financially for transit facilities, as deemed necessary, for purposes of public convenience and fuel conservation, and to ensure transportation for the elderly and disabled.

CIRC 5.3: The City shall promote ridesharing and the use of park-and-ride facilities.

CIRC 5.4: The City shall actively promote the use of transit during special community events.

CIRC 5.5: The City shall encourage the design of public and private outdoor seating to double as bus stop seating, where appropriate.

CIRC 6.1: The City shall implement best practices to improve the pedestrian and bicycle environment.

CIRC 6.12: The City shall continue to encourage the coordination of bicycle use with mass transit by equipping all buses with bicycle racks.

CIRC 8.1: Support land use with increased densities and mixed uses, consistent with the Land Use Element, to reduce vehicle miles traveled (VMT) and promote the use of walking, biking, and transit.

CIRC 8.2: Encourage employers to provide programs for carpooling/transit/biking/walking subsidies, bicycle facilities, ridesharing, telecommuting, and working at/from home.

CIRC 8.3: Monitor the deployment of new transportation technologies and services and develop policies that implement best practices to ensure these technologies and services benefit the public and the multimodal transportation system.

CIRC 8.4: Support the creation of electric vehicle charging stations at commercial, government, and other employment and community destinations.

CONSERVATION AND OPEN SPACE ELEMENT ACTIONS

COS-5a: Continue to review development projects to ensure that all new public and private development complies with the California Code of Regulations (CCR), Title 24 and CalGreen standards as well as the energy efficiency standards established by the General Plan and the Development Code.

COS-5b: Consider offering reduced permit fees and or expedited permit applications on solar installation projects and promote state, federal, and private rebate programs.

COS-5c: Consider the use of alternative fuel vehicles or electric vehicles for City use. If deemed appropriate, identify vehicle purchase needs in any fleet replacement plan.

COS-5d: Provide a conservation page (or similar page) on the City's website that provides links to resource agencies and provides information regarding local and regional conservation and energy upgrade and efficiency programs.

COS-6a: Continue existing, and develop new, diversion strategies (including source reduction, recycling, composting and yard waste programs) to reduce solid waste disposal volume to meet the State-mandated level.

COS-6b: Pursue public funding sources, such as grants, to reduce fiscal impacts of continued implementation of recycling programs.

CIRCULATION ELEMENT ACTIONS

CIR-2b: Review and revise roadway standards for community and rural areas to ensure that the standards are adequate to accommodate complete streets, addressing the following factors as applicable: number of travel lanes, lane width, medians, drainage control, shoulder width, pavement striping and markings, parking lanes, bike lanes, fire and emergency response standards, curb and gutter design, landscaped strip, and sidewalk width. Standards shall serve as evaluation criteria to determine whether development impacts on streets constrained by width, historic value, steepness or other factors exceed acceptable limits.

3.3 AIR QUALITY

CIR-2f: Continue to work with ACTC to amend, as necessary, and implement the Regional Traffic Mitigation Fee program that requires new development to pay fees for its fair share of improvements to the regional transportation system.

CIR-2g: Continue to amend, as necessary, and implement the Local Development Impact Fee (DIF) Program which requires new development to pay fees for its fair share of improvements to the City's local transportation system.

CIR-5b: Continue to expand the use of Amador Transit public transit service including special event shuttle service during significant Main Street activities.

CIR-5c: Partner with Amador Transit and other regional transit providers to conduct regular service reviews to advance convenient transit service to employment centers, County and City service centers, other government centers, and regional destinations (i.e. Sacramento International Airport), as funding allows.

CIR-5d: Enhance transit stops through high quality, well-maintained shelters and provide transit timetables.

CIR-5e: Consider alternatives to conventional bus systems, such as smaller shuttle buses (micro-transit), on-demand transit services, or transportation networking company services that connect residential communities to regional activity centers with greater cost efficiency.

CIR-6a: Work with ACTC to implement the Amador Countywide Pedestrian and Bicycle Transportation Plan, and Pedestrian and Bicycle Design Guidelines and Recommended Standards. The City should also hold public workshops to update and refine the City's part in the countywide plan to clarify or expand upon the City's specific pedestrian and/or bicycle needs. These may include:

- *New roads to accommodate bicyclists and pedestrians;*
- *A designated bicycle route stop located along SR 49 in downtown Jackson to include such facilities as bike racks and lockers for storage;*
- *Pedestrian-actuated signal crossings at key locations such as Busi Municipal Parking Lot, French Bar Road, and Sutter Street;*
- *Parking facilities at trailheads; safe, well-lit, unobstructed walking routes; and quick and convenient services located street-side;*
- *Over- or underpass walkway between the Central Business District and City-owned Busi Municipal Parking Lot; and*
- *Bicycle lanes along new or reconstructed arterial and collector routes in, or adjacent to, the City, wherever possible.*

CIR-6b: Implement and build on recommendations for pedestrian and bicycle improvements included in the Amador Countywide Pedestrian and Bicycle Plan (2017).

CIR-6c: Work with appropriate agencies to implement a regional bikeway system that connects the City to other communities, recreation destinations, and scenic areas in Amador County.

CIR-6d: Pursue funding for construction and maintenance of bikeways and sidewalks, including off-road bikeways, where feasible.

CIR-6e: Add planned bicycle and pedestrian facilities in conjunction with road rehabilitation, reconstruction, or re-striping projects whenever feasible.

CIR-8b: Explore the feasibility of a VMT impact fee program to fund transportation demand management (TDM) strategies that are proven to reduce VMT.

CIR-8c: Require proposed development projects that could have a potentially significant VMT impact to consider reasonable and feasible project modifications and other measures during the project design and environmental review stage of project development that would reduce VMT effects in a manner consistent with state guidance on VMT reduction.

CIR-8d: Consider requiring new development to incorporate electric vehicle charging in accordance with the California Green Building Standards Code and/or commit to using electric vehicles for a certain percentage of its vehicle fleet. Encourage installation of electric vehicle charging stations at existing development.

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Figure 3.3-1. California Air Basins



Sources: Air Resources Board; California State Geoportal; ArcGIS Online World Elevation/Terrain Image Service. Map date: April 12, 2021.

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This section describes biological resources in the Planning Area. This section provides a background discussion of the bioregions, regionally important habitat and wildlife, and special status species found in the vicinity of Jackson. This section is organized with an environmental setting, regulatory setting, and impact analysis.

One comment from the California Department of Fish and Wildlife (CDFW) was received on December 22, 2022 regarding this environmental topic during the NOP comment period. The NOP and all comments received are included in Appendix A of this Draft EIR.

KEY TERMS

The following key terms are used throughout this section to describe biological resources and the framework that regulates them:

Hydric Soils. One of the three wetland identification parameters, according to the Federal definition of a wetland, hydric soils have characteristics that indicate they were developed in conditions where soil oxygen is limited by the presence of saturated soil for long periods during the growing season. There are approximately 2,000 named soils in the United States that may occur in wetlands.

Hydrophytic Vegetation. Plant types that typically occur in wetland areas. Nearly 5,000 plant types in the United States may occur in wetlands. Plants are listed in regional publications of the U.S. Fish and Wildlife Service (USFWS) and include such species as cattails, bulrushes, cordgrass, sphagnum moss, bald cypress, willows, mangroves, sedges, rushes, arrowheads, and water plantains.

Sensitive Natural Community. A sensitive natural community is a biological community that is regionally rare, provides important habitat opportunities for wildlife, is structurally complex, or is in other ways of special concern to local, State, or Federal agencies. The California Environmental Quality Act (CEQA) identifies the elimination or substantial degradation of such communities as a significant impact. The California Department of Fish and Wildlife (CDFW) tracks sensitive natural communities in the California Natural Diversity Database (CNDDB).

Special Status Species. Special status species are those plants and animals that, because of their recognized rarity or vulnerability to various causes of habitat loss or population decline, are recognized by Federal, State, or other agencies. Some of these species receive specific protection that is defined by Federal or State endangered species legislation. Others have been designated as "sensitive" on the basis of adopted policies and expertise of State resource agencies or organizations with acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives. These species are referred to collectively as "special status species" in this report, following a convention that has developed in practice but has no official sanction. For the purposes of this assessment, the term "special status" includes those species that are:

- Federally listed or proposed for listing under the Federal Endangered Species Act (50 CFR 17.11-17.12);

3.4 BIOLOGICAL RESOURCES

- Candidates for listing under the Federal Endangered Species Act (61 FR 7596-7613);
- State listed or proposed for listing under the California Endangered Species Act (14 CCR 670.5);
- Species listed by the USFWS or the CDFW as a species of concern (USFWS), rare (CDFW), or of special concern (CDFW);
- Fully protected animals, as defined by the State of California (California Fish and Game Code Section 3511, 4700, and 5050);
- Species that meet the definition of threatened, endangered, or rare under CEQA (CEQA Guidelines Section 15380);
- Plants listed as rare or endangered under the California Native Plant Protection Act (California Fish and Game Code Section 1900 et seq.); and
- Plants listed by the California Native Plant Society (CNPS) as rare, threatened, or endangered (List 1A and List 2 status plants in Skinner and Pavlik 1994).

Waters of the U.S. The Federal government defines waters of the U.S. as "lakes, rivers, streams, intermittent drainages, mudflats, sandflats, wetlands, sloughs, and wet meadows" [33 C.F.R. §328.3(a)]. Waters of the U.S. exhibit a defined bed and bank and ordinary high water mark (OHWM). The OHWM is defined by the U.S. Army Corps of Engineers (USACE) as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" [33 C.F.R. §328.3(e)].

Wetlands. Wetlands are ecologically complex habitats that support a variety of both plant and animal life. The Federal government defines wetlands as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" [33 C.F.R. §328.3(b)]. Wetlands require wetland hydrology, hydric soils, and hydrophytic vegetation. Examples of wetlands include freshwater marsh, seasonal wetlands, and vernal pool complexes that have a hydrologic link to waters of the U.S.

3.4.1 ENVIRONMENTAL SETTING

Jackson is located in the western portion of Amador County, approximately 10 miles south of Plymouth. Jackson is accessible by both State Route 49 and State Route 88. The City has a total area of 3.7 square miles. The north fork of Jackson Creek lies within the Planning Area. Jackson Creek is a tributary of Dry Creek, which is a tributary of the Mokelumne River.

GEOMORPHIC PROVINCES/BIOREGIONS

The Planning Area is located in the western portion of the Sierra Geomorphic Province of California. The Sierra Province is a broad fault block nearly 400 miles long. Its east face is a high, rugged multiple scarps, contrasting with the gentle western slope (about 2°) that disappears under sediments of the Great Valley. Deep river canyons are cut into the western slope. Their upper courses, especially in massive granites of the higher Sierra, are modified by glacial sculpturing, forming such scenic features as Yosemite Valley (CGS Note 36).

The Planning Area is located within the Sierra Bioregion, which is comprised of counties of Sierra, Nevada, El Dorado, Amador, Alpine, Calaveras, Tuolumne, Mariposa, and Mono, and portions of counties of Plumas, Butte, Yuba, Placer, Madera, Fresno, Tulare, Kern, and Inyo. The Central Valley forms the western boundary of the Sierra Nevada bioregion, and the Great Basin is on the east. The area of the bioregion is 26,442 square miles, approximately 17% of the state. Significant features along the length of the range include Lake Tahoe, Yosemite Valley, and Mount Whitney.

The Sierra bioregion is biologically complex. It contains more than half of the plant species found in California. Habitat types include annual grassland, blue oak savanna, chaparral, ponderosa pine, black oak woodland, mixed conifer, red fir, riparian, alpine meadow, Jeffrey pine, sagebrush, and bitter brush.

This vast and rugged mountainous bioregion spills into Nevada, with which it shares Lake Tahoe. Named for the Sierra Nevada Mountain range that it encompasses, the region includes forests, lakes and rivers that generate much of the state's water supply. The region boasts eight national forests: the Plumas, Tahoe, Eldorado, Stanislaus, Sierra, Inyo, Sequoia and part of Lassen, which it shares with the Modoc bioregion. The Sierra encompasses 18 federally designated wilderness areas, the Ansel Adams, John Muir and Desolation among the most well-known.

VEGETATION

Vegetation occurring within the Planning Area primarily consists of ruderal, riparian, agricultural, and landscaping vegetation. The Sierra bioregion as a whole is a biologically complex region of California. It contains more than half of the plant species found in California. Habitat types include annual grassland, blue oak savanna, chaparral, ponderosa pine, black oak woodland, mixed conifer, red fir, riparian, alpine meadow, Jeffrey pine, sagebrush, and bitter brush.

WILDLIFE

Agricultural, riparian vegetation along the Jackson Creek, and ruderal vegetation found in the Planning Area provides habitat for both common and special-status wildlife populations. The Sierra Bioregion is rich in biodiversity, with about two-thirds of the state's birds and mammals and one-half of its reptiles and amphibians calling the area home. Among these are the mountain king snake, lodgepole chipmunk, mountain beaver, California mule deer, and mountain lion. The mountain chickadee, pine grosbeak, California spotted owl, and mountain quail are a sampling of the birds that can be found in the region. The California golden trout, the state fish, is a native of the southern part of the Sierra bioregion. Other rare species include the Black bear, Pacific fisher, northern goshawk. Threatened and endangered species include Wolverine, California bighorn sheep, willow flycatcher, bald eagle, and great grey owl.

Locally common and abundant wildlife species are important components of the ecosystem. Due to habitat loss, many of these species must continually adapt to using agricultural, ruderal, and ornamental vegetation for cover, foraging, dispersal, and nesting.

3.4 BIOLOGICAL RESOURCES

PLANT COMMUNITIES

Agricultural and natural plant communities provide habitat for a variety of biological resources in the region. Sensitive habitats include those that are of special concern to resource agencies or those that are protected under a Habitat Conservation Plan, Natural Community Conservation Plan, the California Environmental Quality Act (CEQA), the Fish and Game Code, or the Clean Water Act (CWA). Additionally, sensitive habitats are usually protected under specific policies from local agencies. Figure 3.4-1 illustrates the plant communities (land cover types) in the vicinity of the Planning Area.

CALIFORNIA WILDLIFE HABITAT RELATIONSHIP SYSTEM

The California Wildlife Habitat Relationship (CWHR) habitat classification scheme has been developed to support the CWHR System, a wildlife information system and predictive model for California's regularly-occurring birds, mammals, reptiles and amphibians. When first published in 1988, the classification scheme had 53 habitats. At present, there are 59 wildlife habitats in the CWHR System: 27 tree, 12 shrub, 6 herbaceous, 4 aquatic, 8 agricultural, 1 developed, and 1 non-vegetated.

According to the California Wildlife Habitat Relationship System, there are 11 land cover types (wildlife habitat classification) found in Jackson out of the 59 found in California. These include: Annual Grassland, Blue Oak Woodland, Blue Oak-Foothill Pine, Cropland, Fresh Emergent Wetland, Lacustrine, Mixed Chaparral, Montane Hardwood, Urban, Valley Foothill Riparian, Valley Oak Woodland. Table 3.4-1 identifies the total area by acreage for each cover type (classification) found in Jackson. Figure 3.4-1 illustrates the location of each cover type (classification) within Jackson. A brief description of each cover type follows.

TABLE 3.4-1: COVER TYPES - CALIFORNIA WILDLIFE HABITAT RELATIONSHIP SYSTEM

COVER TYPE	CITY (ACRES)	SOI (ACRES)	PLANNING AREA (TOTAL ACRES)
Annual Grassland	665.61	525.82	1,191.43
Blue Oak Woodland	335.15	374.52	709.68
Blue Oak-Foothill Pine	235.78	248.22	484.00
Cropland	1.33	--	1.33
Fresh Emergent Wetland	15.24	9.27	24.51
Lacustrine	6.45	2.31	8.76
Mixed Chaparral	12.88	1.97	14.85
Montane Hardwood	15.74	8.23	23.96
Urban	949.59	31.58	981.17
Valley Foothill Riparian	39.04	11.83	50.87
Valley Oak Woodland	16.27	4.47	20.75
Total	2,293.09	1,218.22	3,511.31

SOURCE: SOURCE: CASIL GIS DATA, 2022, CALIFORNIA WILDLIFE HABITAT RELATIONSHIP SYSTEM, 2022.

Developed Cover Types

Cropland includes a variety of sizes, shapes, and growing patterns. Field corn can reach ten feet while strawberries are only a few inches high. Although most crops are planted in rows, alfalfa hay and small grains (barley and wheat) form dense stands with up to 100 percent canopy closure. Most croplands support annual crops, planted in spring and harvested during summer or fall. In many areas, second crops are commonly planted after harvesting the first. Wheat is planted in fall and harvested in late spring or early summer. Overwintering of sugar beets occurs in the Sacramento Valley, with harvesting in spring after the soil dries. Croplands are located on flat to gently rolling terrain. When flat terrain is put into crop production, it usually is leveled to facilitate irrigation. Rolling terrain is either dry farmed or irrigated by sprinklers. Soils often dictate the crops grown. Climate influences the type of crops grown. Within the Planning Area, there are 1.33 acres of cropland habitat.

Urban habitats are not limited to any particular physical setting. Three urban categories relevant to wildlife are distinguished: downtown, urban residential, and suburbia. The heavily-developed downtown is usually at the center, followed by concentric zones of urban residential and suburbs. There is a progression outward of decreasing development and increasing vegetative cover. Species richness and diversity is extremely low in the inner cover. The structure of urban vegetation varies, with five types of vegetative structure defined: tree grove, street strip, shade tree/lawn, lawn, and shrub cover. A distinguishing feature of the urban wildlife habitat is the mixture of native and exotic species. Within the Planning Area, there are 981.17 acres of urban habitat.

Shrub Dominated Habitats

Mixed Chaparral is a structurally homogeneous brushland type dominated by shrubs with thick, stiff, heavily cutinized evergreen leaves. Mixed Chaparral occurs on all aspects, but at lower elevations, it generally is found on north-facing slopes. Soils can be rocky, sandy, gravelly, or heavy. Mixed Chaparral occurs on sites with deeper and more mesic soils than Chamise-Redshank Chaparral. Serpentine soils are high in several potentially toxic substances, such as iron and magnesium, and low in required nutrients, including calcium. The Mediterranean climate is characterized by cool, wet winters and hot, dry summers. Total rainfall is 38 to 63 cm (15 to 25 in) with less than 20 percent falling during the summer. Within the Planning Area, there are 14.85 acres of Mixed Chaparral habitat.

Herbaceous Cover Types

Annual Grassland habitat occurs mostly on flat plains to gently rolling foothills. Climatic conditions are typically Mediterranean, with cool, wet winters and dry, hot summers. The length of the frost-free season averages 250 to 300 days. Annual precipitation is highest in northern California. Within the Planning Area, there are 1,191.43 acres of annual grassland habitat.

Fresh emergent wetland habitats occur on virtually all exposures and slopes, provided a basin or depression is saturated or at least periodically flooded. They are most common on level to gently rolling topography. They are found in various depressions or at the edge of rivers or lakes. Soils are predominantly silt and clay, although coarser sediments and organic material may be intermixed.

In some areas organic soils (peat) may constitute the primary growth medium. Climatic conditions are highly variable and range from the extreme summer heat to winter temperatures well below freezing. Within the Planning Area, there are 24.51 acres of fresh emergent wetland habitat.

Tree Dominated Cover Types

Blue Oak Woodland have an overstory of scattered trees, although the canopy can be nearly closed on better quality sites. The density of blue oaks on slopes with shallow soils is directly related to water stress. Blue Oak Woodland is usually associated with shallow, rocky, infertile, well-drained soils from a variety of parent materials. The climate is Mediterranean, with mild wet winters and hot dry summers. Climatic extremes are relatively great in these woodlands, because they have a considerable geographic and elevational range. Average annual precipitation varies from 51 to 102 cm (20 to 40 in) over most of the blue oak's range. Mean maximum temperatures are from 24 to 36 C (75 to 96 F) in summer, and minima are from 2 to 6 C (29 to 42 F) in winter. Within the Planning Area, there are 709.68 acres of Blue Oak Woodland habitat.

Blue Oak-Foothill Pine is typically diverse in structure both vertically and horizontally, with a mix of hardwoods, conifers, and shrubs. The shrub component is typically composed of several species that tend to be clumped, with interspersed patches of Annual Grassland. Woodlands of this type generally have small accumulations of dead and downed woody material and relatively few snags, compared with other tree habitats in California. The habitat occurs in a typically Mediterranean climate hot, dry summers and cool, wet winters. Most precipitation falls as rain from November through April, averaging from 51 to 102 cm (20 to 40 in) within the primary range of blue oak. The frost-free growing season ranges from 150 to 300 days, with January minima averaging 1 C (30 F) and July maxima averaging 32 C (90 F). Soils are from a variety of generally well-drained parent materials, ranging from gravelly loam through stony clay loam. Soils rich in rock fragments are typical. Within the Planning Area, there are 484.00 acres of Blue Oak-Foothill Pine.

Montane Hardwood is composed of a pronounced hardwood tree layer, with an infrequent and poorly developed shrub stratum, and a sparse herbaceous layer. Canyon live oak and associates are found on a wide range of slopes, especially those that are moderate to steep. Soils are for the most part rocky, alluvial, coarse textured, poorly developed, and well drained. Soil depth classes range from shallow to deep. Canyon live oak, incense-cedar, and a few other associates are also found on ultrabasic soils. Mean summer temperatures in the Montane Hardwood habitat vary between 20 and 25 C (68 and 77 F) and mean winter temperatures between 3 and 7 C (37 and 45 F). Frost-free days range from 160 to 230. Annual precipitation varies from 2794 mm (110 in) in the northern Coast Range to 914 mm (36 in) in the mountains of southern California. Within the Planning Area, there are 23.96 acres of Montane Hardwood.

Valley-foothill riparian habitats are found in valleys bordered by sloping alluvial fans, slightly dissected terraces, lower foothills, and coastal plains. They are generally associated with low velocity flows, flood plains, and gentle topography. Valleys provide deep alluvial soils and a high water table. The substrate is coarse, gravelly, or rocky soils more or less permanently moist, but probably well aerated. Frost and short periods of freezing occur in winter (200 to 350 frost-free days). This habitat is characterized by hot, dry summers and mild and wet winters. Temperatures

range from 75 to 102 F in the summer to 29 to 44 F in the winter. Average precipitation ranges from 6-30 inches, with little or no snow. The growing season is 7 to 11 months. Within the Planning Area, there are 50.87 acres of valley-foothill riparian habitat.

Valley Oak Woodland varies from savanna-like to forest-like stands with partially closed canopies, comprised mostly of winter-deciduous, broad-leaved species. Denser stands typically grow in valley soils along natural drainages. This habitat occurs in a wide range of physiographic settings but is best developed on deep, well-drained alluvial soils, usually in valley bottoms. Most large, healthy valley oaks are probably rooted down to permanent water supplies. Stands of valley oaks are found in deep sills on broad ridge-tops in the southern Coast Range. Where this type occurs near the coast, it is usually found away from the main fog zone. The climate is Mediterranean, with mild, wet winters and hot, dry summers. Within the Planning Area, there are 20.75 acres of Valley Oak Woodland habitat.

Aquatic Habitats

Lacustrine habitats are inland depressions or dammed riverine channels containing standing water. These habitats may occur in association with any terrestrial habitats, Riverine, or Fresh Emergent Wetlands. They may vary from small ponds less than one acre to large areas covering several square miles. Depth can vary from a few inches to hundreds of feet. Typical lacustrine habitats include permanently flooded lakes and reservoirs, and intermittent lakes and ponds (including vernal pools) so shallow that rooted plants can grow over the bottom. Most permanent lacustrine systems support fish life; intermittent types usually do not. Within the Planning Area, there are 8.76 acres of lacustrine habitat.

SPECIAL-STATUS SPECIES

The following discussion is based on a background search of special-status species that are documented in the CNDDDB, the CNPS Inventory of Rare and Endangered Plants, and the USFWS endangered and threatened species lists. The background search was regional in scope and focused on the documented occurrences within a 9 Quad search area of Jackson. As shown in Figure 3.4-2, the 9 quads consist of Irish Hill, Amador City, Pine Grove, Lone, Jackson, Mokelumne Hill, Wallace, Valley Springs, and San Andreas.

Special Status Plants

The search revealed documented occurrences of no special status plant species within one mile of the Jackson Planning Area and 15 special status plant species within 9 quads of the Planning Area. Tables 3.4-2 provides a list of special-status plant species that are documented within 9 quads of the Planning Area, along with their current protective status, geographic distribution, habitat, and blooming period. Figure 3.4-2 illustrates the special status species located within approximately 9 quads of the Planning Area.

Special Status Animals

The search revealed documented occurrences of 21 special status animal species within approximately 9 quads of the Planning Area, including: five amphibians/reptiles, one Arachnid,

three birds, four Crustaceans, one fish, and three mammals. Tables 3.4-3 and 3.4-4 provide a list of the special-status animal species that are documented within approximately 9 quads of the Planning Area, and one-mile, along with their current protective status, geographic distribution, and habitat. Figure 3.4-2 illustrates documented occurrences within approximately 9 quads of the Planning Area.

Sensitive Natural Communities

The California Department of Fish and Wildlife (CDFW) considers sensitive natural communities to have significant biotic value, with species of plants and animals unique to each community. The CNDDDB search revealed a documented occurrence of sensitive natural communities within Jackson. This includes lone Chaparral. This is a unique plant community of the Sierra foothills found in a few isolated patches north and south of the small town of Lone in Amador County. Lone manzanita is one of the rare plants associated with this dwarf-chaparral type brush community. The sterile soil associated with the plant community is also known as lone, and consists of ancient acidic clay. Most chaparral shrubs cannot tolerate the harsh conditions characteristic of this soil, and those that do are sparsely distributed and stunted.

CNDDDB records reveal that the closest location is approximately 6.5 kilometers southeast of Mokelumne Hill, outside of the Planning Area. It is unlikely for this habitat to occur within the Planning Area; however, focused surveys would have to be conducted to ensure no small areas of lone Chaparral exist.

Natural Communities similar to this type were once more widely distributed throughout California, but have been modified or destroyed by grazing, cultivation, and urban development. Since the remaining examples of these sensitive natural communities are under continuing threat from future development, CDFW considers them “highest inventory priorities” for future conservation.

Wildlife Movement Corridors

Wildlife corridors refer to contiguous tracts of habitat that connect larger areas of habitat and facilitate genetic exchange within a population or between subpopulations by allowing for movement within or between habitat patches. Habitat reduction and fragmentation are among the primary causes of species decline; consequently, the identification and preservation of key corridors is important to retaining native populations in Amador County.

Amador County’s deer include both resident and migratory populations. Although mule deer is not recognized as a special-status species, CDFW is concerned about preserving deer migration corridors in many foothill and mountainous regions of California currently experiencing expansion of urbanized areas. Important habitat and deer migration patterns for the Salt Springs deer herd have been mapped by CDFW in El Dorado County (El Dorado County 2003), but no established migration corridors have been identified in Amador County. The U.S. Forest Service has identified deer range in eastern Amador County (USFWS 2005) and deer may move through any suitable open space habitat areas between their summer and winter ranges.

Important habitat identified and mapped by CDFW is seen as essential to the long-term productivity of this herd and includes critical winter range, critical summer range, and fawning areas. Based on areas defined in El Dorado County as important habitat, critical winter range in Amador County would be located primarily at elevations of 2,000–4,000 feet. Critical summer range and critical fawning areas would be located at elevations of 4,000–9,000 feet in the eastern half of the county and would largely occur on National Forest lands managed by USFS. The summer range of regional deer herds is characterized by mixed conifer forest while winter range consists primarily of oak woodlands and chaparral. Habitats and plant species important to deer in the central Sierra Nevada include riparian and meadow habitats and oak, aspen, willow, ceanothus, and willow species.

Native Nursery Sites

Native Nursery Sites refer to areas in which members of the same species collectively breed and rear offspring in substantial numbers. There are no native nursery sites in the vicinity of the Planning Area. The closest native nursery site to the Planning Area is the Delta Breeze Farm home of Hardly Strictly Natives located at 17690 Tyler. Rd. Fiddletown.

TABLE 3.4-2: SPECIAL-STATUS PLANT SPECIES PRESENT OR POTENTIALLY PRESENT (9 QUADS)

SPECIES	STATUS (FED/CA/CNPS)	GEOGRAPHIC DISTRIBUTION
lone manzanita <i>Arctostaphylos myrtifolia</i>	FT/--/1B.2	On lone clay with chaparral associates. Often comprises 50-80% cover. 90-560 m.
big-scale balsamroot <i>Balsamorhiza macrolepis</i>	--/--/1B.2	Sometimes on serpentine. 35-1465 m.
Hoover's calycadenia <i>Calycadenia hooveri</i>	--/--/1B.3	On exposed, rocky, barren soil. 60-260 m.
Bisbee Peak rush-rose <i>Crocanthemum suffrutescens</i>	--/--/3.2	In gravelly openings on lone formation soil. 85-150 m..
lone buckwheat <i>Eriogonum apricum</i> var. <i>apricum</i>	FE/CE/1B.1	In gravelly openings on lone formation soil. 85-150 m.
Irish Hill buckwheat <i>Eriogonum apricum</i> var. <i>prostratum</i>	FE/CE/1B.1	Gravelly openings on lone formation soils. 90-100 m.
Tuolumne button-celery <i>Eryngium pinnatisectum</i>	--/--/1B.2	Volcanic soils; vernal pools and mesic sites within other natural communities. 65-915 m.
Stanislaus monkeyflower <i>Erythranthe marmorata</i>	--/--/1B.1	300-1435 m.
Parry's horkelia <i>Horkelia parryi</i>	--/--/1B.2	Openings in chaparral or woodland; especially known from the lone formation in Amador County. 85-1115 m.
Legenere <i>Legenere limosa</i>	--/--/1B.1	In beds of vernal pools. 1-1005 m.
pincushion navarretia <i>Navarretia myersii</i> ssp. <i>myersii</i>	--/--/1B.1	Clay soils within non-native grassland. 45-100 m.
Patterson's navarretia <i>Navarretia paradoxiclara</i>	--/--/1B.3	Serpentinite, openings, vernal mesic, often drainages. 150-435 m.
Henderson's bent grass <i>Agrostis hendersonii</i>	--/--/3.2	Moist places in grassland or vernal pool habitat. 65-1030 m.
Red Hills soaproot <i>Chlorogalum grandiflorum</i>	--/--/1B.2	Occurs frequently on serpentine or gabbro, but also on non-ultramafic substrates; often on "historically disturbed" sites. 265-1695 m.
prairie wedge grass <i>Sphenopholis obtusata</i>	--/--/2B.2	Open moist sites, along rivers and springs, alkaline desert seeps. 15-2625 m.

SOURCE: CDFW CNDDDB 2022

NOTES: CNPS = CALIFORNIA NATIVE PLANT SOCIETY

FEDERAL

E = ENDANGERED UNDER THE FEDERAL ENDANGERED SPECIES ACT.

T = THREATENED UNDER THE FEDERAL ENDANGERED SPECIES ACT.

STATE

E = ENDANGERED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.

T = THREATENED UNDER THE FEDERAL CALIFORNIA ENDANGERED SPECIES ACT.

R = RARE UNDER THE CALIFORNIA ENDANGERED SPECIES ACT

CALIFORNIA NATIVE PLANT SOCIETY

1B = RARE, THREATENED, OR ENDANGERED IN CALIFORNIA AND ELSEWHERE.

2 = RARE, THREATENED, OR ENDANGERED IN CALIFORNIA, BUT MORE COMMON ELSEWHERE.

3 = A REVIEW LIST – PLANTS ABOUT WHICH MORE INFORMATION IS NEEDED.

4 = PLANTS OF LIMITED DISTRIBUTION – A WATCH LIST

.1 = SERIOUSLY ENDANGERED IN CALIFORNIA (OVER 80% OF OCCURRENCES THREATENED-HIGH DEGREE AND IMMEDIACY OF THREAT).

.2 = FAIRLY ENDANGERED IN CALIFORNIA (20-80% OCCURRENCES THREATENED).

.3 = NOT VERY ENDANGERED IN CALIFORNIA (<20% OF OCCURRENCES THREATENED)

TABLE 3.4-3: SPECIAL STATUS ANIMALS PRESENT OR POTENTIALLY PRESENT (APPROXIMATELY ONE MILE)

	STATUS (FED/CA/ CDFW)	GEOGRAPHIC DISTRIBUTION
<i>AMPHIBIANS</i>		
foothill yellow-legged frog <i>Rana boylei</i>	--/E/SSC	Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.
<i>CRUSTACEANS</i>		
Grady's Cave amphipod <i>Stygobromus gradyi</i>	--/--/--	
Graham's Cave amphipod <i>Stygobromus grahami</i>	--/--/--	

SOURCE: CDFW CNDDDB 2022

STATUS EXPLANATIONS:

FEDERAL

E = ENDANGERED UNDER THE FEDERAL ENDANGERED SPECIES ACT.

T = THREATENED UNDER THE FEDERAL ENDANGERED SPECIES ACT.

PE = PROPOSED FOR ENDANGERED UNDER THE FEDERAL ENDANGERED SPECIES ACT.

PT = PROPOSED FOR THREATENED UNDER THE FEDERAL ENDANGERED SPECIES ACT.

C = CANDIDATE SPECIES FOR LISTING UNDER THE FEDERAL ENDANGERED SPECIES ACT.

D = DELISTED FROM FEDERAL LISTING STATUS.

BCC = BIRD OF CONSERVATION CONCERN

STATE

E = ENDANGERED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.

T = THREATENED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.

C = CANDIDATE SPECIES FOR LISTING UNDER THE STATE ENDANGERED SPECIES ACT.

FP = FULLY PROTECTED UNDER THE CALIFORNIA FISH AND GAME CODE.

SSC = SPECIES OF SPECIAL CONCERN IN CALIFORNIA.

TABLE 3.4-4: SPECIAL STATUS ANIMALS PRESENT OR POTENTIALLY PRESENT (9 QUADS)

SPECIES	STATUS (FED/CA/CDFW)	GEOGRAPHIC DISTRIBUTION
<i>AMPHIBIANS</i>		
California red-legged frog <i>Rana draytonii</i>	T/--/SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.
California tiger salamander <i>Ambystoma californiense</i>	T/T/WT	Lives in vacant or mammal-occupied burrows throughout most of the year; in grassland, savanna, or open woodland habitats. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.
foothill yellow-legged frog <i>Rana boylei</i>	--/E/SSC	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.
western spadefoot <i>Spea hammondi</i>	--/--/SSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.
<i>ARACHNIDS</i>		
Rudolph's cave harvestman <i>Banksula rudolphi</i>	--/--/--	Known only from the type locality, Chrome Cave, Pardee Reservoir, Amador County. Species is troglitic.
<i>BIRDS</i>		
bald eagle <i>Haliaeetus leucocephalus</i>	D/E/FP	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.
prairie falcon <i>Falco mexicanus</i>	--/--/WL	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.
tricolored blackbird <i>Agelaius tricolor</i>	--/T/SSC	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.
<i>CRUSTACEANS</i>		
California linderiella <i>Linderiella occidentalis</i>	--/--/--	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools has very low alkalinity, conductivity, and total dissolved solids.

3.4

BIOLOGICAL RESOURCES

SPECIES	STATUS (FED/CA/CDFW)	GEOGRAPHIC DISTRIBUTION
Grady's Cave amphipod <i>Stygobromus gradyi</i>	--/--/--	Known only from Central California. Known only from springs and caves in the Mother Lode karst region.
Graham's Cave amphipod <i>Stygobromus grahami</i>	--/--/--	Known only from Central California. Found only in caves.
vernal pool fairy shrimp <i>Branchinecta lynchi</i>	T/--/--	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.
<i>FISH</i>		
steelhead - Central Valley DPS <i>Oncorhynchus mykiss irideus pop.</i> 11	T/--/--	Streams between Elk River, Oregon and the Klamath and Trinity rivers in California, inclusive. Minimum water depth for upstream migration is 18 cm. Water velocities > 3-4 m/sec may impede upstream progress.
<i>INSECTS</i>		
Crotch bumble bee <i>Bombus crotchii</i>	--/C/--	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> .
Leech's skyline diving beetle <i>Hydroporus leechi</i>	--/--/--	Aquatic.
Tulare cuckoo wasp <i>Chrysis tularensis</i>	--/--/--	Based on documented records, this wasp is essentially endemic to the foothills on both sides of California's San Joaquin Valley, being known from Tulare, Fresno, Monterey, and Amador Counties.
valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T/--/--	Occurs only in the Central Valley of California, in association with blue elderberry (<i>Sambucus mexicana</i>). Prefers to lay eggs in elderberries 2-8 inches in diameter; some preference shown for "stressed" elderberries.
<i>MAMMALS</i>		
North American porcupine <i>Erethizon dorsatum</i>	--/--/--	Forested habitats in the Sierra Nevada, Cascade, and Coast ranges, with scattered observations from forested areas in the Transverse Ranges. Wide variety of coniferous and mixed woodland habitat.
pallid bat <i>Antrozous pallidus</i>	--/--/SSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.

SPECIES	STATUS (FED/CA/CDFW)	GEOGRAPHIC DISTRIBUTION
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	--/--/SSC	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.
<i>REPTILES</i>		
western pond turtle <i>Emys marmorata</i>	--/--/SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.

SOURCE: CDFW CNDDDB 2022

STATUS EXPLANATIONS:

FEDERAL

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- PT = PROPOSED FOR THREATENED UNDER THE FEDERAL ENDANGERED SPECIES ACT.
- C = CANDIDATE SPECIES FOR LISTING UNDER THE FEDERAL ENDANGERED SPECIES ACT.
- D = DELISTED FROM FEDERAL LISTING STATUS.
- BCC = BIRD OF CONSERVATION CONCERN

STATE

- E = ENDANGERED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.
- T = THREATENED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.
- C = CANDIDATE SPECIES FOR LISTING UNDER THE STATE ENDANGERED SPECIES ACT.
- FP = FULLY PROTECTED UNDER THE CALIFORNIA FISH AND GAME CODE.
- SSC = SPECIES OF SPECIAL CONCERN IN CALIFORNIA.

3.4.2 REGULATORY SETTING

There are a number of regulatory agencies whose responsibility includes the oversight of the natural resources of the State and nation including the CDFW, the USFWS, the USACE, and the National Marine Fisheries Service (NMFS). These agencies often respond to declines in the quantity of a particular habitat or plant or animal species by developing protective measures for those species or habitat type. The following is an overview of the Federal, State, and local regulations that are applicable to implementing the General Plan.

FEDERAL

Federal Endangered Species Act

The Federal Endangered Species Act, passed in 1973, defines an endangered species as any species or subspecies that is in danger of extinction throughout all or a significant portion of its range. A threatened species is defined as any species or subspecies that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Once a species is listed it is fully protected from a “take” unless a take permit is issued by the United States Fish and Wildlife Service. A take is defined as the harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct, including modification of its habitat (16 USC 1532, 50 CFR 17.3). Proposed endangered or threatened species are those species for which a proposed regulation, but not a final rule, has been published in the Federal Register.

Migratory Bird Treaty Act

To kill, possess, or trade a migratory bird, bird part, nest, or egg is a violation of the Federal Migratory Bird Treaty Act (FMBTA: 16 U.S.C., §703, Supp. I, 1989), unless it is in accordance with the regulations that have been set forth by the Secretary of the Interior.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 USC Section 668) protects these birds from direct take and prohibits the take or commerce of any part of these species. The USFWS administers the act, and reviews Federal agency actions that may affect these species.

Clean Water Act – Section 404

Section 404 of the Clean Water Act (CWA) regulates all discharges of dredged or fill material into waters of the U.S. Discharges of fill material includes the placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and subaqueous utility lines [33 C.F.R. §323.2(f)].

Waters of the U.S. include lakes, rivers, streams, intermittent drainages, mudflats, sandflats, wetlands, sloughs, and wet meadows [33 C.F.R. §328.3(a)]. Wetlands are defined as “those areas

that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” [33 C.F.R. §328.3(b)]. Waters of the U.S. exhibit a defined bed and bank and ordinary high water mark (OHWM). The OHWM is defined by the USACE as “that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” [33 C.F.R. §328.3(e)].

The USACE is the agency responsible for administering the permit process for activities that affect waters of the U.S. Executive Order 11990 is a Federal implementation policy, which is intended to result in no net loss of wetlands.

Clean Water Act – Section 401

Section 401 of the CWA (33 U.S.C. 1341) requires an applicant who is seeking a 404 permit to first obtain a water quality certification from the Regional Water Quality Control Board. To obtain the water quality certification, the Regional Water Quality Control Board must indicate that the proposed fill would be consistent with the standards set forth by the State.

Department of Transportation Act - Section 4(f)

Section 4(f) has been part of Federal law since 1966. It was enacted as Section 4(f) of the Department of Transportation (DOT) Act of 1966 and set forth in Title 49 United States Code (U.S.C.), Section 1653(f). In January 1983, as part of an overall recodification of the DOT Act, Section 4(f) was amended and codified in 49 U.S.C. Section 303. This law established policy on Lands, Wildlife and Waterfowl Refuges, and Historic Sites as follows:

It is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites. The Secretary of Transportation shall cooperate and consult with the Secretaries of the Interior, Housing and Urban Development, and Agriculture, and with the States, in developing transportation plans and programs that include measures to maintain or enhance the natural beauty of lands crossed by transportation activities or facilities. The Secretary of Transportation may approve a transportation program or project (other than any project for a park road or parkway under section 204 of title 23) requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of a historic site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if: a) There is no prudent and feasible alternative to using that land; and b) The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Rivers and Harbors Act of 1899

The Rivers and Harbors Act prohibits the obstruction or alteration of any navigable water of the United States. The Act requires authorization from the USACE for any excavation or deposition of materials into these waters or for any work that could affect the course, location, condition, or capacity of rivers or harbors.

STATE

Fish and Game Code §2050-2097 - California Endangered Species Act

The California Endangered Species Act (CESA) protects certain plant and animal species when they are of special ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the State. CESA established that it is State policy to conserve, protect, restore, and enhance endangered species and their habitats.

CESA was expanded upon the original Native Plant Protection Act and enhanced legal protection for plants. To be consistent with Federal regulations, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the Act as threatened species, but did not do so for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Under State law, plant and animal species may be formally designated by official listing by the California Fish and Game Commission.

Fish and Game Code §1900-1913 California Native Plant Protection Act

In 1977 the State Legislature passed the Native Plant Protection Act (NPPA) in recognition of rare and endangered plants of the State. The intent of the law was to preserve, protect, and enhance endangered plants. The NPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare, and to require permits for collecting, transporting, or selling such plants. The NPPA includes provisions that prohibit the taking of plants designated as "rare" from the wild, and a salvage mandate for landowners, which requires notification of the CDFW 10 days in advance of approving a building site.

Fish and Game Code §3503, 3503.5, 3800 - Predatory Birds

Under the California Fish and Game Code, all predatory birds in the order Falconiformes or Strigiformes in California, generally called "raptors," are protected. The law indicates that it is unlawful to take, possess, or destroy the nest or eggs of any such bird unless it is in accordance with the code. Any activity that would cause a nest to be abandoned or cause a reduction or loss in a reproductive effort is considered a take. This generally includes construction activities.

Fish and Game Code §1601-1603 – Streambed Alteration

Under the California Fish and Game Code, CDFW has jurisdiction over any proposed activities that would divert or obstruct the natural flow or change the bed, channel, or bank of any lake or stream. Private landowners or project proponents must obtain a "Streambed Alteration Agreement" from CDFW prior to any alteration of a lake bed, stream channel, or their banks. Through this agreement, the CDFW may impose conditions to limit and fully mitigate impacts on

fish and wildlife resources. These agreements are usually initiated through the local CDFW warden and will specify timing and construction conditions, including any mitigation necessary to protect fish and wildlife from impacts of the work.

Public Resources Code § 21000 - California Environmental Quality Act

CEQA identifies that a species that is not listed on the Federal or State endangered species list may be considered rare or endangered if the species meets certain criteria. Under CEQA public agencies must determine if a project would adversely affect a species that is not protected by FESA or CESA. Species that are not listed under FESA or CESA, but are otherwise eligible for listing (i.e., candidate or proposed) may be protected by the local government until the opportunity to list the species arises for the responsible agency.

Species that may be considered for review are included on a list of “Species of Special Concern,” developed by the CDFW. Additionally, the California Native Plant Society (CNPS) maintains a list of plant species native to California that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. List 1A contains plants that are believed to be extinct. List 1B contains plants that are rare, threatened, or endangered in California and elsewhere. List 2 contains plants that are rare, threatened, or endangered in California, but more numerous elsewhere. List 3 contains plants where additional information is needed. List 4 contains plants with a limited distribution.

Public Resources Code § 21083.4 - Oak Woodlands Conservation

In 2004, the California legislature enacted SB 1334, which added oak woodland conservation regulations to the Public Resources Code. This new law requires a county to determine whether a project, within its jurisdiction, may result in a conversion of oak woodlands that will have a significant effect on the environment. If a county determines that there may be a significant effect to oak woodlands, the county must require oak woodland mitigation alternatives to mitigate the significant effect of the conversion of oak woodlands. Such mitigation alternatives include: conservation through the use of conservation easements; planting and maintaining an appropriate number of replacement trees; contribution of funds to the Oak Woodlands Conservation Fund for the purpose of purchasing oak woodlands conservation easements; and/or other mitigation measures developed by the county.

California Oak Woodland Conservation Act

The California Legislature passed Assembly Bill 242, known as the California Oak Woodland Conservation Act, in 2001 as a result of widespread changes in land use patterns across the landscape that were fragmenting oak woodland character over extensive areas. The Act created the California Oak Woodland Conservation Program within the Wildlife Conservation Board. The legislation provides funding and incentives to ensure the future viability of California’s oak woodland resources by maintaining large scale land holdings or smaller multiple holdings that are not divided into fragmented, nonfunctioning biological units. The Act acknowledged that the conservation of oak woodlands enhances the natural scenic beauty for residents and visitors,

increases real property values, promotes ecological balance, provides habitat for over 300 wildlife species, moderates temperature extremes, reduces soil erosion, sustains water quality, and aids with nutrient cycling, all of which affect and improve the health, safety, and general welfare of the residents of the State.

California Wetlands Conservation Policy

In August 1993, the Governor announced the "California Wetlands Conservation Policy." The goals of the policy are to establish a framework and strategy that will:

- Ensure no overall net loss and to achieve a long-term net gain in the quantity, quality, and permanence of wetland acreage and values in California in a manner that fosters creativity, stewardship, and respect for private property.
- Reduce procedural complexity in the administration of State and Federal wetland conservation programs.
- Encourage partnerships to make landowner incentive programs and cooperative planning efforts the primary focus of wetland conservation and restoration.

The Governor also signed Executive Order W-59-93, which incorporates the goals and objectives contained in the new policy and directs the Resources Agency to establish an Interagency Task Force to direct and coordinate administration and implementation of the policy.

Natural Community Conservation Planning Act

The Natural Community Conservation Planning Act provides long-term protection of species and habitats through regional, multi-species planning before the special measures of the CESA become necessary.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act authorizes the SWRCB to regulate state water quality and protect beneficial uses.

Water Quality Control Plan for the Sacramento-San Joaquin River Basins

The Water Quality Control Plan for the Sacramento-San Joaquin River Basins (Basin Plan), adopted by the CVRWQCB in 1998, identifies the beneficial uses of water bodies and provides water quality objectives and standards for waters of the Sacramento River and San Joaquin River basins, including the Delta.

State and federal laws mandate the protection of designated "beneficial uses" of water bodies. State law defines beneficial uses as "domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves" (Water Code Section 13050[f]). Additional protected beneficial uses of the San Joaquin River include groundwater recharge and fresh water replenishment.

3.4.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on biological resources if it will:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service;
- 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; 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.

IMPACTS AND MITIGATION

Impact 3.4-1: General Plan implementation could have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (Less than Significant)

Approval of the General Plan would not directly approve or entitle any development or infrastructure projects. However, implementation of the General Plan and Land Use Map would allow and facilitate future development in Jackson, which could result in adverse impacts to special-status plant and wildlife species, as well as sensitive natural habitat or wildlife movement corridors.

SPECIAL STATUS PLANT SPECIES

The search revealed documented occurrences of two special status plant species within one mile of the Planning Area. The search revealed documented occurrences of 15 special status plant species within approximately 9 quads of the Planning Area. Tables 3.4-2 provides a list of special-

3.4 BIOLOGICAL RESOURCES

status plant species that are documented within 9 quads of the Planning Area, along with their current protective status, geographic distribution habitat, and blooming period. Figure 3.4-2 illustrates the special status species located within approximately 9 quads of the Planning Area.

Subsequent development under the proposed General Plan could result in the direct loss of habitat areas associated with these special status plant species, since suitable habitat for these species does occur in the region. Additionally, indirect impacts to special status plant species could occur with implementation of the General Plan. Indirect impacts could include habitat degradation as a result of impacts to water quality.

Special status plant species receive protection from various Federal and State laws and regulations, including FESA and CESA. These regulations generally prohibit the taking of the plant species without a special permit. Additionally, the proposed General Plan includes numerous policies and actions intended to reduce or avoid impacts to special status plant species. These policies and actions are listed below.

SPECIAL STATUS ANIMAL SPECIES

The search revealed documented occurrences of 21 special status animal species within approximately 9 quads of the Planning Area. This includes: five amphibians/reptiles, one Arachnid, three birds, four Crustaceans, one fish, and three mammals. Of these species, three are documented within approximately one mile of the city's SOI. Tables 3.4-3 and 3.4-4 provide a list of the special-status animal species that are documented within approximately one mile and 9 quads of the Planning Area, along with their current protective status, geographic distribution, and habitat. Figure 3.4-2 illustrates the special status species located within approximately 9 quads of the Planning Area.

While most new development in Jackson that would occur under the proposed General Plan would occur in areas that have been previously developed, subsequent development under the proposed General Plan could result in the direct loss of habitat areas associated with these special status animal species, since suitable habitat for these species does occur in the region and may occur on future development project sites within Jackson. Additionally, indirect impacts to special status animal species could occur with implementation of the General Plan. Indirect impacts could include habitat degradation as a result of impacts to water quality, increased human presence, and the loss of foraging habitat.

Special status animal species receive protection from various Federal and State laws and regulations, including FESA and CESA. These regulations generally prohibit the taking of a species or direct impact to foraging and breeding habitat without a special permit. Additionally, the proposed General Plan includes numerous policies and actions intended to reduce or avoid impacts to special status animal species. These policies and actions are listed below.

CONCLUSION

Construction and maintenance activities associated with future development projects under the proposed General Plan could result in the direct and indirect loss or indirect disturbance of special

status plant or animal species or their habitats that are known to occur, or have potential to occur, in the region. Impacts to special status species or their habitat could result in a substantial reduction in local population size, lowered reproductive success, or habitat fragmentation. Significant impacts on special status species associated with individual subsequent projects could include:

- increased mortality caused by higher numbers of automobiles in new areas of development;
- direct mortality from the collapse of underground burrows, resulting from soil compaction;
- direct mortality resulting from the movement of equipment and vehicles through construction areas;
- direct mortality resulting from removal of trees with active nests;
- direct mortality or loss of suitable habitat resulting from the trimming or removal of obligate host plants;
- direct mortality resulting from fill of wetlands features;
- loss of breeding and foraging habitat resulting from the filling of seasonal or perennial wetlands;
- loss of breeding, foraging, and refuge habitat resulting from the permanent removal of riparian vegetation;
- loss of suitable habitat for vernal pool invertebrates resulting from the destruction or degradation of vernal pools or seasonal wetlands;
- abandoned eggs or young and subsequent nest failure for special status nesting birds, including raptors, and other non-special status migratory birds resulting from construction-related noises;
- loss or disturbance of rookeries and other colonial nests;
- loss of suitable foraging habitat for special status raptor species;
- loss of migration corridors resulting from the construction of permanent structures or features; and
- impacts to fisheries/species associated with waterways.

However, implementation of the General Plan policies and actions listed below would assist in minimizing the impact to a less than significant level. Subsequent development projects will be required to comply with the General Plan and adopted Federal, State, and local regulations for the protection of special status plants and animals, including habitat.

The City of Jackson has prepared the General Plan to include numerous policies and actions intended to protect special status plants and animals, including habitat, from adverse effects associated with future development and improvement projects. Additionally, the General Plan requires project proponents to satisfy applicable U.S. Endangered Species Act (ESA), California Endangered Species Act (CESA), National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), and other applicable local, state, and federal laws and

3.4 BIOLOGICAL RESOURCES

regulation provisions through consultations with the Permitting Agencies and local planning agencies.

While future development has the potential to result in significant impacts to protected special status plants and animals, including habitat, the implementation of the policies and actions described above and listed below, as well as Federal and State regulations, would reduce impacts to these resources to a **less than significant** level.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

General Plan implementation could have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

CONSERVATION AND OPEN SPACE ELEMENT POLICIES

COS 3.1: Preserve and enhance biological communities that contribute to the City's and the region's biodiversity including, but not limited to, grasslands, wetlands, vernal pools, riparian areas, aquatic habitat, oak woodlands, and agricultural lands.

COS 3.2: Focus conservation efforts on high priority conservation areas that contain suitable habitat for endangered, threatened, migratory, or special-status species and that can be managed with minimal interference with nearby urban land uses.

COS 3.3: Preserve existing native trees and vegetation where possible and integrate regionally native trees and plant species into development and infrastructure projects where appropriate.

COS 3.4: Utilize locally-sourced native and drought-tolerant plants and trees for landscaping on public projects consistent with the City's landscape standards. Strongly encourage the use of native drought-tolerant trees for landscaping on private projects.

COS 3.5: Avoid removal of large, mature trees that provide wildlife habitat, visual screening, or contribute to the visual quality of the environment through appropriate project design and building siting, if feasible. If full avoidance is not possible, prioritize planting of replacement trees on-site over off-site locations. Replacement trees for high-quality mature trees should generally be of like kind, and provide for comparable habitat functionality, where appropriate site conditions exist.

COS 3.6: Facilitate the preservation of existing trees, the planting of additional street trees, and the replanting of trees lost through disease, new construction, or by other means.

COS 3.7: Strongly discourage the removal of healthy trees on public and private property.

CONSERVATION AND OPEN SPACE ELEMENT ACTIONS

COS-3a: Continue to maintain and apply the City's Landscape Standards (Municipal Code Chapter 17.40) to conserve trees and other foliage wherever practical.

COS-3b: Seek grant funding (“greening” grants) to help offset the cost of landscape improvements along special corridors and public rights-of-way.

COS-3c: Make available a list of plants and trees native to the region that are suitable for use in landscaping, consistent with the requirements of California’s Water Efficient Landscape Ordinance (WELO). The plant and tree species should be drought-tolerant, and consideration should be given to the suitability of the plant and tree species for use as habitat to native animals, birds, and insects.

COS-3d: Allocate sufficient funds in the annual budget to maintain the City’s trees and to replace trees that are diseased or dying.

COS-3e: Require new development which has the potential to result in water quality impacts on the City’s creeks and the local groundwater basin to implement all feasible mitigation measures to reduce impacts.

COS-3f: Require development project proposals, infrastructure projects, long-range planning projects, and other projects to submit a biological resources evaluation which determines whether significant adverse impacts will occur. Evaluations shall be carried out consistent with applicable state and federal guidelines. Projects shall be designed to avoid or reduce impacts to the maximum extent feasible.

COS-3g: Where sensitive biological habitats have been identified on or immediately adjacent to a project site, the project shall include appropriate mitigation measures identified by a qualified biologist, which may include, but are not limited to the following:

- *Pre-construction surveys for species listed under the State or Federal Endangered Species Acts, or species identified as special-status by the resource agencies, shall be conducted by a qualified biologist;*
- *Construction barrier fencing shall be installed around sensitive resources and areas identified for avoidance or protection; and*
- *Employees working on the project site shall be trained by a qualified biologist to identify and avoid protected species and habitat.*

Impact 3.4-2: General Plan implementation could have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (Less than Significant)

The California Department of Fish and Wildlife (CDFW) considers sensitive natural communities to have significant biotic value, with species of plants and animals unique to each community. The CNDDDB search revealed a documented occurrence of sensitive natural communities within Jackson. This includes Lone Chaparral. This is a unique plant community of the Sierra foothills found in a few isolated patches north and south of the small town of Lone in Amador County. Lone manzanita is one of the rare plants associated with this dwarf-chaparral type brush community. The sterile soil associated with the plant community is also known as lone, and consists of ancient acidic clay. Most chaparral shrubs cannot tolerate the harsh conditions characteristic of this soil, and those that do are sparsely distributed and stunted.

CNDDDB records reveal that the closest location is approximately 6.5 kilometers southeast of Mokelumne Hill, outside of the Planning Area. It is unlikely for this habitat to occur within the Planning Area; however, focused surveys would have to be conducted to ensure no small areas of lone Chaparral exist.

Natural Communities similar to this type were once more widely distributed throughout California, but have been modified or destroyed by grazing, cultivation, and urban development. Since the remaining examples of these sensitive natural communities are under continuing threat from future development, CDFW considers them “highest inventory priorities” for future conservation.

While not always documented as a sensitive natural community in the CNDDDB, streams, rivers, wet meadows, and vernal pools are of high concern because they provide unique aquatic habitat for many endemic species, including special status plants, birds, invertebrates, and amphibians. Jackson is located in a bioregion that contains more than half of the plant species found in California. Habitat types include annual grassland, blue oak savanna, chaparral, ponderosa pine, black oak woodland, mixed conifer, red fir, riparian, alpine meadow, Jeffrey pine, sagebrush, and bitter brush.

As noted in Table 3.4-1, approximately 50.87 acres of Valley Foothill Riparian habitat is located within the Planning Area. Over 225 species of birds, mammals, reptiles, and amphibians depend on California’s riparian habitats, including the endangered riparian brush rabbit and the endangered riparian woodrat. Development accommodated by the General Plan in or near riparian and habitat areas could result in removal of vegetation or further habitat degradation from pollutants transported by urban runoff, changes in vegetation as a result of changes in land use and management practices, as well as altered site hydrology from the construction of adjacent urban development and roadways. Alterations to the flow, bed, channel, or bank of creeks and streams within the Planning Area would affect the ability of riparian corridors to provide habitat for wildlife species that utilize them for feeding, cover, and nesting, and thus could result in a loss of riparian habitat function; therefore, this is considered a potentially significant impact.

The City of Jackson has prepared the General Plan to include numerous policies and actions intended to protect sensitive natural communities, including riparian habitat, from adverse effects associated with future development and improvement projects. The General Plan also includes a number of policies and actions related to habitat restoration and protection, including riparian and aquatic habitat. For example, General Plan Policy COS 3.1 requires the City to preserve and enhance biological communities that contribute to the City's and the region's biodiversity including, but not limited to, grasslands, wetlands, vernal pools, riparian areas, aquatic habitat, oak woodlands, and agricultural lands.

Subsequent development projects will be required to comply with the General Plan and adopted Federal, State, and local regulations for the protection of sensitive natural communities, including riparian habitat. While future development has the potential to result in significant impacts to protected habitats, the implementation of the policies and action discussed above and listed below, as well as Federal and State regulations, would reduce impacts to these resources to a **less than significant** level.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

CONSERVATION AND OPEN SPACE ELEMENT POLICIES

COS 3.1: Preserve and enhance biological communities that contribute to the City's and the region's biodiversity including, but not limited to, grasslands, wetlands, vernal pools, riparian areas, aquatic habitat, oak woodlands, and agricultural lands.

COS 3.2: Focus conservation efforts on high priority conservation areas that contain suitable habitat for endangered, threatened, migratory, or special-status species and that can be managed with minimal interference with nearby urban land uses.

COS 3.3: Preserve existing native trees and vegetation where possible and integrate regionally native trees and plant species into development and infrastructure projects where appropriate.

COS 3.5: Avoid removal of large, mature trees that provide wildlife habitat, visual screening, or contribute to the visual quality of the environment through appropriate project design and building siting, if feasible. If full avoidance is not possible, prioritize planting of replacement trees on-site over off-site locations. Replacement trees for high-quality mature trees should generally be of like kind, and provide for comparable habitat functionality, where appropriate site conditions exist.

SAFETY ELEMENT POLICIES

SA 2.4: Encourage and accommodate multipurpose flood control projects that incorporate recreation, resource conservation, preservation of natural riparian habitat, and scenic values of drainages, creeks, and detention ponds.

CONSERVATION AND OPEN SPACE ELEMENT ACTIONS

COS-1a: Continue to work with regional agencies and Amador County to ensure that regional open space amenities remain publicly-accessible, well-maintained, and provide

3.4 BIOLOGICAL RESOURCES

for essential habitat.

COS-3a: Continue to maintain and apply the City's Landscape Standards (Municipal Code Chapter 17.40) to conserve trees and other foliage wherever practical.

COS-3b: Seek grant funding ("greening" grants) to help offset the cost of landscape improvements along special corridors and public rights-of-way.

COS-3e: Require new development which has the potential to result in water quality impacts on the City's creeks and the local groundwater basin to implement all feasible mitigation measures to reduce impacts.

COS-3f: Require development project proposals, infrastructure projects, long-range planning projects, and other projects to submit a biological resources evaluation which determines whether significant adverse impacts will occur. Evaluations shall be carried out consistent with applicable state and federal guidelines. Projects shall be designed to avoid or reduce impacts to the maximum extent feasible.

COS-3g: Where sensitive biological habitats have been identified on or immediately adjacent to a project site, the project shall include appropriate mitigation measures identified by a qualified biologist, which may include, but are not limited to the following:

- *Pre-construction surveys for species listed under the State or Federal Endangered Species Acts, or species identified as special-status by the resource agencies, shall be conducted by a qualified biologist;*
- *Construction barrier fencing shall be installed around sensitive resources and areas identified for avoidance or protection; and*
- *Employees working on the project site shall be trained by a qualified biologist to identify and avoid protected species and habitat.*

Impact 3.4-3: General Plan implementation could 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 (Less than Significant)

Streams, rivers, wet meadows, and vernal pools (wetlands and jurisdictional waters) are of high concern because they provide unique aquatic habitat (perennial and ephemeral) for many endemic species, including special status plants, birds, invertebrates, and amphibians. These aquatic habitats oftentimes qualify as protected wetlands or jurisdictional waters and are protected from disturbance through the CWA.

As shown on Figure 3.4-1, Fresh Emergent Wetland are found in the Planning Area. Additionally, the majority of land adjacent to wetlands within the City limits is designated Urban while the majority land adjacent to wetlands outside of the City limits but within the SOI boundary is designated to Urban, Annual Grassland, Blue Oak Woodland, Blue Oak-Foothill Pine, and Valley Oak Woodland.

Section 404 of the CWA requires any project that involves disturbance to a wetland or water of the U.S. to obtain a permit that authorizes the disturbance. If a wetland or jurisdictional water is determined to be present, then a permit must be obtained from the USACE to authorize a disturbance to the wetland. Although subsequent projects may disturb protected wetlands and/or jurisdictional waters, the regulatory process that is established through Section 404 of the CWA ensures that there is “no net loss” of wetlands or jurisdictional waters. If, through the design process, it is determined that a future development project cannot avoid a wetland or jurisdictional water, then the USACE would require that there be an equal amount of wetland created elsewhere to mitigate any loss of wetland.

The proposed project is a planning document that does not itself approve any specific physical changes to the to the environment, adoption of the proposed General Plan would not directly impact the environment. However, the project could have an indirect change on the physical environment through subsequently projects that are consistent with the buildout that is contemplated in the General Plan. The implementation of an individual project would require a detailed and site-specific review of the site to determine the presence or absence of water features. If water features are present and disturbance is required, Federal and State laws require measures to reduce, avoid, or compensate for impacts to these resources. The requirements of these Federal and State laws are implemented through the permit process.

Construction and development activities associated with individual future projects could result in the disturbance or loss of waters of the United States. This includes perennial and intermittent drainages; unnamed drainages; vernal pools; freshwater marshes; and other types of seasonal and perennial wetland communities. Wetlands and other waters of the United States could be affected through direct removal, filling, hydrological interruption (including dewatering), alteration of bed and bank, encroachment, habitat conversion, routine maintenance, and other development-related activities. Impacts on wetlands and other waters could occur through habitat conversion,

3.4 BIOLOGICAL RESOURCES

encroachment, routine maintenance, or other activities in the immediate vicinity of waterways and in habitat supporting wetlands. Indirect impacts could result from adjacent development that leads to habitat modifications such as changes in hydrology and reduction in water quality caused by urban runoff, erosion, and siltation.

This is considered a potential impact, which would be minimized through the implementation of the policies and actions listed below. Subsequent development projects will be required to comply with the General Plan and adopted Federal, State, and local regulations for the protection of sensitive natural communities, including protected wetlands. The City of Jackson has prepared the General Plan to include numerous policies and actions intended to protect wetlands and waters of the U.S. from adverse effects associated with future development and improvement projects. While future development has the potential to result in significant impacts to protected water features, the implementation of the policies and actions listed below, as well as Federal and State regulations, would reduce impacts to these resources to a **less than significant** level.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

RESOURCE CONSERVATION ELEMENT POLICIES

COS 1.5: Protect Jackson’s scenic resources, including views of the hillsides, prominent ridgelines, riparian areas, and other significant natural features, to the extent practical.

COS 3.1: Preserve and enhance biological communities that contribute to the City’s and the region’s biodiversity including, but not limited to, grasslands, wetlands, vernal pools, riparian areas, aquatic habitat, oak woodlands, and agricultural lands.

COS 3.2: Focus conservation efforts on high priority conservation areas that contain suitable habitat for endangered, threatened, migratory, or special-status species and that can be managed with minimal interference with nearby urban land uses.

COS 3.5: Avoid removal of large, mature trees that provide wildlife habitat, visual screening, or contribute to the visual quality of the environment through appropriate project design and building siting, if feasible. If full avoidance is not possible, prioritize planting of replacement trees on-site over off-site locations. Replacement trees for high-quality mature trees should generally be of like kind, and provide for comparable habitat functionality, where appropriate site conditions exist.

SAFETY ELEMENT POLICIES

SA 2.4: Encourage and accommodate multipurpose flood control projects that incorporate recreation, resource conservation, preservation of natural riparian habitat, and scenic values of drainages, creeks, and detention ponds.

RESOURCE CONSERVATION ELEMENT ACTIONS

COS-1a: Continue to work with regional agencies and Amador County to ensure that regional open space amenities remain publicly-accessible, well-maintained, and provide for essential habitat.

COS-3c: Make available a list of plants and trees native to the region that are suitable for use in landscaping, consistent with the requirements of California’s Water Efficient Landscape Ordinance

(WELO). The plant and tree species should be drought-tolerant, and consideration should be given to the suitability of the plant and tree species for use as habitat to native animals, birds, and insects.

COS-3g: Where sensitive biological habitats have been identified on or immediately adjacent to a project site, the project shall include appropriate mitigation measures identified by a qualified biologist, which may include, but are not limited to the following:

- Pre-construction surveys for species listed under the State or Federal Endangered Species Acts, or species identified as special-status by the resource agencies, shall be conducted by a qualified biologist;*
- Construction barrier fencing shall be installed around sensitive resources and areas identified for avoidance or protection; and*
- Employees working on the project site shall be trained by a qualified biologist to identify and avoid protected species and habitat.*

Impact 3.4-4: General Plan implementation would not 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 (Less than Significant)

Habitat loss, fragmentation, and degradation resulting from land use changes or habitat conversion can alter the use and viability of wildlife movement corridors (i.e., linear habitats that naturally connect and provide passage between two or more otherwise disjunct larger habitats or habitat fragments). Wildlife habitat corridors maintain connectivity for daily movement, travel, mate-seeking, and migration; plant propagation; genetic interchange; population movement in response to environmental change or natural disaster; and recolonization of habitats subject to local extirpation or removal. The suitability of a habitat as a wildlife movement corridor is related to, among other factors, the habitat corridor's dimensions (length and width), topography, vegetation, exposure to human influence, and the species in question.

Species utilize movement corridors in several ways. "Passage species" are those species that use corridors as thru-ways between outlying habitats. The habitat requirements for passage species are generally less than those for corridor dwellers. Passage species use corridors for brief durations, such as for seasonal migrations or movement within a home range. As such, movement corridors do not necessarily have to meet any of the habitat requirements necessary for a passage species everyday survival. "Corridor dwellers" are those species that have limited dispersal capabilities – a category that includes most plants, insects, reptiles, amphibians, small mammals, and birds – and use corridors for a greater length of time.

The areas of land next to waterways within the Jackson City Limits is designated for urban uses by the proposed Land Use Map and are generally developed with urban uses currently. Therefore,

while flowing through City Limits, the creeks do not function as important movement corridor for native wildlife.

Because the proposed project is a planning document and thus, no physical changes will occur to the environment, adoption of the proposed General Plan would not directly impact the environment. However, development of the Planning Area could impede the movement of wildlife by disturbing and/or blocking local movement corridors or by disturbing nursery sites. Many of the species that would normally use annual grasslands and vernal pool complexes as foraging areas would not as easily move across the future urbanized landscapes planned for development. The General Plan includes areas designated for Open Space uses, including, creeks, riparian areas, and grasslands, which would become the primary wildlife corridors as the landscape urbanizes. However, there is still a reasonable chance that movement corridors could be impacted throughout the buildout of subsequent individual projects.

Subsequent development projects will be required to comply with the General Plan and adopted Federal, State, and local regulations for the protection of movement corridors. The City of Jackson has prepared the General Plan to include policies and actions intended to protect movement corridors from adverse effects associated with future development and improvement projects. The detailed and site-specific review of the site should include a determination of whether wildlife movement corridors are present or absent on a given project site. If movement corridors are present and disturbance is required, Federal and State laws require measures to reduce, avoid, or compensate for impacts to these resources. The requirements of these Federal and State laws are implemented through the permit process.

While future development has the potential to result in significant impacts to protected movement corridors, the implementation of the policies and action listed below, as well as Federal and State regulations, would reduce impacts to these resources to a **less than significant** level.

GENERAL PLAN POLICIES AND ACTION THAT MINIMIZE POTENTIAL IMPACTS

RESOURCE CONSERVATION ELEMENT POLICIES

COS 1.5: Protect Jackson's scenic resources, including views of the hillsides, prominent ridgelines, riparian areas, and other significant natural features, to the extent practical.

COS 3.1: Preserve and enhance biological communities that contribute to the City's and the region's biodiversity including, but not limited to, grasslands, wetlands, vernal pools, riparian areas, aquatic habitat, oak woodlands, and agricultural lands.

COS 3.2: Focus conservation efforts on high priority conservation areas that contain suitable habitat for endangered, threatened, migratory, or special-status species and that can be managed with minimal interference with nearby urban land uses.

COS 3.5: Avoid removal of large, mature trees that provide wildlife habitat, visual screening, or contribute to the visual quality of the environment through appropriate project design and building siting, if feasible. If full avoidance is not possible, prioritize planting of replacement trees on-site

over off-site locations. Replacement trees for high-quality mature trees should generally be of like kind, and provide for comparable habitat functionality, where appropriate site conditions exist.

SAFETY ELEMENT POLICIES

SA 2.4: Encourage and accommodate multipurpose flood control projects that incorporate recreation, resource conservation, preservation of natural riparian habitat, and scenic values of drainages, creeks, and detention ponds.

RESOURCE CONSERVATION ELEMENT ACTIONS

COS-1a: Continue to work with regional agencies and Amador County to ensure that regional open space amenities remain publicly-accessible, well-maintained, and provide for essential habitat.

COS-3c: Make available a list of plants and trees native to the region that are suitable for use in landscaping, consistent with the requirements of California's Water Efficient Landscape Ordinance (WELO). The plant and tree species should be drought-tolerant, and consideration should be given to the suitability of the plant and tree species for use as habitat to native animals, birds, and insects.

COS-3g: Where sensitive biological habitats have been identified on or immediately adjacent to a project site, the project shall include appropriate mitigation measures identified by a qualified biologist, which may include, but are not limited to the following:

- Pre-construction surveys for species listed under the State or Federal Endangered Species Acts, or species identified as special-status by the resource agencies, shall be conducted by a qualified biologist;*
- Construction barrier fencing shall be installed around sensitive resources and areas identified for avoidance or protection; and*
- Employees working on the project site shall be trained by a qualified biologist to identify and avoid protected species and habitat.*

Impact 3.4-5: The General Plan would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (Less than Significant)

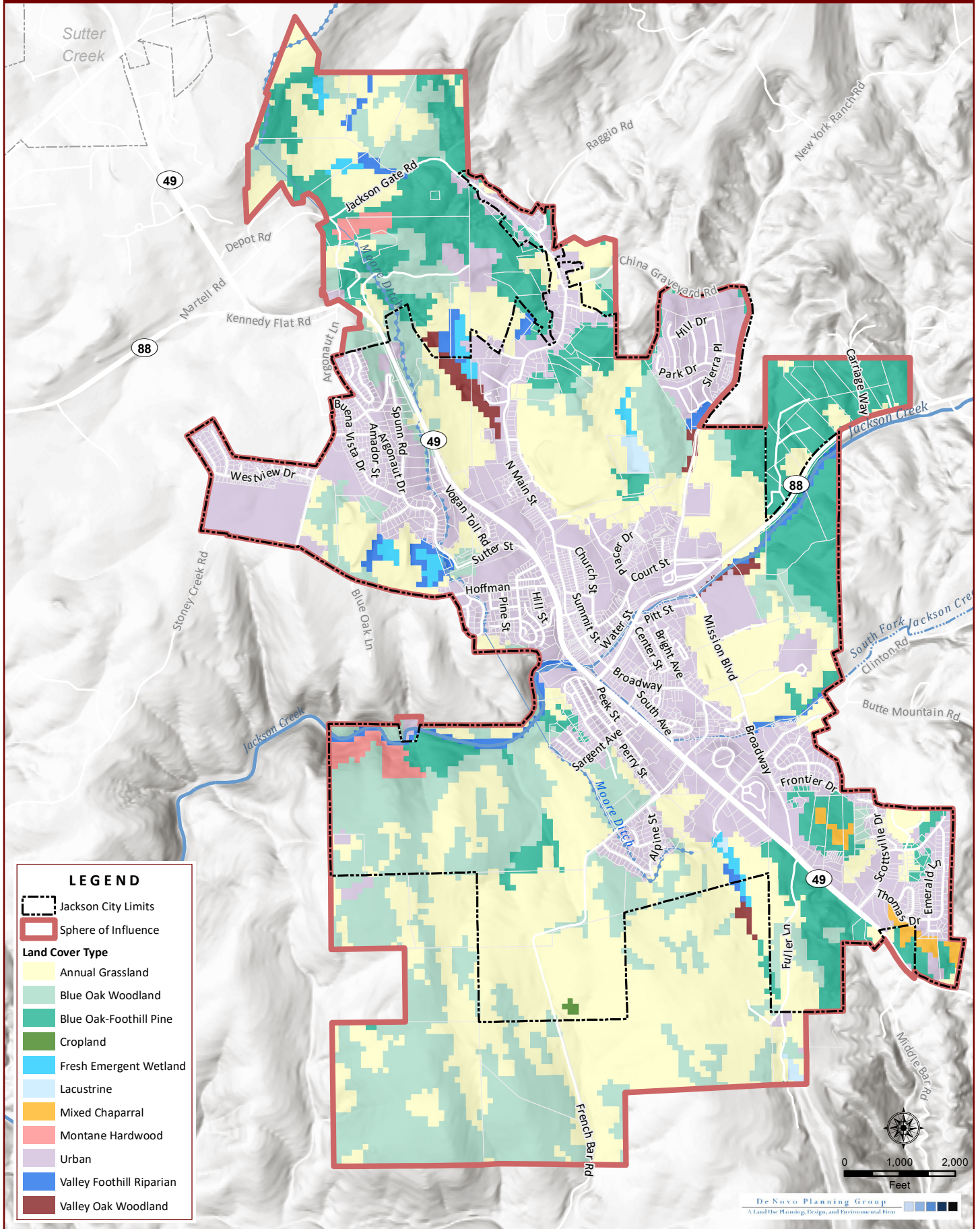
The proposed project is a policy document, in which local policies are established. This EIR presents the numerous policies of the General Plan. The General Plan itself does not conflict with its policies. Subsequent development projects will be required to comply with the General Plan policies, as well as the Municipal Code. This is a **less than significant** impact.

Impact 3.4-6: General Plan implementation would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan (Less than Significant)

The City of Jackson is currently not a permittee of a Habitat Conservation Plan or Natural Community Conservation Plan.

Given that there is no adopted Habitat Conservation Plan or Natural Community Conservation Plan within the Planning Area. Through implementation of this Action, the General Plan would have a less than significant impact relative to this topic.

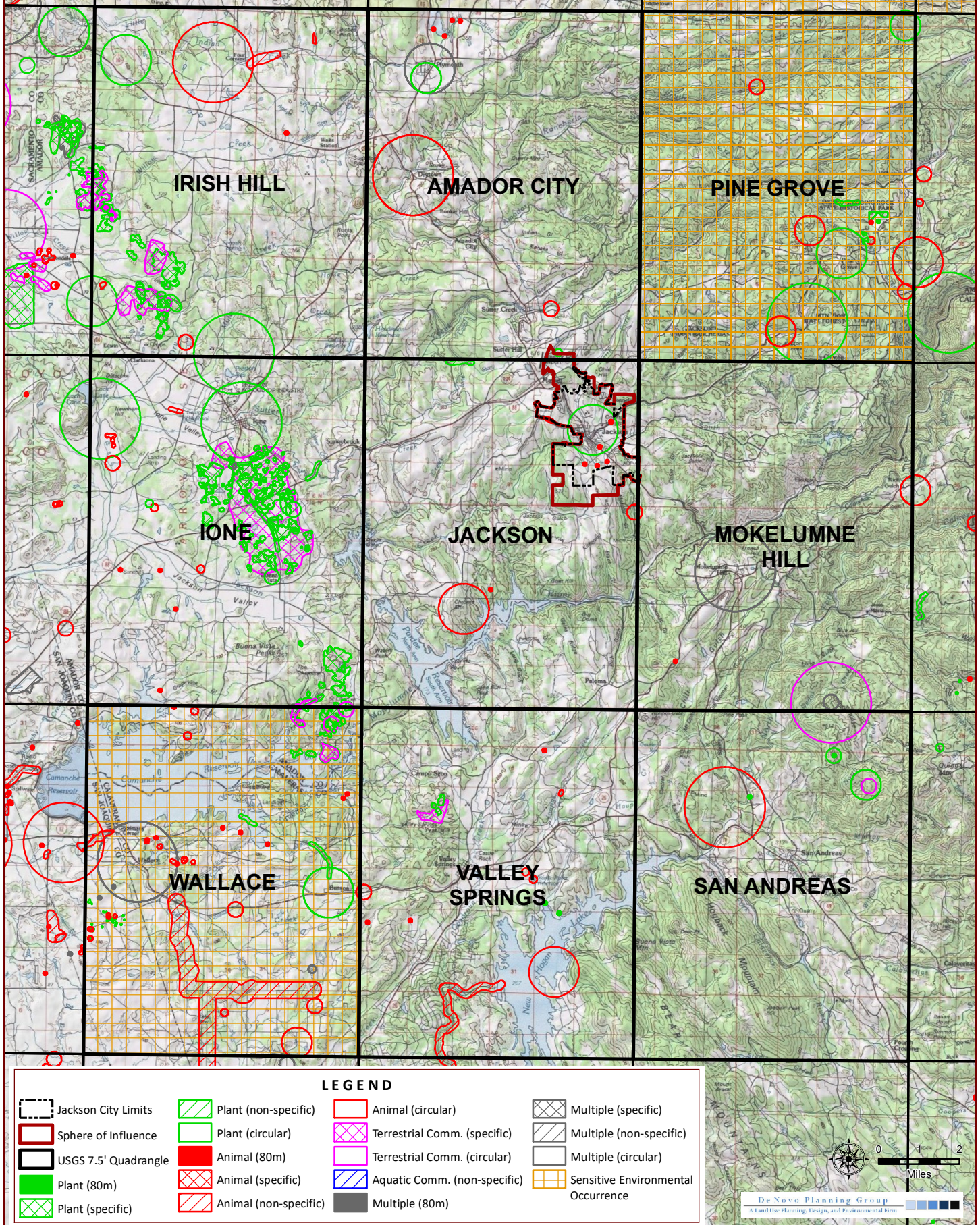
Figure 3.4-1 Land Cover Types



Sources: FVEG_15_1, 2015; City of Jackson; ACTC; ArcGIS Online World Elevation/Terrain Image Service. Map date: April 12, 2021.

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Figure 3.4-2. California Natural Diversity Database - 9-Quad Search



Sources: CNDDB version 4/3/2021. Please Note: the occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area. Other sources: City of Jackson; ACTC; AGO USA Topo Map Service. Map date: April 13, 2021.

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Cultural resources are defined as buildings, sites, structures, or objects that may have historical, architectural, archaeological, cultural, or scientific importance. Preservation of the city's cultural heritage should be considered when planning for the future.

This section provides a background discussion of the prehistory, ethnology, historical period background, and cultural resources found in Jackson. This section is organized with an existing setting, regulatory setting, and impact analysis. Paleontological resources are discussed in Section 3.6, Geology and Soils, of this Draft EIR.

The City received three comment letters related to this environmental topic during the Notice of Preparation (NOP) comment period. The Native American Heritage Commission (NAHC) submitted a letter, dated November 30, 2022. The comment letter provided an overview of tribal consultation requirements, and provided examples of recommended approaches to reducing potential impacts to cultural and tribal resources. The issues raised in this letter have been addressed in this chapter of the Draft EIR. Additionally two NOP letters were received from Tribal Organizations. These include one letter from the Colfax Todds Valley Consolidated Tribe with a letter dated December 1, 2022, and one letter from the Shingle Springs Band of Miwok Indians with a letter dated December 13, 2022. No specific resources were identified in either letter, and all issues raised in this letter have been addressed in this chapter of the Draft EIR. The NOP and all comments received during the NOP comment period are included in Appendix A of this Draft EIR.

KEY TERMS

The following key terms are used throughout this section to describe cultural and tribal resources and the framework that regulates them:

Archaeology. The study of historic or prehistoric peoples and their cultures by analysis of their artifacts and monuments.

Complex. A patterned grouping of similar artifact assemblages from two or more sites, presumed to represent an archaeological culture.

Ethnography. The study of contemporary human cultures.

Midden. A deposit marking a former habitation site and containing such materials as discarded artifacts, bone and shell fragments, food refuse, charcoal, ash, rock, human remains, structural remnants, and other cultural leavings.

3.5.1 ENVIRONMENTAL SETTING

PREHISTORY

The prehistory of the north central Sierra Nevada and Amador County area has been described in several publications, especially those related to the Mokelumne River Project (e.g. Wirth Environmental Services 1985) and numerous Caltrans investigations. Systematic investigations that provide a cultural historical sequence have not occurred in the project area, requiring researchers

3.5 CULTURAL AND TRIBAL RESOURCES

to rely on data from the surrounding areas to support chronological and cultural assessments. Most research in the county consists of archaeological surveys, which add to the inventory of archaeological sites, but do not generally contribute to a greater understanding of prehistoric regional development. Indeed, there are scant archaeological excavations in the project area. Regardless, archaeological data from the area suggest a similarity to prehistoric patterns found elsewhere in the Sierra Nevada.

Documented early human use of the Sierra Nevada and interpretations have been primarily influenced by the discovery of stone points that bear morphological similarity to Great Basin artifacts. A Clovis point was found west of the project in the lower foothills of Amador County (Levy and Wulf 1998), and a “Clovis-like” fluted point was found at Ebbetts Pass (Davis and Shutler 1969), east of the county, suggesting to some that hunters may have ventured in the Sierra Nevada more than 11,000 years ago. Archaeological investigations undertaken as part of the North Fork Stanislaus River Project revealed that early Holocene (11,000 years before present) habitation in the central Sierra very likely occurred. Sierran prehistoric habitation at the former Clarks Flat (CA-CAL-S342), located south of the City of Jackson on the Stanislaus River, was dated at 11,720 to 6,250 years before present (B.P.) (Peak and Crew 1990). Excavations at CA-ALP-192 located in Alpine County, also revealed a Western Stemmed Series projectile point possibly associated with a hearth that yielded a date in excess of 9,505 years B.P. (Peak and Neuenschwander 1990). Similarly, excavations in Calaveras County near Copperopolis at the Skyrocket Site (CA-CAL-629/630) yielded dates of $9,240 \pm 150$ B.P. and $9,040 \pm 250$ B.P. from dark, artifact-bearing strata some nine meters below the surface.

Archaeological investigations at New Melones in Tuolumne and Calaveras Counties expanded our understanding of regional archaeology. At New Melones Reservoir, more than 700 historic and prehistoric archaeological sites were recorded and 30 separate archival and field investigations were conducted (Moratto et al. 1987, 1988). New Melones studies provided a chronological sequence for the area, which begins prior to 8,000 years B.P. This period is identified by the presence of stemmed series projectile points, but little more is known about this early period. The next temporal division in the New Melones sequence, 8,000-5,500 B.P., is also poorly understood. Sites in this time period exhibit an abundance of “backed” scrapers, with a paucity of ground stone, a low density of tools and debitage, and an emphasis on chert tool production (Riley and Moratto 1986).

Beginning around 5,500 B.P. and ending about 3,000 B.P. Humboldt and Pinto-like points are characteristic artifacts at sites. An important site associated with this time period is the Texas Charley Gulch Site (CA-CAL-286). Archaeological studies of the remaining 3,000 years of development in the area indicate a gradual increase in population. Features and artifacts at habitation sites include defined living floors, use of ornaments such as beads and pendants, and a wide variety of tool forms and materials. The acquisition of obsidian from far-ranging sources and the use of coastal shells in ornamentation suggest that trade and exchange systems were well established to move artifacts over long distances and were important components of social life. Temporal changes during this period are identified by changes in tool form (e.g., shaped milling implements modified to unshaped tools) and changes in projectile points (e.g. Elko Series and

Sierra Concave Base points to small Gunther Barbed points) that may be associated with adoption of the bow and arrow.

About 600 years ago, changes in the archaeological record suggest that a new group of people entered the area (Moratto 1984). This new group is generally considered to be the precursors of the ethnographic Me-Wuk, the new cultural traits identified in the archaeological record consist of bedrock milling stations, increased use of acorns, and more permanent settlements. Steatite is found as vessels and as ornamentation, and Rosegate Series projectile points initially are common, but are replaced by the use of Desert Side-Notched and Cottonwood projectile points in the more recent past.

ETHNOLOGY

The Planning Area lies within the traditional territory of the Eastern Me-Wuk speaking groups. In the late prehistoric and early ethnographic periods, these people used the western slopes of the Sierra Nevada between the drainages of Calaveras Creek on the south and the Cosumnes River to the north (Merriam 1907; Barrett n.d., 1906, and 1908).

Nineteenth and 20th century Me-Wuk material culture, language, social life ways, customs, and more have been documented in several monographs or overviews (e.g. Barrett and Gifford 1933; Kroeber 1925; Levy 1978; and Merriam 1898-1938). Since most ethnographic information about the Sierra Me-Wuk was collected many decades after the wholesale disruption of their prehistoric life ways, such data more accurately reflect a transitional form of their culture. Nevertheless, these culture descriptions provide a detailed account of the Me-Wuk culture and are the basis for most ethnographic summaries.

Before 1840, the Sierra Me-Wuk had little, if any, direct contact with Euroamericans, even though the indirect impacts of Spanish settlement on the Pacific coast were felt in the form of introduced diseases, the disruption of trade networks, and by the influx of Mission, Yokuts, and other native refugees and wayfarers. The more northerly Me-Wuk groups, including those in the Jackson area, likely had interactions or information about the settlers, traders, and wayfarers who came in and out of Sutter's Fort. With the 1848 announcement that gold had been found in their territory, the Me-Wuk experienced substantial direct effects by outsiders. While the Me-Wuk and other Native American groups panned and traded gold for exotic commodities in the first years of the Gold Rush, the Native Americans were rapidly displaced by an invasion of white, Chinese, and Hispanic colonists.

Powers (1877) noted that Koni was the name for people who lived on the south bank of the Cosumnes, and Yuloni was the name for the people on Sutter Creek and possibly Jackson. Powers also noted that there was a great storyteller from the Jackson area that he calls "Old Sam." This is most likely Casoose, also known as Jesus, or Sam Domingo, who was known in the area at the time Powers collected his data. Casoose was a leader among the Me-Wuk. Powers noted that Sierra Me-Wuk subsistence was based on plant, animal, and fish resources available in their foothill and mountain environment with an emphasis on the acorn.

3.5 CULTURAL AND TRIBAL RESOURCES

At the time of contact, the staple plant food was the acorn; historically there has been a preference for the black oak acorn. The fall harvest of acorn was dried, stored, and ground into meal, when needed. Pestles were used to pound acorn in mortars found on large granite outcrops. Such rocks are not easily dated, but are found in association with remains dating more than 1,000 years in age. A village or settlement would have many milling areas in its vicinity, and at least in recent times, the same families used such areas year after year. Other plant foods supplemented the acorn in the past, including buckeye nuts in an emergency, sugar and bull pine nuts and pith, at least 20 types of seeds, a dozen bulbs and corms (“wild potatoes”), 21 species of greens, manzanita and other berries, and certain mushrooms (Barrett and Gifford 1933:142-165).

Barrett and Gifford (1933) state that deer was the most important animal to the Me-Wuk, but do not suggest that it was the staple meat source. Other large game were also hunted, particularly bear, pronghorn, and elk. Food lists for the Me-Wuk generally concentrate on the plant foods, hinting that while deer was favored meat, other animals may have been the regular fare. Hudson (1898 to 1902) mentions that the Indians living at Cherokee fancied hornet grubs, while Groveland (Big Creek) people roasted gray and ground squirrels, boiled deer meat and angleworms, and dried hare and rabbit. Barrett and Gifford (1933) suggest that both cottontail and jackrabbit were second in importance to deer as food animals, but beaver, rats, and both ground and tree squirrel were also hunted. In addition, Sierra Me-Wuk hunted quail, pigeons, jays, flickers, and waterfowl.

Me-Wuk foothill villages and settlements were usually located on ridges or saddles near permanent water, below 3,500-4,000 feet in elevation, which corresponds to the heavy snow line. Summer brought movement into higher elevations where seasonal camps were established near favored summer gathering and hunting areas. Smaller satellite gathering areas, campsites, and resource preparation locales are among the more commonly discovered prehistoric archaeological sites today

Nineteenth century anthropologists often visited rancherias or Indian reservations before entering unsettled areas. Samuel Barrett used this strategy in 1906 when he was trying to understand the territory, language, and variety of cultures in the area. Barrett’s (n.d.) informants from Jackson Rancheria were Mary and Sally. They told him the name of village where they were born, which was Heyagetci located east of Camanetti’s in Jackson. The agent, who was probably the “Farmer in Charge,” told Barrett that 38 people were enrolled at the reservation at that time, but only 12 were there at the present. The only other village mentioned by Barrett was Yuluni. Barrett’s (n.d.) notes place the village on “Soda Creek” about four miles northwest of the reservation and two miles from Jackson.

C. Hart Merriam, a medical doctor and biologist by training, was an early ethnographer in the project area. He visited a number of settlements around the current City of Jackson around the turn of the last century. Merriam’s closest investigation to the project area was his visit to the site “near an old mine called Scottsville” (Merriam Journal 1903). Scottsville is located between the main shaft of the Moore Mine and the main shaft of the Amador Mine along State Route 49. Merriam also visited the newly established Jackson Rancheria where 20 people were living and cultivating various crops.

HISTORIC PERIOD BACKGROUND

Although the Spanish had occupied portions of California as early as 1769, the interior of the state remained largely unexplored. By the 1820s, trappers were making intermittent forays into the Great Central Valley (Bean and Rawls 1988). Still, the Sierra Nevada remained largely untouched by Europeans and it is doubtful anyone there noticed when California changed hands from Spain to Mexico and from Mexico to the United States.

Early development of central California focused on the various industries and settlements of John Sutter. Sutter employed James Marshall to build a sawmill 40 miles east of Sacramento up the South Fork of the American River. In January 1848, while passing a test run of water through the tailrace of the sawmill Marshall discovered flecks of placer or free gold in these deposits. Virtually everyone in California soon heard about the discovery of gold and sought their fortune in the streams of the Sierra Nevada. The following year a wave of prospectors entered California from around the world.

The earliest miners focused on the loose form of gold found in sand and gravel beds, known as placer gold. Initially miners were using knives and spoons to pick out the gold, but Mexican miners used the batea, and it soon became a favored gold-washing pan. An Appalachian gold miner, Isaac Humphrey, purportedly introduced the American pan in Coloma, and it too gained great favor. Me-Wuk women were commissioned to weave baskets in the shape of the batea because it was less expensive than the metal version. Other placer tools, including the rocker cradle, “long tom,” and sluice soon followed (Bean and Rawls 1988).

One of the key waterways to become the focus of placer mining in Amador County was the Mokelumne River that divides Amador County from its southern neighbor, Calaveras County. Gravel bars rich in gold were first prospected here by Charles Weber’s workers in March 1848 (Cenotto 1988a). Camps at Middle Bar, French Bar, and Columbia Bar quickly became the center of intense mining activities. Lesser waterways nearby, such as Dry Creek, Rancheria Creek, Sutter Creek, and Jackson Creek, and the minor unnamed drainages of the French Bar area also saw extensive and early placer mining activity. Miners explored most every river, creek, and drainage in the area, leaving few rocks unturned.

While placer gold was the earliest focus of mining in California, those knowledgeable about mineralization soon began a search of the parent rock where gold formed in the “hard rock.” Often indicated by quartz and by many-colored country rock, gold veins were explored and freed from their “lode”. Miners dug vertical shafts or horizontal openings (adits) into the ground following veins of gold bearing ore. In Amador County, Cornish miners introduced single-jack and double-jack drilling of holes into granite, into which black powder was packed, and detonated. The fractured rock was then mucked out by hand and hauled by basket, cart, or bucket out of the mine.

Hard rock mining began in the California gold fields as early as spring of 1849, but lack of knowledge of the deposits, absence of skilled labor, and overcapitalization of surface plants led to the ultimate collapse of many early hard rock mines. Despite the early setbacks, it did not take

3.5 CULTURAL AND TRIBAL RESOURCES

long for the miners to adapt to their new environment. Relying heavily on experienced hard rock miners from Cornwall, Germany, Chile, and Mexico, mine operators moved forward. By keeping the mines under 300 feet in depth, they were able to focus on oxidized or “enriched” deposits that were easier to mill and mine. They were also able to avoid most of the groundwater and the expense of pumping it out. In the 1860s, mines began to probe deeper. Up to this point most of the work had been done by hand. With the aid of technological advances such as dynamite, air-powered drills, and improved hoisting and power plants, mines moved deeper underground.

When the ore was removed from the mine it then had to be milled to separate the gold from the ore body. Early mining relied heavily on a Mexican import, the arrastra, a circular stone-lined basin into which ore was placed. The ore was crushed by a drag-stone, hauled by a horse, mule, or power of a water wheel. A variation of this was the “Chilean Mill” that rolled large millstones over the ore instead of using a drag-stone. Fifty arrastras were counted in Amador County in 1859 (Langley and Morrison 1859). This technology remained in widespread use through the 1880s, and was used in a limited fashion into the 1930s. Regardless, the signature mill used to crush ore in California was the California battery stamp mill. This device was essentially a series of cam-operated hammers that crushed rock against an anvil. Variations of this technology had been used throughout the world for centuries, but the California Stamp Mill was modified to include an automatic gravity-fed crusher and feeder with water and mercury injection into the amalgamation pan. The California Mill was nearly ubiquitous by 1853 in California lode areas and was favored well into the 20th century (Limbaugh 1999; Young 1970). Amador County had 32 quartz mills in operation by 1859, with a total of 402 stamps operated by steam and water power amounting to 15 percent of the total number in California (Langley and Morrison 1859). Mining was certainly big business in Amador County.

While many immigrants to the area were actively searching for gold, some new arrivals realized there were easier ways to make money in California. Aside from the equipment needed for mining, miners needed food, clothes, a place to stay, and entertainment. To fulfill these needs, individual businesses and towns quickly appeared. By 1849, Amador City, Drytown, Sutter Creek, Jackson, and a host of smaller communities were established. These were generally rough and tumble towns, composed mostly of wooden shanties occupied primarily by men.

The community of Jackson started with a simple log cabin erected by Louis Tellier (Thompson and West 1881). In August of 1850, there were just seven buildings in Jackson, but the town still managed to become the seat of Calaveras County. By December 1st of that year, the population had reached 100 citizens, but the booming town of Mokelumne Hill south of the Mokelumne River soon was of sufficient population that in 1852, the county seat was moved there (Thompson and West 1881). In 1854 there was a sufficient population in the Jackson and other mining areas to form the new county of Amador. It was split off of the northern portion of Calaveras County, and Jackson again became a county seat, a position it retains today. With this boost, several brick buildings were built, and even a gasworks constructed. The town thrived as a crossroads for Volcano, Mokelumne Hill, and the mines to the north as well as an easy route to the copper and other mines in the western county (Thompson and West 1881). Businesses in Jackson included hotels, mercantile stores, barbershops, and saloons. In December 1861, heavy rains hit the

foothills and Jackson was flooded, with at least 20 buildings swept away, causing more than \$50,000 in damage (Thompson and West 1881). The following year the town was hit by fire, causing a great deal of damage. It flooded again in 1878 (Thompson and West 1881).

Like most gold rush towns, Jackson was a cosmopolitan community and included a number of ethnic enclaves. Notable groups included Chinese, Slavic, French, and Italian. The latter group formed a substantial part of the population, concentrated primarily around Broadway Street in what became known as “Little Italy”. While many Italian families lived in Jackson, they also maintained extensive vineyards and orchards in and around town. Local Italian surnames include Arata, Bacigalupi, Belluomini, Carroli, Cuneo, Devoto, Fregulia, Garbarini, Lavesso, Molfino, Oneto, Raggio, and Ratta. Prominent among these was Giovanni Belluomini, who owned a brick house on Broadway and opened a wine house on the same street (Costa 1994). Also notable on Broadway during the 1850-60s was an “Italian Dairy” owned by a consortium of six Italians, who owned land on French Bar Road (Cenotto 1988b). The Italians were responsible for keeping Amador County’s wine industry going through several depressions and 20th century prohibition. The Italian community in Amador County has remained cohesive to this day, with an annual picnic and parade organized by the Italian Benevolent Society.

As the county’s economy diversified to include farming, ranching, logging, and other activities, Jackson changed to accommodate these new industries. Shops were soon selling barbed wire, plows, saws, and other necessary materials for ranching and settlement. Regardless, Jackson remained firmly tied to mining, which flourished until World War II. The community also retained a bit of that Wild West flare, with numerous bars lining Main Street, and legalized prostitution continuing into the 1950s.

While some settlers turned to mercantilism and service industries as a lucrative form of employment, others looked to the land to provide a more secure form of income. Cattle prices at the gold fields escalated in 1849 from \$4 to \$500 a head, and many saw that the land provided options for lucrative incomes (Jelinek 1999). Soon the scramble was on to secure land for raising crops and livestock. Throughout the 1850-60s, speculators bought much of the public land that came for sale. This was a period of severe local government disorganization, with no state agency to oversee the sale of land, resulting in widespread corruption and collusion between government bureaucrats and land speculators. It was not until the passage of the Homestead Act of 1862 that the system became more organized (Jelinek 1999).

The Federal Government tried to ensure that land was available for every interested and willing party, but the system remained imperfect. Implementation of the program in California was particularly poor, and many large landholders gobbled up large tracts of land. Individuals such as Chapman, Miller & Lux, and Beale soon held hundreds of thousands of acres of land, primarily in the central part of the state (Jelinek 1999). While the large landholdings were concentrated in the Great Central Valley, other parts of the state, including Amador County, were not immune to the concentration of landownership. The Allen, Garibaldi, Plasse, and the Belluomini families were just some of the large landowners in Amador County. These families held tens of thousands of acres that were acquired through the Homestead Act and other means.

3.5 CULTURAL AND TRIBAL RESOURCES

At the time of California's annexation to the United States, the most important form of agriculture in the state was cattle ranching. Cattle were raised primarily to supply hides and tallow. After the Gold Rush the value of cattle soon soared, not for hides, but to supply fresh meat to the hungry army of miners diligently picking away at the Sierra Nevada. In the 1850s, cattle were raised free-range on large open ranchos across California. Within a decade, however, the entire agricultural pattern in the state changed with the importation of new American breeds of cattle and large numbers of European varieties of sheep. These livestock were raised in feedlots rather than open range land. Simultaneously, vast tracts of land were planted in wheat and other grains, to feed not only livestock, but as a major export commodity. This soon transitioned into the raising of nuts and fruits, and horticulture became more wide spread.

This agricultural pattern was more common along the coastal plains and in the Great Central Valley, rather than the Sierra Nevada foothills. The nature of the soil and topography in the Amador County foothills did not lend themselves well to raising vast expanses of grain. The amount of grain produced amounted to slightly more than one percent of the state's total harvest, and was more than doubled by its sister county of Calaveras. Irregular terrain and rocky soil made plowing and harvesting of grain impractical in many areas. This was especially true with the advent of steam and mechanized farm equipment that were only practical, in their early form, on large open tracts of cleared land. While grains, hay, and other field crops were raised in the foothills, it was always on a much smaller scale, with horse-drawn plows and other "primitive" equipment still being used well into the 20th century. The problems presented by the soil and topography still exist: although straw and hay are still grown in limited quantities, the raising of commercial grain is no longer practiced in Amador County.

Topography and soils affected the types of crops planted in the foothills, and facilitated the planting of grapevines and fruit tree. As early as 1851, Benjamin Burt was raising fruits and vegetables on Rancheria Creek to the north of the project. He cultivated 1,600 grapevines and six acres of peach, pear, plum, apple, apricot, cherry, and almond trees. He sold his produce to miners as far away as Jackson, Fiddletown, and Volcano. A mile south of Jackson, in 1855, Horace Kilham also had an expansive fruit orchard that Samuel Page later purchased and expanded (Costa 1994). By 1857, nearly 10,000 fruit and nut trees had been planted in the county, along with 44,000 grape and berry vines (Langley and Morrison 1859). Early attempts at raising commercial quantities of fruits and vegetables had some success. Peach trees were the most popular fruit, initially outnumbering other varieties by more than 2 to 1. Apple, almond, olive, plum, cherry, fig, and walnut trees were popular and grew well in Amador County.

The successful planting of grapevines led to the establishment of viticulture in Amador County. Initially based on transplanted mission grapes, other grape varieties were soon planted. Burt and Kilham were pioneer vineyard owners in the early 1850s, but Amador County's French and Italian immigrants soon found the area's soil and climate to be well suited to the growing of wine grapes. By 1870, Amador County was home to 15 wineries producing 58,000 gallons of wine per year (Costa 1994). This did not include the many small vineyards planted at homes and ranches, or the homemade wine so commonly consumed by the county's immigrant families. The 1870s were hard on the local wine industry, and production was down to 38,000 gallons of wine per year by 1880.

Disease in France’s vineyards in 1877-1889, combined with a bolstered local economy, led to renewed interest in Amador wines in the 1880s. During this time Angelo Marre spearheaded efforts to export locally made wines outside the area, eventually opening a wholesale house in Chicago and creating the trade name “Amador County Wines” (Costa 1994). Amador vineyards and wineries continued to prosper until Prohibition in 1919. Between 1922 and 1930, the total acreage of commercial vineyards dropped from 500 to 200 acres. It was not until the 1960s that Amador County wines and vineyards would again be back on track (Costa 1994). Today the wine business is again booming with new vineyards planted and wineries opening.

Even with the spread of farming and viticulture, cattle ranching was always more important in the Amador County foothills. In 1857, there were 4,025 cattle accounted for in Amador County, divided into several categories: cows, calves, stock cattle, oxen, and beef cattle (Langley and Morrison 1859). By far the smallest group was beef cattle, amounting to 310 head. Ranchers acquired large tracts of rolling oak woodland on which to graze their cattle during the winter. In late spring, they would drive their cattle higher into the mountains to graze on private and leased government land, and then bring them back down in the fall. This ranching pattern remains today, except tractor-trailers are used to move cattle up and down the roads to seasonal grazing lands. Cattle ranching activities were so important to the area that there were several meatpacking houses in the Jackson area until World War II. Although suburban development is quickly replacing large ranches, the local cattle industry is still sufficient to keep one meatpacking house in operation.

CULTURAL RESOURCES IN THE JACKSON PLANNING AREA

California Historic Resources Inventory System

Archaeological investigations contained within the 2008 General Plan Land Use Element Update EIR (e.g., record search, archival research, and consultation) for the planning area identify typical prehistoric and historic resources that would likely be present in the area as shown in Table 3.5-1.

TABLE 3.5-1: CULTURAL RESOURCES IN THE PLANNING AREA

<i>RESOURCE</i>	<i>RESOURCE TYPE</i>	<i>STATUS FOR INCLUSION IN THE NRHP AND/OR CRHR</i>	<i>STATE HISTORIC LANDMARK</i>
Amador County Hospital	Historic hospital (1890)	Eligible	
Kennedy & Argonaut Mines	Historic gold mines	Eligible	X
Kennedy Mine Tailing Wheels	Mining tailing wheels	Eligible	
Chichizola Family Store Complex	Historic building complex	Eligible	
John A. Butterfield House	Historic house	Eligible	
Jackson Pioneer Jewish Synagogue	Historic synagogue building (Note: building has been removed)	Eligible	X
Jackson Gate	Mining complex	Not evaluated	X

3.5

CULTURAL AND TRIBAL RESOURCES

<i>RESOURCE</i>	<i>RESOURCE TYPE</i>	<i>STATUS FOR INCLUSION IN THE NRHP AND/OR CRHR</i>	<i>STATE HISTORIC LANDMARK</i>
Serbian Orthodox Church	Historic church building	Eligible	
Jackson Creek Bridge	Historic truss bridge	Eligible	
Belluomini Ranch District	Historic ranch complex	Eligible	
Moore Ditch	Historic water ditch	Eligible	
South Central Ditch	Historic water ditch	Eligible	
Powder House	Foundation	Not eligible	
JH1	Prehistoric site	Not eligible	
CA-Ama-185	Prehistoric site	Not evaluated	
CA-Ama-208-H	Argonaut Mine Hoist	Eligible	
CA-Ama-300-H	Residence foundations	Eligible	
CA-Ama-301-H	Structure foundation	Not evaluated	
CA-Ama-384-H	Mining foundation, adit	Not evaluated	
CA-Ama-385-H	Zeila Mine	Not evaluated	
CA-Ama-493-H	Moore Mine	Not evaluated	
CA-Ama-494-H	Mine shaft	Not evaluated	
CA-Ama-495-H	Mining waste pile	Not evaluated	
CA-Ama-496-H	Historic residence (1933)	Not evaluated	
CA-Ama-499	Prehistoric site	Not evaluated	
CA-Ama-522-H	Historic refuse scatter	Not evaluated	
CA-Ama-523/H	Prehistoric and historic	Not evaluated	
CA-Ama-524-H	Historic concrete dams	Not evaluated	
CA-Ama-726-H	Mining cuts & tailings	Not evaluated	
CA-Ama-727-H	Historic ranch	Not evaluated	
CA-Ama-733-H	Prospect mining pits	Not eligible	
CA-Ama-734-H	Mining shaft	Not evaluated	
CA-Ama-737-H	Clark Ranch	Eligible	
P-3-0577	Residence (1933)	Not evaluated	
P-3-0582	Historic ditch	Not evaluated	
P-3-0585	Aetna/Amador Mines	Not evaluated	
P-3-0716-H	Old Highway 32	Not evaluated	
P-3-1051-H	French Bar Road	Not eligible	
P-3-1052-H	Historic well	Eligible	
P-3-1058-H	Prospect pit	Not eligible	
P-3-1059-H	Prospect pit	Not eligible	
P-3-1064-H	Adit & mining waste pile	Not eligible	
P-3-1065-H	Prospect pit	Not eligible	

<i>RESOURCE</i>	<i>RESOURCE TYPE</i>	<i>STATUS FOR INCLUSION IN THE NRHP AND/OR CRHR</i>	<i>STATE HISTORIC LANDMARK</i>
P-3-1067-H	Historic road	Not eligible	
P-3-1069	Prehistoric	Not eligible	
P-3-1070	Prehistoric	Not eligible	

SOURCE: CITY OF JACKSON GENERAL PLAN 2008

There are three properties or districts currently listed on the National Register of Historic Places within the Planning Area (www.nationalregisterofhistoricplaces.com).

TABLE 3.5-2: BUILDINGS OR DISTRICTS LISTED ON THE NATIONAL REGISTER OF HISTORIC PLACES

<i>REFERENCE NUMBER</i>	<i>PROPERTY NAME</i>	<i>CATEGORY OF PROPERTY</i>	<i>STREET & NUMBER</i>
72000215	Amador County Hospital Building	Building	708 Court St, Jackson
86002412	Butterfield, John A., House	Building	115 Broadway, Jackson
92000979	Chichizola Family Store Complex	District	1316--1330 Jackson Gate Rd, Jackson
82002169	DePue, Grace Blair, House and Indian Museum	Building	215 Court St, Jackson
00000365	Jackson Downtown Historic District	District	Roughly along Main St. from 215 Main St. to 14 Broadway, Jackson
08001347	Kennedy Mine Historic District	District	12594 Kennedy Mine Rd, Jackson
81000146	Kennedy Tailing Wheels	Structure	Jackson Gate Rd, Jackson
07000507	Paugh, William J., House	Building	406 Pitt St, Jackson
86000385	Saint Sava Serbian Orthodox Church	Building	724 N. Main, Jackson

SOURCE: NATIONAL REGISTER OF HISTORIC PLACES

NATIVE AMERICAN CONSULTATION

Consultation letters were sent to the Native American Heritage Commission; as well as all tribes included the Jackson noticing list during the NOP process for the Draft EIR. These tribes include the Buena Vista Rancheria Tribe, Torres Martinez Desert Cahuilla Indians, Shingle Springs Band of Miwok Indians, Jackson Rancheria Band of Me-Wuk Indians, Lone Band of Miwok Indians, The United Auburn Indian Community, Colfax-Todds Valley Consolidated Tribe, Nashville Enterprise Miwqok-Maidu-Nishinam Tribe, Wilton Rancheria, Washoe Tribe of Nevada and California, Calaveras Bank of Mi-Wuk Indians, Tule River Indian Tribe, and the Chicken Ranch Rancheria of Me-Wuk Indians, . The City received three comment letters during the Notice of Preparation (NOP) comment period. The Native American Heritage Commission (NAHC) submitted a letter, dated November 30, 2022. The comment letter provided an overview of tribal consultation requirements, and provided examples of recommended approaches to reducing potential impacts to cultural and tribal resources. The issues raised in this letter have been addressed in this chapter of the Draft EIR. Additionally two NOP letters were revived from Tribal Organizations. These include one letter from the Colfax Todds Valley Consolidated Tribe with a letter dated December 1, 2022, and one letter from the Shingle Springs Band of Miwok Indians with a letter dated December 13, 2022. No specific resources were identified in either letter, and all issues raised in this letter

have been addressed in this chapter of the Draft EIR. The NOP and all comments received during the NOP comment period are included in Appendix A of this Draft EIR.

3.5.2 REGULATORY SETTING

FEDERAL

National Historic Preservation Act

Most regulations at the Federal level stem from the National Environmental Policy Act (NEPA) and historic preservation legislation such as the National Historic Preservation Act (NHPA) of 1966, as amended. NHPA established guidelines to "preserve important historic, cultural, and natural aspects of our national heritage, and to maintain, wherever possible, an environment that supports diversity and a variety of individual choice." The NHPA includes regulations specifically for Federal land-holding agencies, but also includes regulations (Section 106) which pertain to all projects that are funded, permitted, or approved by any Federal agency and which have the potential to affect cultural resources. All projects that are subject to NEPA are also subject to compliance with Section 106 of the NHPA and NEPA requirements concerning cultural resources. Provisions of NHPA establish a National Register of Historic Places (The National Register) maintained by the National Park Service, the Advisory Councils on Historic Preservation, State Historic Preservation Offices, and grants-in-aid programs.

American Indian Religious Freedom Act and Native American Graves and Repatriation Act

The American Indian Religious Freedom Act recognizes that Native American religious practices, sacred sites, and sacred objects have not been properly protected under other statutes. It establishes as national policy that traditional practices and beliefs, sites (including right of access), and the use of sacred objects shall be protected and preserved. Additionally, Native American remains are protected by the Native American Graves and Repatriation Act of 1990.

Other Federal Legislation

Historic preservation legislation was initiated by the Antiquities Act of 1966, which aimed to protect important historic and archaeological sites. It established a system of permits for conducting archaeological studies on federal land, as well as setting penalties for noncompliance. This permit process controls the disturbance of archaeological sites on federal land. New permits are currently issued under the Archaeological Resources Protection Act (ARPA) of 1979. The purpose of ARPA is to enhance preservation and protection of archaeological resources on public and Native American lands. The Historic Sites Act of 1935 declared that it is national policy to "Preserve for public use historic sites, buildings, and objects of national significance."

STATE

California Register of Historic Resources (CRHR)

California State law also provides for the protection of cultural resources by requiring evaluations of the significance of prehistoric and historic resources identified in documents prepared pursuant to the California Environmental Quality Act (CEQA). Under CEQA, a cultural resource is considered an important historical resource if it meets any of the criteria found in Section 15064.5(a) of the CEQA Guidelines. Criteria identified in the CEQA Guidelines are similar to those described under the NHPA. The State Historic Preservation Office (SHPO) maintains the CRHR. Historic properties listed, or formally designated for eligibility to be listed, on The National Register are automatically listed on the CRHR. State Landmarks and Points of Interest are also automatically listed. The CRHR can also include properties designated under local preservation ordinances or identified through local historical resource surveys.

California Environmental Quality Act (CEQA)

CEQA requires that lead agencies determine whether projects may have a significant effect on archaeological and historical resources. This determination applies to those resources which meet significance criteria qualifying them as “unique,” “important,” listed on the California Register of Historical Resources (CRHR), or eligible for listing on the CRHR. If the agency determines that a project may have a significant effect on a significant resource, the project is determined to have a significant effect on the environment, and these effects must be addressed. If a cultural resource is found not to be significant under the qualifying criteria, it need not be considered further in the planning process.

CEQA emphasizes avoidance of archaeological and historical resources as the preferred means of reducing potential significant environmental effects resulting from projects. If avoidance is not feasible, an excavation program or some other form of mitigation must be developed to mitigate the impacts. In order to adequately address the level of potential impacts, and thereby design appropriate mitigation measures, the significance and nature of the cultural resources must be determined. The following are steps typically taken to assess and mitigate potential impacts to cultural resources for the purposes of CEQA:

- identify cultural resources;
- evaluate the significance of the cultural resources found;
- evaluate the effects of the project on cultural resources; and
- develop and implement measures to mitigate the effects of the project on cultural resources that would be significantly affected.

In 2015, CEQA was amended to require lead agencies to determine whether projects may have a significant effect on tribal cultural resources. (Public Resources Code [PRC] § 21084.2). To qualify as a tribal cultural resource, the resource must be a site, feature, place, cultural landscape, sacred place, or object, which is of cultural value to a California Native American Tribe and is listed, or eligible for listing, on the national, state, or local register of historic resources. Lead agencies may also use their discretion to treat any notable resource as a tribal cultural resource. To determine whether a project may have an impact on a resource, the lead agency is required to consult with any California Native American tribe that requests consultation and is affiliated with the geographic area of a proposed project (PRC § 21080.3.1). CEQA requires that a lead agency

consider the value of the cultural resource to the tribe and consider measures to mitigate any adverse impact.

California Public Resources Code

Section 5097 of the Public Resources Code specifies the procedures to be followed in the event of the unexpected discovery of historic, archaeological, and paleontological resources, including human remains, historic or prehistoric resources, paleontological resources on nonfederal land. The disposition of Native American burial falls within the jurisdiction of the California NAHC. Section 5097.5 of the Code states the following:

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.

California Health and Safety Code

Section 7050.5 of the California Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the California Native American Heritage Commission. CEQA Guidelines (Section 15064.5) specify the procedures to be followed in case of the discovery of human remains on non-federal land. The disposition of Native American burials falls within the jurisdiction of the Native American Heritage Commission.

Senate Bill 18 (Burton, Chapter 905, Statutes 2004)

SB 18, authored by Senator John Burton and signed into law by Governor Arnold Schwarzenegger in September 2004, requires local (city and county) governments to consult with California Native American tribes to aid in the protection of traditional tribal cultural places (“cultural places”) through local land use planning. This legislation, which amended §65040.2, §65092, §65351, §65352, and §65560, and added §65352.3, §653524, and §65562.5 to the Government Code; also requires the Governor’s Office of Planning and Research (OPR) to include in the General Plan Guidelines advice to local governments for how to conduct these consultations. The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places. These consultation and notice requirements apply to adoption and amendment of both general plans (defined in Government Code §65300 et seq.) and specific plans (defined in Government Code §65450 et seq.).

Assembly Bill 978

In 2001, Assembly Bill (AB) 978 expanded the reach of Native American Graves Protection and Repatriation Act of 1990 and established a State commission with statutory powers to assure that

Federal and State laws regarding the repatriation of Native American human remains and items of patrimony are fully complied with. In addition, AB 978 also included non-Federally recognized tribes for repatriation.

Assembly Bill 52

Assembly Bill (AB) 52, approved in September 2014, creates a formal role for California Native American tribes by creating a formal consultation process and establishing that a substantial adverse change to a tribal cultural resource has a significant effect on the environment. Tribal cultural resources are defined as:

- 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 CRHR
 - B) Included in a local register of historical resources as defined in PRC Section 5020.1(k)
- 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 PRC Section 5024.1 (c). In applying the criteria set forth in PRC Section 5024.1 (c) the lead agency shall consider the significance of the resource to a California Native American tribe.

A cultural landscape that meets the criteria above is also a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. In addition, a historical resource described in PRC Section 21084.1, a unique archaeological resource as defined in PRC Section 21083.2(g), or a “non-unique archaeological resource” as defined in PRC Section 21083.2(h) may also be a tribal cultural resource if it conforms with above criteria.

AB 52 requires a lead agency, prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project, to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe, and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation.

3.5.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project is considered to have a significant impact on cultural or tribal resources if it will:

- Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5;

3.5 CULTURAL AND TRIBAL RESOURCES

- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;
- Disturb any human remains, including those interred outside of formal cemeteries;
- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
 - Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k);
 - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resources to a California Native American tribe.

IMPACTS AND MITIGATION MEASURES

Impact 3.5-1: General Plan implementation could cause a substantial adverse change in the significance of a historical or archaeological resource pursuant to Section 15064.5 (Less than Significant)

A substantial adverse change in the significance of an historic resource is defined in Section 15064.5 (b)(1) of the CEQA Guidelines as the “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.” Known historic and prehistoric resource sites are located throughout the Planning Area, as shown in Tables 3.5-1 and 3.5-2, and it is expected that additional undiscovered sites may be located in various areas of the City as well.

While the General Plan does not directly propose any adverse changes to any historic or archaeological resources, future development allowed under the General Plan could affect known historical and archaeological resources or unknown historical and archaeological resources which have not yet been identified.

As future development and infrastructure projects are considered by the City, each project will be evaluated for conformance with the City’s General Plan, Municipal Code, and other applicable State and local regulations. Subsequent development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA. The General Plan includes policies and actions that would reduce impacts to cultural, historic, and archaeological resources, as well as policies and actions for the conservation of cultural, historic, and archaeological resources. Specifically, General Plan policies require the City to protect Jackson’s Native American heritage by requiring projects to comply with the requirements of CEQA and the National Historic Preservation Act. Additionally, General Plan policies require development projects with a potential to impact archeological resources to consult with the CCIC of the California Historical Resources Information System to determine the potential for a discovery of cultural resources, conduct a site evaluation as may be indicated and, mitigate any adverse impacts according to the recommendation of a qualified archaeologist. Adoption and implementation of the policies and actions listed below, combined with adopted CEQA review requirements, would ensure that adverse effects on significant historic and archaeological resources are **less than significant**.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

CONSERVATION AND OPEN SPACE ELEMENT POLICIES

COS 4.1: Recognize significant historical resources and use these resources to promote a sense of place and history in Jackson. Seek to incorporate reminders of Jackson’s culture in the built and natural environment through adaptive reuse, signage, markers, and other reminders of Jackson’s heritage.

3.5 CULTURAL AND TRIBAL RESOURCES

COS 4.2: Evaluate the condition of historical buildings, the costs of rehabilitation, and the feasibility of preservation or conservation alternatives when considering the demolition of historical structures. As feasible, encourage the adaptive reuse of the historical structure.

COS 4.3: Provide readily available public information on the Mills Act and encourage people to renovate historical homes in disrepair using property tax savings available through the Mills Act.

COS 4.4: Protect areas containing significant historical, archaeological, and paleontological resources, as defined by the California Public Resources Code.

COS 4.5: If found during construction, ensure that human remains are treated with sensitivity and dignity, and ensure compliance with the provisions of California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98.

COS 4.6: Work with Native American representatives to identify and appropriately address, through avoidance or mitigation, impacts to Native American cultural resources and sacred sites during the development review process.

COS 4.7: Consistent with state, local, and tribal intergovernmental consultation requirements such as SB 18 and AB 52, consult as necessary with Native American tribes that may be interested in proposed new development projects and land use policy changes.

CONSERVATION AND OPEN SPACE ELEMENT ACTIONS

COS-4a: Develop a citywide Historical Resources Inventory with new sites or buildings that are of local, state, or federal significance.

COS-4b: Continue to assess development proposals for potential impacts to sensitive historical, archaeological, and paleontological resources pursuant to the California Environmental Quality Act (CEQA).

COS-4c: Create incentives to promote historic preservation, maintenance, and adaptive reuse by property owners, such as expedited permits, lower permit fees, and Mills Act Contracts for tax benefits.

COS-4d: Continue to implement the City's Development Code to support historic preservation goals, including Site Plan Review and Historic Design Review, and periodically review and modify as necessary in order to ensure that it continues to meet the City's historic preservation goals.

COS-4e: Provide educational resources and public outreach efforts that inform citizens of historic preservation efforts including:

- *School age programs, and on-line exhibits; and*
- *Collaboration with community groups and educational institutions to promote local awareness and appreciation of Jackson's rich history.*

COS-4f: Require all development, infrastructure, and other ground-disturbing projects to comply with the City's Archeological/Cultural Resources Ordinance in the event of an inadvertent discovery of cultural resources or human remains.

Impact 3.5-2: Implementation of the General Plan could lead to the disturbance of any human remains (Less than Significant)

Indications are that humans have occupied the Sierra Nevada foothills for over 10,000 years and it is not always possible to predict where human remains may occur outside of formal burials. Therefore, excavation and construction activities allowed under the General Plan may yield human remains that may not be interred in marked, formal burials.

Although Native American human remains are normally associated with former residential village locations, isolated burials and cremations have been found in many other locations. Future projects may disturb or destroy buried Native American human remains, including those interred outside of formal cemeteries. Consistent with state laws protecting these remains (that is, Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98), sites containing Native American human remains must be treated in a sensitive manner.

As future development and infrastructure projects are considered by the City, each project will be evaluated for conformance with the City's General Plan, Municipal Code, and other applicable State and local regulations. Subsequent development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA. Under CEQA, human remains are protected under the definition of archaeological materials as being "any evidence of human activity." Public Resources Code Section 5097 has specific stop-work and notification procedures to follow in the event that Native American human remains are inadvertently discovered during development activities. The General Plan requires that human remains are treated in compliance with the provisions of California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98. Implementation of the policies and actions below ensures that potential adverse impacts to human remains would be **less than significant**.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS**CONSERVATION AND OPEN SPACE ELEMENT POLICIES**

COS 4.4: Protect areas containing significant historical, archaeological, and paleontological resources, as defined by the California Public Resources Code.

COS 4.5: If found during construction, ensure that human remains are treated with sensitivity and dignity, and ensure compliance with the provisions of California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98.

COS 4.6: Work with Native American representatives to identify and appropriately address, through avoidance or mitigation, impacts to Native American cultural resources and sacred sites during the development review process.

COS 4.7: Consistent with state, local, and tribal intergovernmental consultation requirements such as SB 18 and AB 52, consult as necessary with Native American tribes that may be interested in proposed new development projects and land use policy changes.

3.5 CULTURAL AND TRIBAL RESOURCES

CONSERVATION AND OPEN SPACE ELEMENT ACTIONS

COS-4b: Continue to assess development proposals for potential impacts to sensitive historical, archaeological, and paleontological resources pursuant to the California Environmental Quality Act (CEQA).

COS-4d: Continue to implement the City's Development Code to support historic preservation goals, including Site Plan Review and Historic Design Review, and periodically review and modify as necessary in order to ensure that it continues to meet the City's historic preservation goals.

COS-4f: Require all development, infrastructure, and other ground-disturbing projects to comply with the City's Archeological/Cultural Resources Ordinance in the event of an inadvertent discovery of cultural resources or human remains.

Impact 3.5-3: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074, and that is: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or a resource determined by the lead agency (Less than Significant)

The City of Jackson conducted Native American consultations under Senate Bill 18 (Chapter 905, Statutes of 2004), also known as SB18, which requires local governments to consult with Tribes prior to making certain planning decisions and requires consultation and notice for a general and specific plan adoption or amendments in order to preserve, or mitigate impacts to, cultural places that may be affected. In addition to SB18 consultation, the City conducted tribal consultations under the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code section 21080.3.1 subdivisions (b), (d) and (e)), also known as AB 52, which requires consulting for projects within the City of Jackson's jurisdiction and within the traditional territory of the Tribal Organizations who have previously requested AB52 consultations with the City. 13 Tribal Organizations were contacted under AB52 and SB18. Notification letters were sent to all 13 Tribal Organizations on November 23, 2022 via certified mail. To date, two responses have been received. No specific resources were identified in either letter, and all issues raised in this letter have been addressed in this chapter of the Draft EIR. The NOP and all comments received during the NOP comment period are included in Appendix A of this Draft EIR.

Specific locations for future development and improvements have not been identified. Future projects would be required to be evaluated for project-specific impacts under CEQA at the time of application. The General Plan and local CEQA guidelines require tribal consultation and the protections of any identified archeological and tribal resources. All future development projects would be required to follow development requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to protection of tribal resources. Subsequent projects would be required to prepare site-specific project-level analysis to fulfill CEQA requirements, which also would include additional AB 52 and/or SB 18 consultation that could lead to the identification of potential site specific tribal resources.

As discussed under Impacts 3.5-1 and 3.5-2, impacts from future development could impact unknown archaeological resources including Native American artifacts and human remains. Impacts are considered less-than-significant at the program level with implementation of General Plan policies and actions and local review guidelines. Compliance with the General Plan policies and actions, as well as State and local guidelines would provide an opportunity to identify, disclose, and avoid or minimize the disturbance of and impacts to a tribal resource through tribal consultation and CEQA review procedures. Therefore, impacts related to tribal resources as a result of General Plan implementation would be considered **less than significant**.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

CONSERVATION AND OPEN SPACE ELEMENT POLICIES

COS 4.1: Recognize significant historical resources and use these resources to promote a sense of place and history in Jackson. Seek to incorporate reminders of Jackson’s culture in the built and natural environment through adaptive reuse, signage, markers, and other reminders of Jackson’s heritage.

COS 4.2: Evaluate the condition of historical buildings, the costs of rehabilitation, and the feasibility of preservation or conservation alternatives when considering the demolition of historical structures. As feasible, encourage the adaptive reuse of the historical structure.

COS 4.3: Provide readily available public information on the Mills Act and encourage people to renovate historical homes in disrepair using property tax savings available through the Mills Act.

COS 4.4: Protect areas containing significant historical, archaeological, and paleontological resources, as defined by the California Public Resources Code.

COS 4.5: If found during construction, ensure that human remains are treated with sensitivity and dignity, and ensure compliance with the provisions of California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98.

COS 4.6: Work with Native American representatives to identify and appropriately address, through avoidance or mitigation, impacts to Native American cultural resources and sacred sites during the development review process.

COS 4.7: Consistent with state, local, and tribal intergovernmental consultation requirements such as SB 18 and AB 52, consult as necessary with Native American tribes that may be interested in proposed new development projects and land use policy changes.

CONSERVATION AND OPEN SPACE ELEMENT ACTIONS

COS-4a: Develop a citywide Historical Resources Inventory with new sites or buildings that are of local, state, or federal significance.

COS-4b: Continue to assess development proposals for potential impacts to sensitive historical, archaeological, and paleontological resources pursuant to the California Environmental Quality Act (CEQA).

3.5 CULTURAL AND TRIBAL RESOURCES

COS-4c: Create incentives to promote historic preservation, maintenance, and adaptive reuse by property owners, such as expedited permits, lower permit fees, and Mills Act Contracts for tax benefits.

COS-4d: Continue to implement the City's Development Code to support historic preservation goals, including Site Plan Review and Historic Design Review, and periodically review and modify as necessary in order to ensure that it continues to meet the City's historic preservation goals.

COS-4e: Provide educational resources and public outreach efforts that inform citizens of historic preservation efforts including:

- *School age programs, and on-line exhibits; and*
- *Collaboration with community groups and educational institutions to promote local awareness and appreciation of Jackson's rich history.*

COS-4f: Require all development, infrastructure, and other ground-disturbing projects to comply with the City's Archeological/Cultural Resources Ordinance in the event of an inadvertent discovery of cultural resources or human remains.

This section provides a background discussion of the seismic and geologic hazards found in the City and the regional vicinity. This section is organized with an environmental setting, regulatory setting, and impact analysis.

Comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from Cal OES. Each of the comments related to this topic are addressed within this section. Full comments received are included in Appendix A.

3.6.1 ENVIRONMENTAL SETTING

GEOMORPHIC PROVINCE

California's geomorphic provinces are naturally defined geologic regions that display a distinct landscape or landform. Earth scientists recognize eleven provinces in California. Each region displays unique, defining features based on geology, faults, topographic relief and climate. These geomorphic provinces are remarkably diverse. They provide spectacular vistas and unique opportunities to learn about earth's geologic processes and history. The Planning Area is located in the northern portion of the Sierra Nevada Geomorphic Province of California.

The planning area is defined by the Sierra bioregion. Figure 3.6-1 illustrates the boundaries of the bioregions within Amador County, which the planning area resides.

The Sierra Bioregion extends from the Feather River in the north to Tejon Pass in the south. It is bounded on the west by the Central Valley Bioregion and on the east by the Intermountain and Mojave Desert Bioregions. Included in the region are the headwaters of 24 river basins extending to the foothills on the west side and the base of the high Sierra Nevada escarpment on the east side.

The Sierra Bioregion is over 8,000,000 hectares in size; elevations range from 150 meters in the foothills to nearly 4,400 meters at the crest. Vegetation ranges from valley grasslands and woodlands through chaparral-covered slopes to montane coniferous forests and alpine meadows. Isolated groves of giant sequoias are interspersed along the length of the range. In the past, the primary economic activities have been grazing, mining, and logging. As the human population has increased, these activities have shifted.

REGIONAL GEOLOGY

Jackson and Amador County are located in the Sierra Nevada foothills of central California. A west to east cross section through California at Jackson would reveal three major geomorphic provinces. These consist of the Coast Ranges, Great Valley, and Sierra Nevada geomorphic provinces.

Beyond the Great Valley to the east are the granitic plutons and metamorphic rocks which form the Sierra Nevada geomorphic province. Younger volcanic and sedimentary deposits are also present in the Sierra Nevada. The project lies within the Sierra foothill metamorphic belt which

3.6 GEOLOGY AND SOILS

consists of a strip Mesozoic sedimentary and volcanic rock which have been highly metamorphosed by the orogenic processes which formed the Sierra Nevada.

Other significant geologic features of importance are the presence of active fault zones at the eastern base of the Sierra Nevada, which have a history of producing moderate to great earthquakes.

SEISMIC HAZARDS

Seismic hazards include both rupture (surface and subsurface) along active faults and ground shaking, which can occur over wider areas. Ground shaking, produced by various tectonic phenomena, is the principal source of seismic hazards in areas devoid of active faults. All areas of the state are subject to some level of seismic ground shaking.

Several scales may be used to measure the strength or magnitude of an earthquake. Magnitude scales (ML) measure the energy released by earthquakes. The Richter scale, which represents magnitude at the earthquake epicenter, is an example of an ML. As the Richter scale is logarithmic, each whole number represents a 10-fold increase in magnitude over the preceding number. Table 3.6-1 represents effects that would be commonly associated with Richter Magnitudes.

TABLE 3.6-1: RICHTER MAGNITUDES AND EFFECTS

MAGNITUDE	EFFECTS
< 3.5	Typically not felt
3.5 – 5.4	Often felt but damage is rare
5.5 – < 6	Damage is slight for well-built buildings
6.1 – 6.9	Destructive potential over ±60 miles of occupied area
7.0 – 7.9	“Major Earthquake” with the ability to cause damage over larger areas
≥ 8	“Great Earthquake” can cause damage over several hundred miles

SOURCE: USGS, EARTHQUAKE PROGRAM.

According to the California Geological Survey’s Probabilistic Seismic Hazard Assessment Program, Amador County is considered to be within an area that is predicted to have a 10 percent probability that a seismic event would produce horizontal ground shaking of 10 to 20 percent within a 50-year period. This level of ground shaking correlates to a Modified Mercalli intensity of V to VII, light to strong. Table 3.6-2 below presents Modified Mercalli intensity effects at each level.

TABLE 3.6-2: MODIFIED MERCALLI INTENSITIES AND EFFECTS

RICHTER MAGNITUDE	MODIFIED MERCALLI	EFFECTS OF INTENSITY
0.1 – 0.9	I	Earthquake shaking not felt
1.0 – 2.9	II	Shaking felt by those at rest.
3.0 – 3.9	III	Felt by most people indoors, some can estimate duration of shaking.
4.0 – 4.5	IV	Felt by most people indoors. Hanging objects rattle, wooden walls and frames creak.
4.6 – 4.9	V	Felt by everyone indoors, many can estimate duration of shaking. Standing autos rock. Crockery clashes, dishes rattle and glasses clink. Doors open, close and

		swing.
5.0 – 5.5	VI	Felt by all who estimate duration of shaking. Sleepers awaken, liquids spill, objects are displaced, and weak materials crack.
5.6 – 6.4	VII	People frightened and walls unsteady. Pictures and books thrown, dishes and glass are broken. Weak chimneys break. Plaster, loose bricks and parapets fall.
6.5 – 6.9	VIII	Difficult to stand. Waves on ponds, cohesionless soils slump. Stucco and masonry walls fall. Chimneys, stacks, towers, and elevated tanks twist and fall.
7.0 – 7.4	IX	General fright as people are thrown down, hard to drive. Trees broken, damage to foundations and frames. Reservoirs damaged, underground pipes broken.
7.5 – 7.9	X	General panic. Ground cracks, masonry and frame buildings destroyed. Bridges destroyed, railroads bent slightly. Dams, dikes and embankments damaged.
8.0 – 8.4	XI	Large landslides, water thrown, general destruction of buildings. Pipelines destroyed, railroads bent.
8.5 +	XII	Total nearby damage, rock masses displaced. Lines of sight/level distorted. Objects thrown into air.

SOURCE: UNITED STATES GEOLOGICAL SURVEY

The Significant United States Earthquake data published by the USGS in the National Atlas identifies earthquakes that caused deaths, property damage, and geologic effects or were felt by populations near the epicenter. No significant earthquakes are identified within the Planning Area.

The 2015 Uniform California Earthquake Rupture Forecast, Version 3, or UCERF3, is the latest official earthquake rupture forecast (ERF) for the state of California. It provides estimates of the likelihood and severity of potentially damaging earthquake ruptures in the long- and near-term. Combining this with ground motion models produces estimates of the severity of ground shaking that can be expected during a given period (seismic hazard), and of the threat to the built environment (seismic risk). This information is used to inform engineering design and building codes, plan for disaster, and evaluate whether earthquake insurance premiums are sufficient for the prospective losses.

The potential for seismic ground shaking in California is expected. As a result of the foreseeable seismicity in California, the State requires special design considerations for all structural improvements in accordance with the seismic design provisions in the California Building Code. These seismic design provisions require enhanced structural integrity based on several risk parameters.

FAULTS

A fault is a fracture in the crust of the earth. A fault trace is the line on the earth's surface defining the fault. Displacement of the earth's crust along faults releases energy in the form of earthquakes and in some cases in fault creep. Most faults are the result of repeated displacements over a long period of time.

Surface rupture occurs when movement on a fault deep within the earth breaks through to the surface. Surface ruptures have been known to extend up to 50 miles with displacements of an inch to 20 feet. Fault rupture almost always follows preexisting faults, which are zones of weakness.

Rupture may occur suddenly during an earthquake or slowly in the form of fault creep. Sudden displacements are more damaging to structures because they are accompanied by shaking.

Faults are further distinguished as active, potentially active, or inactive:

- **Active:** An active fault is a Historic or Holocene fault that has had surface displacement within the last 11,000 years;
- **Potentially Active:** A potentially active fault is a pre-Holocene Quaternary fault that has evidence of surface displacement between about 1.6 million and 11,000 years ago; and
- **Inactive:** An inactive fault is a pre-Quaternary fault that does not have evidence of surface displacement within the past 1.6 million years. The probability of fault rupture is considered low; however, this classification does not mean that inactive faults cannot, or will not, rupture.

The 2010 Fault Activity Map provided by the California Department of Conservation identified potential seismic sources within 100 kilometers (62 miles) of the Planning Area. The Planning Area is generally located approximately 2 miles north of the closest fault (Poorman Gulch fault) in the Bear Mountains Fault zone and approximately 29 miles northwest of the closest fault (Raw Hide East fault) in the Melones Fault zone (California Geological Survey). An underlying hidden fault does pass through the ore body of the Moore Gold Mine at a depth of approximately 1,100 feet below the surface. This mine is located beyond the eastern boundary of the Jackson SOI. Its ore body is apparently located in a geologic contact between slates of the Mariposa Formation and greenstone of the Brower Creek volcanics. Although this fault is not noted in recently published documents by the California Division of Mines and Geology (CDMG), the evidence that this hidden fault was exposed in workings of the Moore Mine and documented in older bulletins of the CDMG. This information indicates that fault structures that could be considered as part of the Foothill Fault system are in close proximity to the Planning Area. Figure 3.6-2 provides a map of known area faults.

Fault Rupture

A fault rupture occurs when the surface of the earth breaks as a result of an earthquake, although this does not happen with all earthquakes. These ruptures generally occur in a weak area of an existing fault. Ruptures can be sudden (i.e. earthquake) or slow (i.e. fault creep). The Alquist-Priolo Fault Zoning Act requires active earthquake fault zones to be mapped and it provides special development considerations within these zones. Jackson does not have surface expression of active faults and fault rupture is not anticipated. Figure 3.6-2 shown regional faults in relation to Jackson.

SEISMIC HAZARD ZONES

Alquist-Priolo Fault Zones

An active earthquake fault, per California's Alquist-Priolo Act, is one that has ruptured within the Holocene Epoch (≈11,000 years). Based on this criterion, the California Geological Survey identifies Earthquake Fault Zones. These Earthquake Fault Zones are identified in Special Publication 42

(SP42), which is updated as new fault data become available. The SP42 lists all counties and cities within California that are affected by designated Earthquake Fault Zones. The Fault Zones are delineated on maps within SP42 (Earthquake Fault Zone Maps).

The California legislature passed the Alquist-Priolo Special Studies Zone Act in 1972 to address seismic hazards associated with faults and to establish criteria for developments for areas with identified seismic hazard zones. The California Geologic Survey (CGS) evaluates faults with available geologic and seismologic data and determines if a fault should be zoned as active, potentially active, or inactive. If CGS determines a fault to be active, then it is typically incorporated into a Special Studies Zone in accordance with the Alquist-Priolo Earthquake Hazard Act. Alquist-Priolo Special Study Zones are usually one-quarter mile or less in width and require site-specific evaluation of fault location and require a structure setback if the fault is found traversing a project site. The Planning Area is not within an Alquist-Priolo Special Study Zone. The nearest Alquist-Priolo fault zone, the Greenville Fault, is located approximately 60 miles southwest of Jackson.

LIQUEFACTION

Liquefaction, which is primarily associated with loose, saturated materials, is most common in areas of sand and silt or on reclaimed lands. Cohesion between the loose materials that comprise the soil may be jeopardized during seismic events and the ground will take on liquid properties. Thus, specific soil characteristics and seismic shaking must exist for liquefaction to be possible. Liquefaction susceptibility based on soil types, deposit, and age is presented below.

Liquefaction typically requires a significant sudden decrease of shearing resistance in cohesionless soils and a sudden increase in water pressure, which is typically associated with an earthquake of high magnitude. The potential for liquefaction is highest when groundwater levels are high, and loose, fine, sandy soils occur at depths of less than 50 feet. Soil data from the Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2020) suggests that the potential for liquefaction is low within the Planning Area.

EARTHQUAKE-INDUCED LANDSLIDES

Earthquake-Induced Landslide Zones Areas are areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required. The California Geological Survey Landslides Maps have not mapped any landslide areas in the Planning Area or its vicinity. The potential for landslides within the planning area is generally low, however the bedrock in the Jackson area has undergone fracturing, tilting, faulting, and weathering creating areas of instability where there are steep slopes or open cuts.

3.6 GEOLOGY AND SOILS

NON-SEISMIC HAZARDS

Soils

A Custom Soil Survey was completed for the Planning Area using the NRCS Web Soil Survey program. The NRCS Soils Map is provided in Figure 3.6-3. Table 3.6-3 below identifies the type and range of soils found in the Planning Area.

TABLE 3.6-3: PLANNING AREA SOILS

<i>NAME</i>	<i>ACRES IN JACKSON</i>	<i>ACRES IN SOI</i>
Argonaut very rocky loam, 3 to 31 percent slopes	0.75	0.00
Auburn silt loam, 0 to 31 percent slopes	35.82	64.85
Auburn very rocky silt loam, 3 to 31 percent slopes	886.36	455.92
Auburn very rocky silt loam, 31 to 51 percent slopes	13.30	72.82
Auburn very rocky silt loam, moderately deep, 3 to 31 percent slopes	91.34	74.98
Auburn very rocky silt loam, moderately deep, 31 to 51 percent slopes	127.08	0.81
Auburn extremely rocky silt loam, 3 to 31 percent slopes	7.98	18.02
Auburn extremely rocky silt loam, moderately deep, 31 to 71 percent slopes	3.53	1.34
Auburn-Argonaut very rocky silt loams, 3 to 31 percent slopes	158.60	3.19
Exchequer and Auburn very rocky loams, 3 to 31 percent slopes	343.91	130.62
Exchequer and Auburn very rocky loams, 31 to 51 percent slopes	3.41	133.56
Josephine-Maymen complex, 16 to 51 percent slopes	10.21	68.60
Loamy alluvial land	8.17	0.00
Mariposa very rocky loam, 9 to 31 percent slopes	77.28	14.26
Mariposa-Maymen complex, 16 to 51 percent slopes	122.10	27.68
Maymen-Mariposa complex, 16 to 51 percent slopes	87.0	1.49
Mine tailings and Riverwash	98.21	25.83
Mixed alluvial land	87.01	68.60
Mine pits	3.45	0.0
Pardee cobbly loam, 3 to 31 percent slopes	98.31	4.69
Placer diggings and Riverwash	113.71	39.83
Quarries	0.00	4.80
Supan Cobbly Loam	0.00	4.32
Supan very cobbly loam	0.00	66.59
Water	2.54	0.45
Total	2,293	1,218

SOURCE: NRCS CUSTOM SOIL SURVEY 2020.

As shown in Table 3.6-3, the majority of soils within the Planning Area consist of loam soil types. Below is a brief description of the most prominent soils within the Planning Area. Below is a brief description of prominent soils within the Planning Area.

Argonaut series. The Argonaut series consists of moderately deep, well drained soils that formed in materials weathered from meta-andesite. Argonaut soils are on foothills with slopes of 2 to 30 percent. The mean annual precipitation is 27 inches and the mean annual temperature is about 60 degrees F. The Argonaut soils are on undulating to hilly broad ridges and slightly concave slopes of 2 to 30 percent. The soils formed in material weathered from metamorphosed and intrusive basic rocks. Argonaut soils are mainly used for annual rangeland. Vegetation is soft chess, wild oats, riggut brome, filaree with scattered foothill pine and scattered to dense thickets of blue oak, interior live oak and buckbrush. Argonaut soils are well drained; slow to rapid runoff; very slow permeability.

Auburn series. The Auburn series consists of shallow to moderately deep, well drained soils formed in material weathered from amphibolite schist. Auburn soils are on foothills and have slopes of 2 to 75 percent. The mean annual precipitation is about 610 mm and the mean annual air temperature is about 16 degrees C. The Auburn soils are hills with slopes of 2 to 75 percent. The soils formed in material weathered from metabasic or metasedimentary rock such as amphibolite schist, greenstone schist, or diabase. Auburn soils are used for annual rangeland with small areas used for irrigated pasture. The native vegetation is typically annual grasses and forbs such as soft chess, wild oats, riggut brome, and filaree with stands of blue oak, interior live oak, scattered California foothill pine and brush. Auburn soils are well drained; Saturated hydraulic conductivity of the soil is moderately high. It is primarily in the Sierra Nevada Foothills, with a small extent in the northern part of the Central California Coast Range.

Exchequer series. The Exchequer series consists of shallow, somewhat excessively drained soils that formed in material weathered from hard andesitic breccia, schist and metamorphosed volcanic rocks. These soils are on undulating to steep uplands. The mean annual precipitation is about 25 inches and the mean annual air temperature is about 61 degrees F. The soil is used for rangeland. The vegetation is annual grasses with small herbaceous plants, scattered blue oaks; or dense shrubs. It is found in the lower foothills of the western Sierra Nevada of central and north-central California and coastal hills of southern California. The soils is somewhat excessively drained; medium to rapid runoff; moderate permeability.

Josephine series. The Josephine series consists of deep, well drained soils that formed in colluvium and residuum weathered from altered sedimentary and extrusive igneous rocks. Josephine soils are on broad ridgetops, toeslopes, footslopes, and side slopes of mountains. Slopes are 2 to 75 percent. The mean annual precipitation is about 45 inches and the mean annual temperature is about 50 degrees F. Woodland, wildlife habitat and water supply. Native vegetation is Douglas fir, ponderosa pine, Pacific madrone, California black oak, tanoak, incense cedar, sugar pine, cascade Oregon grape and common snowberry in Oregon, and in California the dominant tree is ponderosa pine. It is found in the Klamath mountains of southern Oregon (MLRA 5) and in the Sierra Nevada in northern California (MLRA 22). The soil is well drained; moderately slow permeability.

Mariposa series. The Mariposa series consists of moderately deep, well drained soils formed in material weathered from metasedimentary rocks. These soils are on mountains. Slopes are 2 to 75 percent. The mean annual precipitation is about 1400 mm and the mean annual temperature is

about 12 degrees C. The dominant land use is timber production, with some grazing and deciduous fruit orchards. Vegetation is typically mixed coniferous forest-shrub, with Douglas fir, white fir, ponderosa pine, sugar pine, California black oak, tanoak, whiteleaf manzanita and Pacific poison oak. The soil is well-drained; saturated hydraulic conductivity is moderately high throughout the profile. Saturated hydraulic conductivity of the fractured bedrock is moderately low to moderately high.

Maymen series. The Maymen series consists of shallow, somewhat excessively drained soils that formed in residuum weathered from shale, schist, greenstone, sandstone and conglomerate. Maymen soils are on mountains. Slopes range from 5 to 100 percent. The mean annual precipitation is about 42 inches, and the mean annual temperature is about 54 degrees F. This soil is used for watershed, wildlife habitat and recreation. Vegetation is usually open stands of chaparral consisting of chamise, Manzanita, several species of ceanothus, several species of scrub or dwarf oak and scattered small trees in protected sites such as drainages or north slopes. The soils are extensive and are mapped in the coast ranges of northern and central California. The soil is somewhat excessively drained; high to very high runoff; moderate to moderately rapid permeability.

Pardee series. The Pardee series consists of shallow, well drained soils formed in mixed alluvium. These soils are on terrace remnants and eroded fan remnants on hills. Slopes are 0 to 30 percent. The mean annual precipitation is about 515 mm and the mean annual air temperature is about 17 degrees C. It is used primarily for rangeland. Vegetation is annual grasses and forbs with scattered blue oaks at higher elevations. Understory species include wild oat, bromes, soft chess, stork's bill, foxtail fescue, Mediterranean barley, and smooth cat's ear. The soil is well drained and there is moderately-high saturated hydraulic conductivity throughout the soil. Saturated hydraulic conductivity of the bedrock is low to moderately high.

Supan series. The Supan series comprises of a fine-loamy mixed, mesic family. The soils have brown, near reddish brown slightly acid sola with loam, clay loam, and gravelly horizons that rest at moderate depths, rather abruptly on partly weathered rock. The Supan soils occurs on sloping, plateau-like areas under shrub-grass vegetation. Underlying rock is andesitic and basaltic tuff-breccia or similar rocks. Elevation ranges from 1,500 to 4,000 feet. The climate is moist, subhumid mesothermal with mean annual rainfall of 30 to 45 inches, warm dry summer and cool wet winters. Mean annual temperature is about 54 degrees F., average January temperature about 40 degrees F., and average July temperature about 68 degrees F. Supan occurs in the upper foothills of the Cascade Range, Sierra Nevada Range and in scattered areas of coastal counties in California. It is characterized by well drained, medium, to rapid runoff, and moderately slowly permeability.

Erosion

The NRCS delineates soil units and compiles soils data as part of the National Cooperative Soil Survey. The following description of erosion factors is provided by the NRCS Physical Properties Descriptions:

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water. Erosion factor Kw indicates the erodibility of the whole soil, whereas Kf indicates the erodibility of the fine soils. The estimates are modified by the presence of rock fragments.

The *Custom Soils Report* identified the erosion potential for the soils in the Planning Area. This report summarizes those soil attributes used by the Revised Universal Soil Loss Equation Version 2 (RUSLE2) for the map units in the selected area. Soil property data for each map unit component includes the hydrologic soil group, erosion factors Kf for the surface horizon, erosion factor T, and the representative percentage of sand, silt, and clay in the surface horizon.

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water. Within the Planning Area, the erosion factor K varies from 0.17 to 0.43, which is considered a low to moderate-high potential for erosion. Furthermore, given the drainage characteristics of the majority of the soils and the nearly level topography of the Planning Area, runoff erosion hazard is considered low. The wind erosion potential ranges from moderate-to-high during the spring, summer, and fall, however this potential for wind erosion diminishes during the winter.

Expansive Soils

The NRCS delineates soil units and compiles soils data as part of the National Cooperative Soil Survey. The following description of linear extensibility (also known as shrink-swell potential or expansive potential) is provided by the NRCS Physical Properties Descriptions:

“Linear extensibility” refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. The amount and type of clay minerals in the soil influence volume change.

The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Expansive soils can undergo significant volume change with changes in moisture content. They shrink and harden when dried and expand and soften when wet. If structures are underlain by expansive soils, it is important that foundation systems be capable of tolerating or resisting any potentially damaging soil movements. In addition, it is important to limit moisture changes in the surficial soils by using positive drainage away from buildings as well as limiting landscaping watering.

According to the NRCS Web Soil Survey, the soils in the Planning Area have a low potential of soil expansion. Figure 3.6-4 provides a map of the shrink-swell potential of the soils within the Planning Area.

Lateral Spreading

Lateral spreading typically results when ground shaking moves soil toward an area where the soil integrity is weak or unsupported, and it typically occurs on the surface of a slope, although it does not occur strictly on steep slopes. Oftentimes, lateral spreading is directly associated with areas of liquefaction. Soil data from the NRCS Web Soil Survey (NRCS 2020) suggests that the potential for lateral spreading is low within the Planning Area.

Landslide

The California Geological Survey classifies landslides with a two-part designation based on Varnes (1978) and Cruden and Varnes (1996). The designation captures both the type of material that failed and the type of movement that the failed material exhibited. Material types are broadly categorized as either rock or soil, or a combination of the two for complex movements. Landslide movements are categorized as falls, topples, spreads, slides, or flows.

Landslide potential is influenced by physical factors, such as slope, soil, vegetation, and precipitation. Landslides require a slope, and can occur naturally from seismic activity, excessive saturation, and wildfires, or from human-made conditions such as construction disturbance, vegetation removal, wildfires, etc.

The potential for landslides within the planning area is generally low, however the bedrock in the Jackson area has undergone fracturing, tilting, faulting, and weathering creating areas of instability where there are steep slopes or open cuts.

Subsidence

Land subsidence is the gradual settling or sinking of an area with little or no horizontal motion due to changes taking place underground. It is a natural process, although it can also occur (and is greatly accelerated) as a result of human activities. Common causes of land subsidence from human activity include: pumping water, oil, and gas from underground reservoirs; dissolution of limestone aquifers (sinkholes); collapse of underground mines; drainage of organic soils; and initial wetting of dry soils. Subsidence has not been identified as an issue in the Planning Area.

Collapsible Soils

Collapsible soils undergo a rearrangement of their grains and a loss of cementation, resulting in substantial and rapid settlement under relatively low loads. Collapsible soils occur predominantly at the base of mountain ranges, where Holocene-age alluvial fan and wash sediments have been deposited during rapid run-off events. Soils prone to collapse are commonly associated with manmade fill, wind-laid sands and silts, and alluvial fan and mudflow sediments deposited during flash floods. During an earthquake, even slight settlement of fill materials can lead to a differentially settled structure and significant repair costs. Differential settlement of structures

typically occurs when heavily irrigated landscape areas are near a building foundation. Examples of common problems associated with collapsible soils include tilting floors, cracking or separation in structures, sagging floors, and nonfunctional windows and doors. Collapsible soils have not been identified in the Planning Area as an issue. However, in areas subject to potential liquefaction, the potential for liquefaction induced settlement is present.

Naturally Occurring Asbestos

The term “asbestos” is used to describe a variety of fibrous minerals that, when airborne, can result in serious human health effects. Naturally occurring asbestos is commonly associated with ultramafic rocks and serpentinite. Ultramafic rocks, such as dunite, peridotite, and pyroxenite are igneous rocks comprised largely of iron-magnesium minerals. As they are intrusive in nature, these rocks often undergo metamorphosis, prior to their being exposed on the Earth’s surface. The metamorphic rock serpentinite is a common product of the alteration process.

The presence of ultramafic rocks within the region indicates the possibility of naturally occurring asbestos materials. Ultramafic rocks that are associated with shear zones are considerably denser than other rock formations in the area and many are serpentinitized. Minerals known to contain asbestos-quality (i.e., asbestiform) fibers include ultramafic minerals of the amphibole group and phyllosilicates. Fibrous varieties of the amphibole group include tremolite, actinolite, amosite, crocidolite and anthophyllite. Serpentine is a phyllosilicate that occurs in a platy variety (antigorite) and an asbestiform variety (chrysotile) and is the most common variety of commercially mined asbestos. Amphibole asbestos, when disturbed emits needle-like fibers that can be inhaled into the lungs. Amphibole asbestos is more friable than chrysotile, which requires considerable flexing to break. Both forms of asbestos are found in serpentine commonly found in the Sierra Nevada foothills and in the areas surrounding the City of Jackson. When serpentine rock is disturbed by grading and construction activities, asbestos fibers may be released. Though Amador County and the surrounding region do possess deposits of these ultramafic materials, the nearest deposits of naturally occurring asbestos are identified approximately 2 miles to the west of the Planning area.

PALEONTOLOGICAL RESOURCES

Among the natural resources deserving conservation and preservation, and existing within the Planning Area, are the often-unseen records of past life buried in the sediments and rocks below the pavement, buildings, soils, and vegetation which now cover most of the area. These records – fossils and their geologic context – undoubtedly exist in large quantities below the surface in many areas in and near the City of Jackson, and span millions of years in age of origin. Fossils constitute a non-renewable resource: Once lost or destroyed, the exact information they contained can never be reproduced.

Paleontology is the science that attempts to unravel the meaning of these fossils in terms of the organisms they represent, the ages and geographic distribution of those organisms, how they interacted in ancient ecosystems and responded to past climatic changes, and the changes through time of all of these aspects.

The sensitivity of a given area or body of sediment with respect to paleontological resources is a function of both the potential for the existence of fossils and the predicted significance of any fossils which may be found there. The primary consideration in the determination of paleontological sensitivity of a given area, body of sediment, or rock formation is its potential to include fossils. Information that can contribute to assessment of this potential includes: 1) direct observation of fossils within the project area; 2) the existence of known fossil localities or documented absence of fossils in the same geologic unit (e.g., "Formation" or one of its subunits); 3) descriptive nature of sedimentary deposits (such as size of included particles or clasts, color, and bedding type) in the area of interest compared with those of similar deposits known elsewhere to favor or disfavor inclusion of fossils; and 4) interpretation of sediment details and known geologic history of the sedimentary body of interest in terms of the ancient environments in which they were deposited, followed by assessment of the favorability of those environments for the preservation of fossils.

The most general paleontological information can be obtained from geologic maps, but geologic cross sections (slices of the layer cake to view the third dimension) must be reviewed for each area in question. These usually accompany geologic maps or technical reports. Once it can be determined which formations may be present in the subsurface, the question of paleontological resources must be addressed. Even though a formation is known to contain fossils, they are not usually distributed uniformly throughout the many square miles the formation may cover. If the fossils were part of a bay environment when they died, perhaps a scattered layer of shells will be preserved over large areas. If on the other hand, a whale died in this bay, you might expect to find fossil whalebone only in one small area of less than a few hundred square feet. Other resources to be considered in the determination of paleontological potential are regional geologic reports, site records on file with paleontological repositories and site-specific field surveys.

Paleontologists consider all vertebrate fossils to be of significance. Fossils of other types are considered significant if they represent a new record, new species, an oldest occurring species, the most complete specimen of its kind, a rare species worldwide, or a species helpful in the dating of formations. However, even a previously designated low potential site may yield significant fossils.

Regional Paleontological Setting

The Geologic Map of California, prepared by the California Department of Conservation California Geological Survey, identifies the generalized rock types in the Planning Area is metavolcanic rock. Metavolcanic rock is volcanic rock that shows signs of having experienced metamorphism. The rock was then subjected to high pressure, high temperature or both, for example by burial under younger rocks, causing the original volcanic rock to recrystallize.

According to a records search of the University of California Museum of Paleontology (UCMP) Collections Date, 24 fossils have been found and recorded within Amador County. Over half of them are dated to the Paleogene period. It is the first period of the Cenozoic Era, during which modern flora, apes, large mammals, and eventually humans developed. The majority of fossils found within the Jackson area have been invertebrate in nature.

3.6.2 REGULATORY SETTING

FEDERAL

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act of 1977 (42 USC, 7701 et seq.) requires the establishment and maintenance of an earthquake hazards reduction program by the Federal government.

Executive Order 12699

Signed in January 1990, this executive order of the President implements provisions of the Earthquake Hazards Reduction Act for “federal, federally assisted or federally regulated new building construction” and requires the development and implementation of seismic safety programs by Federal agencies.

International Building Code (IBC)

The purpose of the International Building Code (IBC) is to provide minimum standards to preserve the public peace, health, and safety by regulating the design, construction, quality of materials, certain equipment, location, grading, use, occupancy, and maintenance of all buildings and structures. IBC standards address foundation design, shear wall strength, and other structurally related conditions.

STATE

California Building Standards Code

Title 24 of the California Code of Regulations, known as the California Building Standards Code (CBSC) or simply "Title 24," contains the regulations that govern the construction of buildings in California. The CBSC includes 12 parts: California Building Standards Administrative Code, California Building Code, California Residential Building Code, California Electrical Code, California Mechanical Code, California Plumbing Code, California Energy Code, California Historical Building Code, California Fire Code, California Existing Building Code, California Green Building Standards Code (CAL Green Code), and the California Reference Standards Code. Through the CBSC, the State provides a minimum standard for building design and construction. The CBSC contains specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition. It also regulates grading activities, including drainage and erosion control.

California Health and Safety Code

Section 19100 et seq. of the California Health and Safety Code establishes the State’s regulations for earthquake protection. This section of the code requires structural designs to be capable of resisting likely stresses produced by phenomena such as strong winds and earthquakes.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 sets forth the policies and criteria of the State Mining and Geology Board, which governs the exercise of governments' responsibilities to prohibit the location of developments and structures for human occupancy across the trace of active faults. The policies and criteria are limited to potential hazards resulting from surface faulting or fault creep within Earthquake Fault Zones, as delineated on maps officially issued by the State Geologist. Working definitions include:

- Fault – a fracture or zone of closely associated fractures along which rocks on one side have been displaced with respect to those on the other side;
- Fault Zone – a zone of related faults, which commonly are braided and sub parallel, but may be branching and divergent. A fault zone has a significant width (with respect to the scale at which the fault is being considered, portrayed, or investigated), ranging from a few feet to several miles;
- Sufficiently Active Fault – a fault that has evidence of Holocene surface displacement along one or more of its segments or branches (last 11,000 years); and
- Well-Defined Fault – a fault whose trace is clearly detectable by a trained geologist as a physical feature at or just below the ground surface. The geologist should be able to locate the fault in the field with sufficient precision and confidence to indicate that the required site-specific investigations would meet with some success.

“Sufficiently Active” and “Well Defined” are the two criteria used by the State to determine if a fault should be zoned under the Alquist-Priolo Act.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act, passed in 1990, addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically-induced landslides. Under the Act, seismic hazard zones are to be mapped by the State Geologist to assist local governments in land use planning. The program and actions mandated by the Seismic Hazards Mapping Act closely resemble those of the Alquist-Priolo Earthquake Fault Zoning Act (which addresses only surface fault-rupture hazards) and are outlined below:

The State Geologist is required to delineate the various “seismic hazard zones.”

- Cities and counties, or other local permitting authority, must regulate certain development “projects” within the zones. They must withhold the development permits for a site within a zone until the geologic and soil conditions of the site are investigated and appropriate mitigation measures, if any, are incorporated into development plans.
- The State Mining and Geology Board provides additional regulations, policies, and criteria to guide cities and counties in their implementation of the law. The Board also provides guidelines for preparation of the Seismic Hazard Zone Maps and for evaluating and mitigating seismic hazards.
- Sellers (and their agents) of real property within a mapped hazard zone must disclose that the property lies within such a zone at the time of sale.

Caltrans Seismic Design Criteria

The California Department of Transportation (Caltrans) has Seismic Design Criteria (SDC), which is an encyclopedia of new and currently practiced seismic design and analysis methodologies for the design of new bridges in California. The SDC adopts a performance-based approach specifying minimum levels of structural system performance, component performance, analysis, and design practices for ordinary standard bridges. The SDC has been developed with input from the Caltrans Offices of Structure Design, Earthquake Engineering and Design Support, and Materials and Foundations. Memo 20-1 Seismic Design Methodology (Caltrans 1999) outlines the bridge category and classification, seismic performance criteria, seismic design philosophy and approach, seismic demands and capacities on structural components, and seismic design practices that collectively make up Caltrans' seismic design.

Division of Mines and Geology

The California Division of Mines and Geology (DMG) operates within the Department of Conservation. The DMG is responsible for assisting in the utilization of mineral deposits and the identification of geological hazards.

State Geological Survey

Similar to the DMG, the California Geological Survey is responsible for assisting in the identification and proper utilization of mineral deposits, as well as the identification of fault locations and other geological hazards.

3.6.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on geology and soils if it will:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42;
 - Strong seismic ground shaking;
 - Seismic-related ground failure, including liquefaction; or
 - Landslides.
- Result in substantial soil erosion or the loss of topsoil;
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property;

3.6 GEOLOGY AND SOILS

- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water; or
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

IMPACTS AND MITIGATION MEASURES

Impact 3.6-1: General Plan implementation has the potential to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides (Less than Significant)

There are no known active or potentially active faults, or Alquist-Priolo Earthquake Fault Zones, located within the Planning Area. However, there are numerous faults located in the region. Figure 3.6-2 illustrates the location of these faults. The Planning Area is located approximately 2 miles north of the closest fault (Poorman Gulch fault) in the Bear Mountains Fault zone and approximately 29 miles northwest of the closest fault (Raw Hide East fault) in the Melones Fault zone (California Geological Survey). An underlying hidden fault does pass through the ore body of the Moore Gold Mine at a depth of approximately 1,100 feet below the surface. Rupture of any of these faults, or of an unknown fault in the region, could cause seismic ground shaking. As a result, future development in the City of Jackson may expose people or structures to potential adverse effects associated with a seismic event, including strong ground shaking and seismic-related ground failure.

While there are no known active faults located within the Planning Area, the area could experience considerable ground shaking generated by faults outside Jackson. For example, Jackson could experience an intensity of MM V to VII generated by seismic events. The effect of this intensity level could have structural damage. Additionally, as noted previously, the bedrock in the Jackson area has undergone fracturing, tilting, faulting, and weathering creating areas of instability where there are steep slopes or open cuts. Soil data from the NRCS Web Soil Survey (NRCS 2020) suggests that the potential for liquefaction is low within the Planning Area. This is considered a potentially significant impact, which would be mitigated to a less than significant level through the implementation of the policies and actions listed below.

All projects would be required to comply with the provisions of the CBSC, which requires development projects to: perform geotechnical investigations in accordance with State law, engineer improvements to address potential seismic and ground failure issues and use earthquake-resistant construction techniques to address potential earthquake loads when constructing buildings and improvements. As future development and infrastructure projects are considered by the City, each project will be evaluated for conformance with the CBSC, General Plan, Zoning Ordinance, and other regulations. Subsequent development and infrastructure would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA. In addition to the requirements associated with the CBSC and the Municipal Code, the General Plan includes policies and actions to address potential impacts associated with seismic activity.

The General Plan policies and actions (listed below) require review of development proposals to ensure compliance with California Health and Safety Code Section 19100 et seq. (Earthquake Protection Law), which requires that buildings be designed to resist stresses produced by natural

forces such as earthquakes and wind. All development and construction proposals must be reviewed by the City to ensure conformance with applicable building standards. Development on soils sensitive to seismic activity is only allowed after adequate site analysis, including appropriate siting, design of structure, and foundation integrity. All future projects are subject to CEQA review to address seismic safety issues and provide adequate mitigation for existing and potential hazards identified. With the implementation of the policies and actions in the General Plan, as well as applicable State and City codes, potential impacts associated with a seismic event, including rupture of an earthquake fault, seismic ground shaking, liquefaction, and landslides would be **less than significant**.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

SAFETY ELEMENT POLICIES

SA 1.1: Require development to reduce risks to life and property associated with earthquakes, liquefaction, erosion, landslides, and unstable soil conditions.

SA 1.2: Ensure that all new development and construction is in conformance with applicable building standards related to geologic and seismic safety.

SA 1.3: Require geotechnical investigations to be completed prior to approval of any public safety or other critical facilities, in order to ensure that these facilities are constructed in a way that mitigates site-specific seismic and/or geologic hazards.

SA 1.4: Development in areas subject to unstable soil and/or geologic conditions shall be reviewed by qualified engineers and/or geologists prior to development in order to ensure the safety and stability of all new construction.

SA 1.5: Require an erosion and sediment control plan prepared by a civil engineer, or other professional who is qualified to prepare such a plan, as part of any grading permit application for new development. The erosion and sediment control plan shall delineate measures to appropriately and effectively minimize soil erosion and sedimentation.

SA 1.6: Prevent land subsidence and maintain adequate groundwater supplies.

SAFETY ELEMENT ACTIONS

SA-1a: Require adherence to the requirements of the California Building Code (California Code of Regulations, Title 24) during the plan check review process.

SA-1b: Periodically review the structural integrity of all existing City-owned critical facilities and, if any facilities are found unsatisfactory, take steps to ensure structural integrity and safety.

SA-1c: Continue to maintain and provide an inventory of all natural hazards, including active faults, Alquist-Priolo Special Study Zones, floodplains, hazardous soil conditions, and dam failure inundation areas.

SA-1d: Require the submission of geologic and soils reports for all new developments. The geologic risk areas that are determined from these studies shall have standards established and recommendations shall be incorporated into development.

SA-1e: Monitor withdrawal of groundwater, oil, and gas, maintain land elevation records, and regulate overdraft to prevent subsidence.

SA-1f: As part of any tentative map, review preliminary grading plans, and ensure they are designed to control erosion and prevent sedimentation or damage to off-site properties.

Impact 3.6-2: General Plan implementation has the potential to result in substantial soil erosion or the loss of topsoil (Less than Significant)

The General Plan would allow development and improvement projects that would involve some land clearing, mass grading, and other ground-disturbing activities that could temporarily increase soil erosion rates during and shortly after project construction. Construction-related erosion could result in the loss of a substantial amount of nonrenewable topsoil and could adversely affect water quality in nearby surface waters. This is considered a potentially significant impact, which would be mitigated to a less than significant level through the implementation of the policies and actions listed below.

As noted previously, soil erosion data for the City of Jackson was obtained from the NRCS. As identified by the NRCS web soil survey, the erosion factor K within the City of Jackson varies widely from 0.17 to 0.43, which is considered a low to moderate-high potential for erosion. Furthermore, given the drainage characteristics of the majority of the soils and the nearly level topography of the Planning Area, runoff erosion hazard is considered low.

As future development and infrastructure projects are considered by the City, each project will be evaluated for conformance with the CBSC, General Plan, Zoning Ordinance, and other regulations. In addition to compliance with City standards and policies, the Regional Water Quality Control Board will require a project specific Storm Water Pollution Prevention Plan (SWPPP) to be prepared for each project that disturbs an area of one acre or larger. The SWPPPs will include project specific best management measures that are designed to control drainage and erosion. Subsequent development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA.

The General Plan includes Policies such as SA 1.5 that requires an erosion and sediment control plan, as part of any grading permit application for new development. The erosion and sediment control plans shall delineate measures to appropriately and effectively minimize soil erosion and sedimentation. Additionally, Policy SA 2.6 ensures that any development activity that requires a grading permit does not impact adjacent properties, local creeks, and storm drainage systems by designing and building the site to drain properly to minimize drainage issues and erosion. The General Plan includes a range of policies and actions related to best management practices, discharge requirements, and minimizing substantial soil erosion or the loss of topsoils. With the implementation of the policies and actions in the General Plan, as well as applicable State and City

requirements, potential impacts associated with erosion and loss of topsoil would be **less than significant**.

GENERAL PLAN POLICIES AND ACTION THAT MINIMIZE POTENTIAL IMPACTS

LAND USE ELEMENT POLICIES

LU 2.1: Control land grading to minimize the potential for erosion, landsliding, and other forms of land failure, as well as to limit the potential negative aesthetic impact of excessive modification of natural landforms.

SAFETY ELEMENT POLICIES

SA 1.1: Require development to reduce risks to life and property associated with earthquakes, liquefaction, erosion, landslides, and unstable soil conditions.

SA 1.2: Ensure that all new development and construction is in conformance with applicable building standards related to geologic and seismic safety.

SA 1.3: Require geotechnical investigations to be completed prior to approval of any public safety or other critical facilities, in order to ensure that these facilities are constructed in a way that mitigates site-specific seismic and/or geologic hazards.

SA 1.4: Development in areas subject to unstable soil and/or geologic conditions shall be reviewed by qualified engineers and/or geologists prior to development in order to ensure the safety and stability of all new construction.

SA 1.5: Require an erosion and sediment control plan prepared by a civil engineer, or other professional who is qualified to prepare such a plan, as part of any grading permit application for new development. The erosion and sediment control plan shall delineate measures to appropriately and effectively minimize soil erosion and sedimentation.

SA 2.2: Require all new development projects to demonstrate how stormwater runoff will be detained or retained on-site, treated, and/or conveyed to the nearest drainage facility as part of the development review process. Project applicants shall demonstrate that project implementation would not result in increases in the peak flow runoff to adjacent lands or drainage facilities that would exceed the design capacity of the drainage facility or result in an increased potential for off-site flooding.

SA 2.5: Encourage flood control measures that respect natural drainage features, vegetation, and natural waterways, while still providing for adequate flood control and protection.

SA 2.6: Ensure that any development activity that requires a grading permit does not impact adjacent properties, local creeks, and storm drainage systems by designing and building the site to drain properly to minimize drainage issues and erosion.

LAND USE ELEMENT ACTIONS

LU-2c: Maintain and revise, as necessary, a grading ordinance which protects the natural topography and directs that all roads and structures be designed, built, and landscaped to control erosion and other pollutants during and after construction. This shall include the use of Best Management Practices (BMPs) that demonstrate the ability to treat storm water drainage consistent with Regional Water Quality Control Board (RWQCB), state, and federal requirements.

CONSERVATION AND OPEN SPACE ELEMENT ACTIONS

COS-7a: Continue to identify stormwater and drainage facilities in need of repair and address these needs through capital improvement planning. As feasible, seek to incorporate BMPs and Low Impact Development (LID) techniques into repairs and upgrades that promote water quality objectives.

SAFETY ELEMENT ACTIONS

SA-1c: Continue to maintain and provide an inventory of all natural hazards, including active faults, Alquist-Priolo Special Study Zones, floodplains, hazardous soil conditions, and dam failure inundation areas.

SA-1d: Require the submission of geologic and soils reports for all new developments. The geologic risk areas that are determined from these studies shall have standards established and recommendations shall be incorporated into development.

SA-1e: Monitor withdrawal of groundwater, oil, and gas, maintain land elevation records, and regulate overdraft to prevent subsidence.

SA-1f: As part of any tentative map, review preliminary grading plans, and ensure they are designed to control erosion and prevent sedimentation or damage to off-site properties.

SA-2a: As part of the development review process, require new development projects to prepare hydraulic and storm drainage studies as necessary to define the net increase in stormwater run-off resulting from construction and require mitigation to reduce impacts. Drainage and grading plans shall identify BMP protections and include standards established and recommended by the City that shall be incorporated into development.

Impact 3.6-3: General Plan implementation has the potential to result in development located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse (Less than Significant)

No specific development projects have been proposed or would be approved through adoption of the General Plan, however, future development allowed under the General Plan could result in the exposure of people and structures to conditions that have the potential for adverse effects

3.6 GEOLOGY AND SOILS

associated with ground instability or failure. The potential for soils and geologic conditions in the Jackson Planning Area to have the potential for landslides, lateral spreading, subsidence, liquefaction, or collapse are discussed below:

LANDSLIDES

The potential for landslides within the planning area is generally low, however the bedrock in the Jackson area has undergone fracturing, tilting, faulting, and weathering creating areas of instability where there are steep slopes or open cuts. The proposed General Plan includes policies and actions in order to reduce impacts associated with landslides. For example, Action SA-1d requires the submission of geologic and soils reports for all new developments. Geologic risk areas that are determined from these studies shall have standards established and recommendations shall be incorporated into development.

LATERAL SPREADING

Lateral spreading generally is a phenomenon where blocks of intact, non-liquefied soil move down slope on a liquefied substrate of large areal extent. The potential for lateral spreading is present where open banks and unsupported cut slopes provide a free face (unsupported vertical slope face). Ground shaking, especially when inducing liquefaction, may cause lateral spreading toward unsupported slopes. The potential for lateral spreading is low within the Planning Area.

SUBSIDENCE

Land subsidence is the gradual settling or sinking of an area with little or no horizontal motion due to changes taking place underground. It is a natural process, although it can also occur (and is greatly accelerated) as a result of human activities. Common causes of land subsidence from human activity include: pumping water, oil, and gas from underground reservoirs; dissolution of limestone aquifers (sinkholes); collapse of underground mines; drainage of organic soils; and initial wetting of dry soils. Subsidence has not been identified as an issue in the Planning Area as an issue in the Planning Area.

LIQUEFACTION

Liquefaction typically requires a significant sudden decrease of shearing resistance in cohesion-less soils and a sudden increase in water pressure, which is typically associated with an earthquake of high magnitude. The potential for liquefaction is highest when groundwater levels are high, and loose, fine, sandy soils occur at depths of less than 50 feet. Soil data from the NRCS Web Soil Survey (NRCS 2020) suggests that the potential for liquefaction is low within the Planning Area. The proposed General Plan includes policies and actions in order to reduce impacts associated with liquefaction. For example, Action SA-1d requires the submission of geologic and soils reports for all new developments. Geologic risk areas that are determined from these studies shall have standards established and recommendations shall be incorporated into development. Collapse

Collapsible soils undergo a rearrangement of their grains and a loss of cementation, resulting in substantial and rapid settlement under relatively low loads. Collapsible soils occur predominantly

at the base of mountain ranges, where Holocene-age alluvial fan and wash sediments have been deposited during rapid run-off events. Differential settlement of structures typically occurs when heavily irrigated landscape areas are near a building foundation. Examples of common problems associated with collapsible soils include tilting floors, cracking or separation in structures, sagging floors, and nonfunctional windows and doors. Collapsible soils have not been identified in the Planning Area as an issue. However, in areas subject to potential liquefaction, the potential for liquefaction induced settlement is present.

CONCLUSION

As future development and infrastructure projects are considered by the City of Jackson, each project will be evaluated for conformance with the CBSC, the General Plan, Zoning Ordinance, and other regulations. Subsequent development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA. Future development and improvement projects would be required to have a specific geotechnical study prepared and incorporated into the improvement design, consistent with the requirements of the State and City codes. In addition to the requirements associated with the CBSC and the Municipal Code, the General Plan includes policies and actions to ensure that development projects address potential geologic hazards, at-risk buildings and infrastructure is evaluated for potential risks, and site-specific studies are completed for area subject to liquefaction. With the implementation of the policies and actions in the General Plan, as well as applicable State and City codes, potential impacts associated with ground instability or failure would be **less than significant**.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

SAFETY ELEMENT POLICIES

SA 1.1: Require development to reduce risks to life and property associated with earthquakes, liquefaction, erosion, landslides, and unstable soil conditions.

SA 1.2: Ensure that all new development and construction is in conformance with applicable building standards related to geologic and seismic safety.

SA 1.3: Require geotechnical investigations to be completed prior to approval of any public safety or other critical facilities, in order to ensure that these facilities are constructed in a way that mitigates site-specific seismic and/or geologic hazards.

SA 1.4: Development in areas subject to unstable soil and/or geologic conditions shall be reviewed by qualified engineers and/or geologists prior to development in order to ensure the safety and stability of all new construction.

SA 1.5: Require an erosion and sediment control plan prepared by a civil engineer, or other professional who is qualified to prepare such a plan, as part of any grading permit application for new development. The erosion and sediment control plan shall delineate measures to appropriately and effectively minimize soil erosion and sedimentation.

SA 1.6: Prevent land subsidence and maintain adequate groundwater supplies.

SAFETY ELEMENT ACTIONS

SA-1a: Require adherence to the requirements of the California Building Code (California Code of Regulations, Title 24) during the plan check review process.

SA-1b: Periodically review the structural integrity of all existing City-owned critical facilities and, if any facilities are found unsatisfactory, take steps to ensure structural integrity and safety.

SA-1c: Continue to maintain and provide an inventory of all natural hazards, including active faults, Alquist-Priolo Special Study Zones, floodplains, hazardous soil conditions, and dam failure inundation areas.

SA-1d: Require the submission of geologic and soils reports for all new developments. The geologic risk areas that are determined from these studies shall have standards established and recommendations shall be incorporated into development.

SA-1e: Monitor withdrawal of groundwater, oil, and gas, maintain land elevation records, and regulate overdraft to prevent subsidence.

SA-1f: As part of any tentative map, review preliminary grading plans, and ensure they are designed to control erosion and prevent sedimentation or damage to off-site properties.

Impact 3.6-4: General Plan implementation has the potential to result in development on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property (Less than Significant)

Expansive soil properties can cause substantial damage to building foundations, piles, pavements, underground utilities, and/or other improvements. Structural damage, such as warping and cracking of improvements, and rupture of underground utility lines, may occur if the expansive potential of soils is not considered during the design and construction of all improvements.

Linear extensibility is a method for measuring expansion potential. The expansion potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

The linear extensibility of the soils within the Planning Area is generally low. Figure 3.6-4 illustrates the shrink-swell potential of soils in the Planning Area.

As future development and infrastructure projects are considered by the City, each project will be evaluated for conformance with the CBSC, General Plan, Zoning Ordinance, and other applicable regulations. Subsequent development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA.

The Safety Element of the General Plan establishes policies that are designed to protect from geologic hazards, including expansive soils. Consistency with the General Plan policies will require identification of geologic hazards and risk inventory of existing at-risk buildings and infrastructure. As required by the CBSC, a site-specific geotechnical investigation will identify the potential for damage related to expansive soils and non-uniformly compacted fill and engineered fill. If a risk is identified, design criteria and specification options may include removal of the problematic soils, and replacement, as needed, with properly conditioned and compacted fill material that is designed to withstand the forces exerted during the expected shrink-swell cycles and settlements.

Design criteria and specifications set forth in the design-level geotechnical investigation will ensure impacts from problematic soils are minimized. There are no additional significant adverse environmental impacts, apart from those disclosed in the relevant chapters of this Draft EIR, that are anticipated to occur associated with expansive soils. Therefore, this impact is considered **less than significant**.

GENERAL PLAN POLICY AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

SAFETY ELEMENT POLICIES

SA 1.1: Require development to reduce risks to life and property associated with earthquakes, liquefaction, erosion, landslides, and unstable soil conditions.

SA 1.2: Ensure that all new development and construction is in conformance with applicable building standards related to geologic and seismic safety.

SA 1.3: Require geotechnical investigations to be completed prior to approval of any public safety or other critical facilities, in order to ensure that these facilities are constructed in a way that mitigates site-specific seismic and/or geologic hazards.

SA 1.4: Development in areas subject to unstable soil and/or geologic conditions shall be reviewed by qualified engineers and/or geologists prior to development in order to ensure the safety and stability of all new construction.

SA 1.5: Require an erosion and sediment control plan prepared by a civil engineer, or other professional who is qualified to prepare such a plan, as part of any grading permit application for new development. The erosion and sediment control plan shall delineate measures to appropriately and effectively minimize soil erosion and sedimentation.

SA 1.6: Prevent land subsidence and maintain adequate groundwater supplies.

SAFETY ELEMENT ACTIONS

SA-1a: Require adherence to the requirements of the California Building Code (California Code of Regulations, Title 24) during the plan check review process.

SA-1b: Periodically review the structural integrity of all existing City-owned critical facilities and, if any facilities are found unsatisfactory, take steps to ensure structural integrity and safety.

SA-1c: Continue to maintain and provide an inventory of all natural hazards, including active faults, Alquist-Priolo Special Study Zones, floodplains, hazardous soil conditions, and dam failure inundation areas.

SA-1d: Require the submission of geologic and soils reports for all new developments. The geologic risk areas that are determined from these studies shall have standards established and recommendations shall be incorporated into development.

SA-1e: Monitor withdrawal of groundwater, oil, and gas, maintain land elevation records, and regulate overdraft to prevent subsidence.

SA-1f: As part of any tentative map, review preliminary grading plans, and ensure they are designed to control erosion and prevent sedimentation or damage to off-site properties.

Impact 3.6-5: General Plan implementation does not have the potential to have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water (Less than Significant)

The wastewater generated by the City of Jackson is treated and disposed of at the City of Jackson wastewater treatment plant (WWTP). The wastewater collection system consists of approximately 21 miles of gravity sewer lines and one mile of pressure sewer. The collection system consists of three areas, with the westernmost portion of the City reliant on lift stations in the vicinity of Argonaut High School, and the remainder of the system gravity-fed. Flows from the northwest portion of the City are conveyed through an eight-inch line. A 16-inch trunk carries flows from the remainder of the City to the WWTP.

Title 13 Article II Chapter 13.20 of the Jackson Municipal Code requires sewer extension and connection to sewer facilities directly within and outside of the city for each person, firm, individual business, or corporation using the city sewer system. It also includes standards for discharge, services fees, permitting requirements, and technical specifications for sewage connections.

On-site systems, commonly referred to as septic systems, are useful for handling the wastewater disposal needs of individual dwellings or commercial establishments for which connection to community facilities is not feasible. Projects developed within the city under the proposed General Plan would be anticipated to tie into the City of Jackson's existing wastewater system and are not anticipated to use alternative on-site wastewater treatment. Within the County, the Amador County Environmental Health Department is responsible for protecting the public and the environment from potential adverse health and environmental impacts associated with on-site sewage disposal systems. Septic system designs and proposals are reviewed by the Environmental Health Department and the systems are inspected at several different stages in the construction or repair process, ensuring conformance with applicable county codes. Permits are required for construction of a new septic system, various repairs, and installation of new tanks. New

wastewater generated from new development with the city allowed under the General Plan will be collected and transmitted to the WWTP for treatment.

As described previously, it is anticipated that there will be no septic tanks or alternative waste water disposal systems utilized for new development within the city planned under the General Plan, and any development within the county that utilizes onsite disposal would undergo review and approval under a County Environmental Health Department permit. Therefore, this impact is considered **less than significant**.

Impact 3.6-6: General Plan implementation has the potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (Less than Significant)

DEFINITION OF SIGNIFICANCE FOR PALEONTOLOGICAL RESOURCES

Only qualified, trained paleontologists with specific expertise in the type of fossils being evaluated can determine the scientific significance of paleontological resources. Fossils are considered to be significant if one or more of the following criteria apply:

1. The fossils provide information on the evolutionary relationships and developmental trends among organisms, living or extinct;
2. The fossils provide data useful in determining the age(s) of the rock unit or sedimentary stratum, including data important in determining the depositional history of the region and the timing of geologic events therein;
3. The fossils provide data regarding the development of biological communities or interaction between paleobotanical and paleozoological biotas;
4. The fossils demonstrate unusual or spectacular circumstances in the history of life;
5. The fossils are in short supply and/or in danger of being depleted or destroyed by the elements, vandalism, or commercial exploitation, and are not found in other geographic locations.
6. All identifiable vertebrate fossils are considered significant due to the rarity of their preservation.

As so defined, significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, uncommon, or diagnostically important. Significant fossils can include remains of large to very small aquatic and terrestrial vertebrates or remains of plants and invertebrate animals previously not represented in certain portions of the stratigraphy. Assemblages of fossils that might aid stratigraphic correlation, particularly those offering data for the interpretation of tectonic events, geomorphologic evolution, and paleoclimatology are also critically important.

PALEONTOLOGICAL SENSITIVITY FOR PLANNING AREA

The sensitivity of a given area or body of sediment with respect to paleontological resources is a function of both the potential for the existence of fossils and the predicted significance of any fossils which may be found there. The primary consideration in the determination of

paleontological sensitivity of a given area, body of sediment, or rock formation is its potential to include fossils. Information that can contribute to assessment of this potential includes: 1) direct observation of fossils within the project area; 2) the existence of known fossil localities or documented absence of fossils in the same geologic unit (e.g., “Formation” or one of its subunits); 3) descriptive nature of sedimentary deposits (such as size of included particles or clasts, color, and bedding type) in the area of interest compared with those of similar deposits known elsewhere to favor or disfavor inclusion of fossils; and 4) interpretation of sediment details and known geologic history of the sedimentary body of interest in terms of the ancient environments in which they were deposited, followed by assessment of the favorability of those environments for the preservation of fossils.

Paleontologists consider all vertebrate fossils to be of significance. Fossils of other types are considered significant if they represent a new record, new species, an oldest occurring species, the most complete specimen of its kind, a rare species worldwide, or a species helpful in the dating of formations. However, even a previously designated low potential site may yield significant fossils. The Planning Area is in a region where fossils and paleontological resources have been identified.

CONCLUSION

It is possible that undiscovered paleontological resources could be encountered during ground-disturbing activities. Damage to or destruction of a paleontological resource would be considered a potentially significant impact under local, state, or federal criteria. Implementation of the proposed General Plan policies and actions (listed below) would ensure steps would be taken to reduce impacts to paleontological resources in the event that they are discovered during construction. Implementation of these policies and actions would ensure impacts to paleontological resources are **less than significant**.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

CONSERVATION AND OPEN SPACE ELEMENT POLICIES

COS 4.1: Recognize significant historical resources and use these resources to promote a sense of place and history in Jackson. Seek to incorporate reminders of Jackson’s culture in the built and natural environment through adaptive reuse, signage, markers, and other reminders of Jackson’s heritage.

COS 4.4: Protect areas containing significant historical, archaeological, and paleontological resources, as defined by the California Public Resources Code.

CONSERVATION AND OPEN SPACE ELEMENT ACTIONS

COS-4b: Continue to assess development proposals for potential impacts to sensitive historical, archaeological, and paleontological resources pursuant to the California Environmental Quality Act (CEQA).

COS-4f: Require all development, infrastructure, and other ground-disturbing projects to comply with the City’s Archeological/Cultural Resources Ordinance in the event of an inadvertent discovery of cultural resources or human remains.

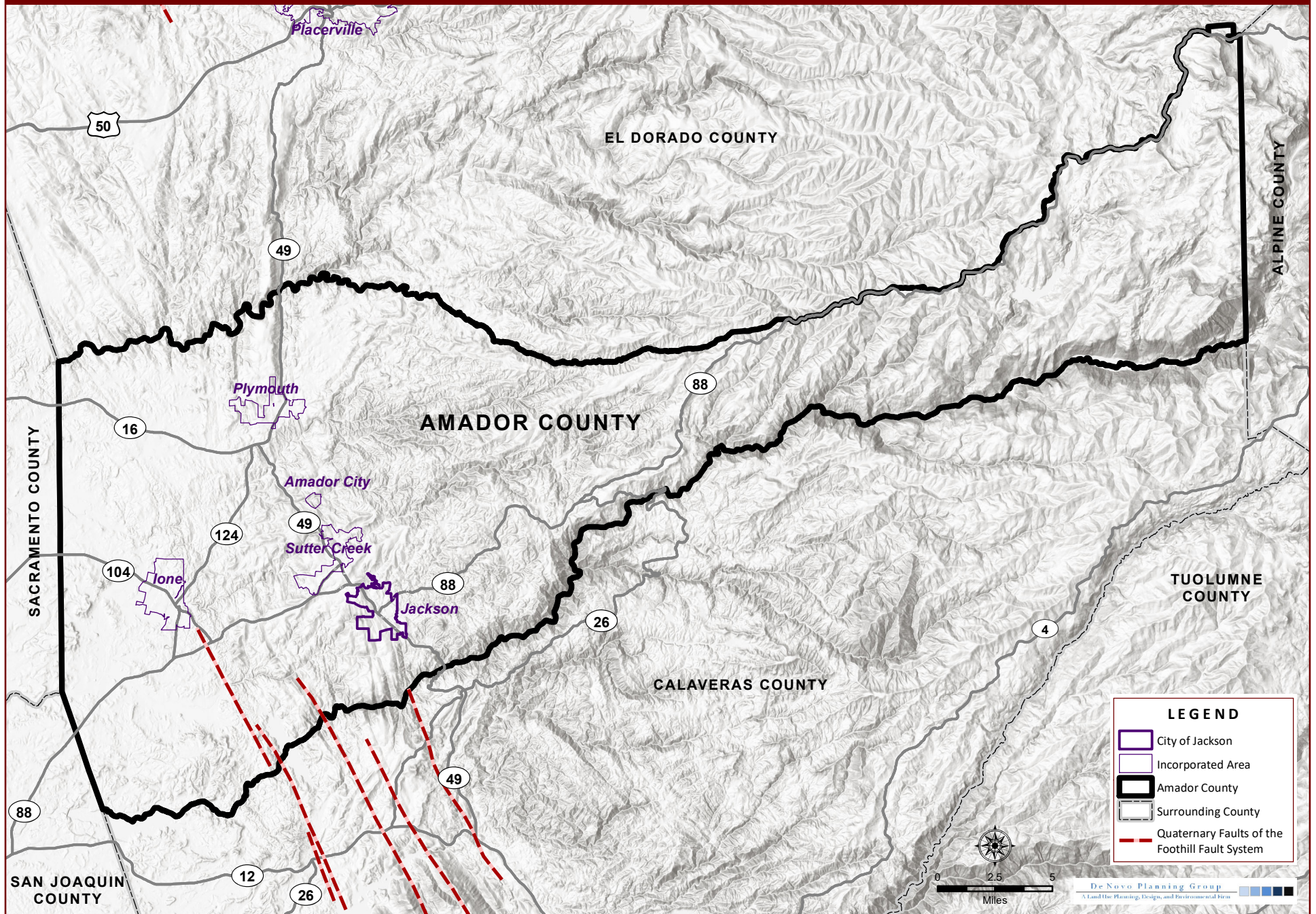
Figure 3.6-1. California Bioregions



Sources: INACC 2004; California State Geoportal; ArcGIS Online World Elevation/Terrain Image Service. Map date: April 12, 2021.

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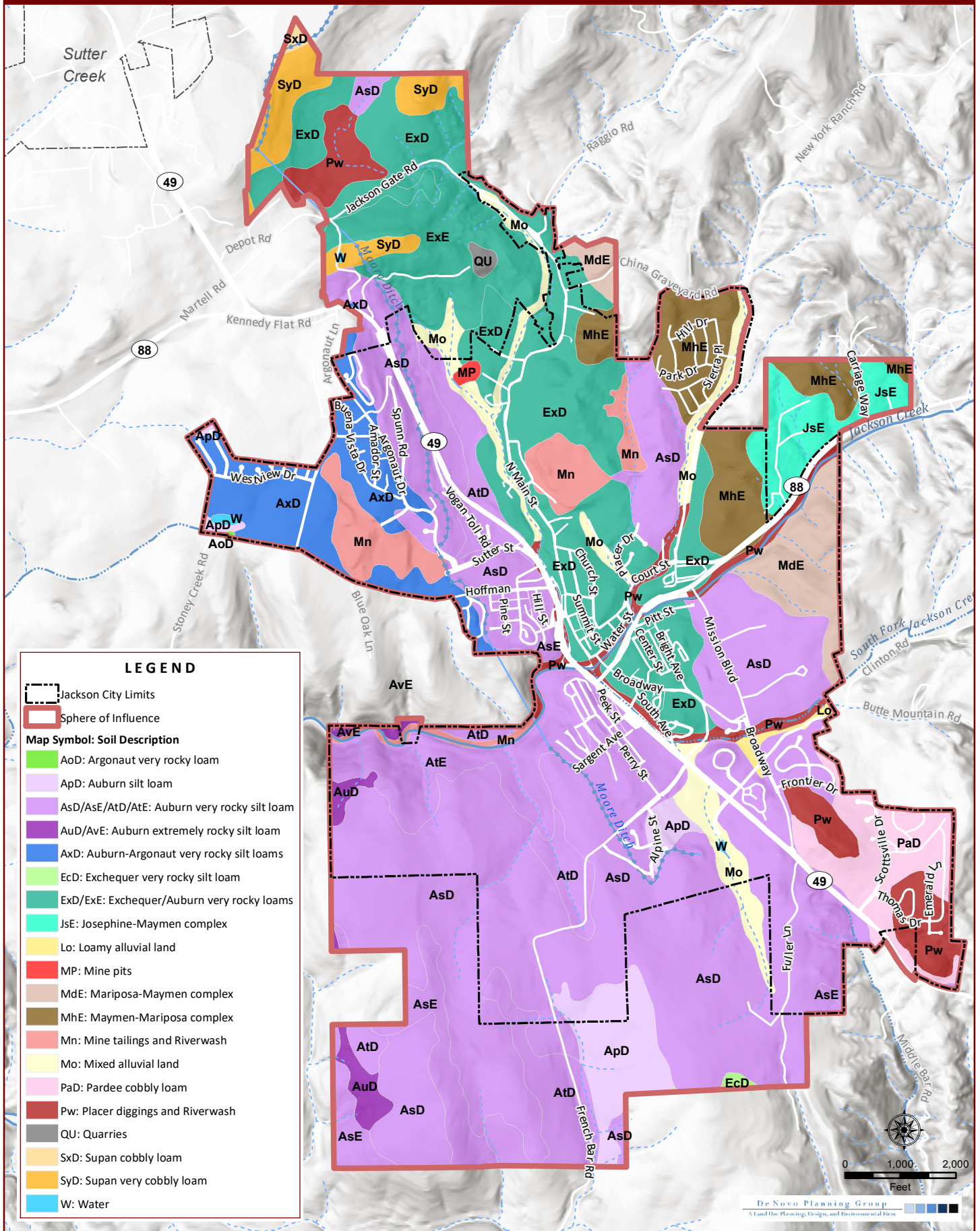
Figure 3.6-2. Earthquake Faults



Sources: USGS Quaternary Faults database; California State Geoportal; ArcGIS Online World Elevation/Terrain Image Service. Map date: April 14, 2021.

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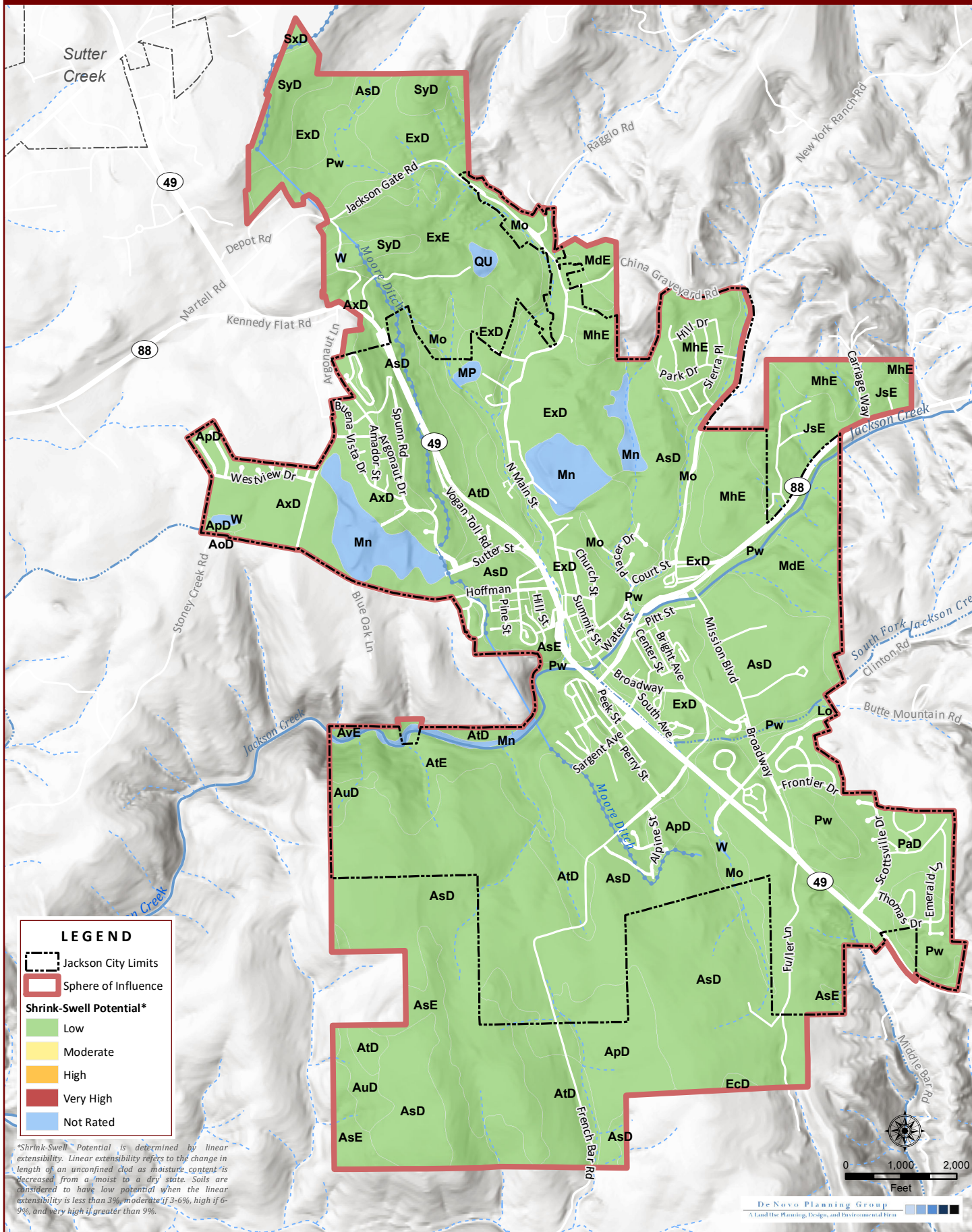
Figure 3.6-3 Soils Map



Sources: NRCS Web Soil Survey, Amador Area, California (CA628); City of Jackson; ACTG, USGS NHD; ArcGIS Online World Elevation/Terrain Image Service. Map date: April 14, 2021.

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Figure 3.6-4. Shrink-Swell Potential of Soils



Sources: NRCS Web Soil Survey, Amador Area, California (CA628); City of Jackson; ACTG; USGS NHD; ArcGIS Online World Elevation/Terrain Image Service. Map date: April 14, 2021.

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This section discusses regional greenhouse gas (GHG) emissions, climate change, and energy conservation impacts that could result from implementation of the General Plan. This section provides a background discussion of greenhouse gases and climate change linkages and effects of global climate change. This section also provides background discussion on energy use in the City of Jackson, Amador County, and the region. This section is organized with an existing setting, regulatory setting, approach/methodology, and impact analysis.

The analysis and discussion of the GHG, climate change, and energy conservation impacts in this section focuses on the General Plan's consistency with local, regional, statewide, and federal climate change and energy conservation planning efforts and discusses the context of these planning efforts as they relate to the proposed project. Disclosures of the estimated energy usage and greenhouse gas emissions due to implementation of the General Plan are provided.

Emissions of GHGs have the potential to adversely affect the environment in a cumulative context. The emissions from a single project will not cause global climate change; however, GHG emissions from multiple projects throughout the world could result in a cumulative impact with respect to global climate change. Therefore, the analysis of GHGs and climate change presented in this section is presented in terms of the proposed project's contribution to cumulative impacts and potential to result in cumulatively considerable impacts related to GHGs and climate change.

No comments were received during the NOP comment period regarding this environmental topic.

3.7.1 ENVIRONMENTAL SETTING

GREENHOUSE GASES AND CLIMATE CHANGE LINKAGES

Various gases in the Earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the Earth's surface temperature. Solar radiation enters Earth's atmosphere from space, and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation.

Naturally occurring GHGs include water vapor (H₂O), carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and ozone (O₃). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also GHGs, but they are, for the most part, solely a product of industrial activities. Although the direct GHGs CO₂, CH₄, and N₂O occur naturally in the atmosphere, human activities have changed their atmospheric concentrations. From the pre-industrial era (i.e., ending about 1750) to 2011, concentrations of these three GHGs have increased globally by 40, 150, and 20 percent, respectively (IPCC, 2013).

GHGs, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO₂), methane (CH₄), ozone (O₃), water vapor, nitrous oxide (N₂O), and chlorofluorocarbons (CFCs).

3.7 GREENHOUSE GASES, CLIMATE CHANGE, AND ENERGY

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. In California, the transportation sector is the largest emitter of GHGs, followed by the industrial and electricity generation sectors (California Energy Commission, 2020).

As the name implies, global climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern, respectively. California produced 440 million gross metric tons of carbon dioxide equivalents (MMTCO₂e) in 2016 (California Air Resources Board, 2018a).

Carbon dioxide equivalents are a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential of a GHG, is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted.

Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2017, accounting for 41% of total GHG emissions in the state. This category was followed by the industrial sector (24%), the electricity generation sector (including both in-state and out of-state sources) (15%), the agriculture sector (8%), the residential energy consumption sector (7%), and the commercial energy consumption sector (5%) (California Air Resources Board, 2020c).

EFFECTS OF GLOBAL CLIMATE CHANGE

The effects of increasing global temperature are far-reaching and extremely difficult to quantify. The scientific community continues to study the effects of global climate change. In general, increases in the ambient global temperature as a result of increased GHGs are anticipated to result in rising sea levels, which could threaten coastal areas through accelerated coastal erosion, threats to levees and inland water systems and disruption to coastal wetlands and habitat.

If the temperature of the ocean warms, it is anticipated that the winter snow season would be shortened. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the State. The snowpack portion of the supply could potentially decline by 50% to 75% by the end of the 21st century (National Resources Defense Council, 2014). This phenomenon could lead to significant challenges securing an adequate water supply for a growing state population. Further, the increased ocean temperature could result in increased moisture flux into the State; however, since this would likely increasingly come in the form of rain rather than snow in the high elevations, increased precipitation could lead to increased potential and severity of flood events, placing more pressure on California's levee/flood control system.

Sea level has risen approximately seven inches during the last century and it is predicted to rise an additional 22 to 35 inches by 2100, depending on the future GHG emissions levels (California

Environmental Protection Agency, 2010). If this occurs, resultant effects could include increased coastal flooding, saltwater intrusion and disruption of wetlands. As the existing climate throughout California changes over time, mass migration of species, or failure of species to migrate in time to adapt to the perturbations in climate, could also result. Under the emissions scenarios of the Climate Scenarios report (California Environmental Protection Agency, 2010), the impacts of global warming in California are anticipated to include, but are not limited to, the following.

Public Health

Higher temperatures are expected to increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation are projected to increase from 25% to 35% under the lower warming range and to 75% to 85% under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances depending on wind conditions. The Climate Scenarios report indicates that large wildfires could become up to 55% more frequent if GHG emissions are not significantly reduced.

In addition, under the higher warming scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures will increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

Water Resources

A vast network of man-made reservoirs and aqueducts capture and transport water throughout the State from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snow pack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snow pack, increasing the risk of summer water shortages.

The State's water supplies are also at risk from rising sea levels. An influx of saltwater would degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta, a major State fresh water supply. Global warming is also projected to seriously affect agricultural areas, with California farmers projected to lose as much as 25% of the water supply they need; decrease the potential for hydropower production within the State (although the effects on hydropower are uncertain); and seriously harm winter tourism. Under the lower warming range, the snow dependent winter recreational season at lower elevations could be reduced by as much as one month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing, snowboarding, and other snow dependent recreational activities.

If GHG emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snow pack by as much as 70% to 90%. Under the lower warming scenario, snow pack losses are expected to be only half as large as those expected if temperatures were to rise to the higher warming range. How much snow pack will be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snow pack would pose challenges to water managers, hamper hydropower generation, and nearly eliminate all skiing and other snow-related recreational activities.

Agriculture

Increased GHG emissions are expected to cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. Although higher carbon dioxide levels can stimulate plant production and increase plant water-use efficiency, California's farmers will face greater water demand for crops and a less reliable water supply as temperatures rise.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures are likely to worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits and nuts, and milk.

Crop growth and development will be affected, as will the intensity and frequency of pest and disease outbreaks. Rising temperatures will likely aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

In addition, continued global warming will likely shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion is expected in many species while range contractions are less likely in rapidly evolving species with significant populations already established. Should range contractions occur, it is likely that new or different weed species will fill the emerging gaps. Continued global warming is also likely to alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

Forests and Landscapes

Global warming is expected to alter the distribution and character of natural vegetation thereby resulting in a possible increased risk of large of wildfires. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55%, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the State. For example, if precipitation increases as temperatures rise, wildfires in southern California are expected to increase by approximately 30% toward the end of the century. In contrast, precipitation decreases could increase wildfires in northern California by up to 90%.

Moreover, continued global warming will alter natural ecosystems and biological diversity within the State. For example, alpine and sub-alpine ecosystems are expected to decline by as much as 60% to 80% by the end of the century as a result of increasing temperatures. The productivity of the State's forests is also expected to decrease as a result of global warming.

Rising Sea Levels

Rising sea levels, more intense coastal storms, and warmer water temperatures will increasingly threaten the State's coastal regions. Under the higher warming scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.

ENERGY CONSUMPTION

Energy in California is consumed from a wide variety of sources. Fossil fuels (including gasoline and diesel fuel, natural gas, and energy used to generate electricity) are most widely used form of energy in the State. However, renewable source of energy (such as solar and wind) are growing in proportion to California's overall energy mix. A large driver of renewable sources of energy in California is the State's current Renewable Portfolio Standard (RPS), which required the State to derive at least 33% of electricity generated from renewable resources by 2020, and 50 percent by 2030.

In 2018, California's energy consumption was second-highest among the states, but its per capita energy consumption was the fourth-lowest due in part to its mild climate and its energy efficiency programs. In 2019, California was the nation's top producer of electricity from solar, geothermal, and biomass energy, and the state was second in the nation in conventional hydroelectric power generation. In addition, California was the fourth-largest electricity producer in the nation.

The consumption of nonrenewable energy (primarily gasoline and diesel fuel) associated with the operation of passenger, public transit, and commercial vehicles results in GHG emissions that ultimately result in global climate change. Other fuels such as natural gas, ethanol, and electricity (unless derived from solar, wind, nuclear, or other energy sources that do not produce carbon emissions) also result in GHG emissions and contribute to global climate change.

Electricity Consumption

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. In 2016, more than one-fourth of the electricity supply comes from facilities outside of the State. Much of the power delivered to California from states in the Pacific Northwest was generated by wind. States in the Southwest delivered power generated at coal-fired power plants, at natural gas-fired power plants, and from nuclear generating stations (U.S. EIA, 2020a). In 2016, approximately 50 percent of California's utility-scale net electricity generation was fueled by natural gas. In addition, about 25 percent of the State's utility-scale net electricity generation came from non-hydroelectric renewable technologies, such as solar, wind, geothermal, and biomass. Another 14 percent of the State's utility-scale net

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electricity generation came from hydroelectric generation, and nuclear energy powered an additional 11 percent. The amount of electricity generated from coal negligible (approximately 0.2 percent) (U.S. EIA, 2020a). The percentage of renewable resources as a proportion of California's overall energy portfolio is increasing over time, as directed the State's Renewable Portfolio Standard (RPS).

According to the California Energy Commission (CEC), total statewide electricity consumption increased from 166,979 gigawatt-hours (GWh) in 1980 to 228,038 GWh in 1990, which is an estimated annual growth rate of 3.66 percent. The statewide electricity consumption in 1997 was 246,225 GWh, reflecting an annual growth rate of 1.14 percent between 1990 and 1997 (U.S. EIA, 2020b). Statewide consumption was 274,985 GWh in 2010, an annual growth rate of 0.9 percent between 1997 and 2010. In 2019, electricity consumption in Amador County was 362 GWh (California Energy Commission, 2022).

Higher temperatures will increase annual electricity demand for homes, driven mainly by increased use of air conditioning. High demand is projected in inland regions, and more moderate increases are projected in cooler coastal areas. However, in California, the increased annual residential energy demand for electricity is expected to be offset by reduced use of natural gas for space heating. Increases in peak hourly demand during the hot months of the year could be more pronounced than changes in annual demand. This is a critical finding for California's electric system, because generating capacity must match peak electricity demand.

Oil

The primary energy source for the United States is oil, which is refined to produce fuels like gasoline, diesel, and jet fuel. Oil is a finite, nonrenewable energy source. World consumption of petroleum products has grown steadily in the last several decades. As of 2016, world consumption of oil had reached 96 million barrels per day. The United States, with approximately five percent of the world's population, accounts for approximately 19 percent of world oil consumption, or approximately 18.6 million barrels per day (U.S. EIA, 2020c). The transportation sector relies heavily on oil. In California, petroleum-based fuels currently provide approximately 96 percent of the State's transportation energy needs.

California was the seventh-largest producer of crude oil among the 50 states in 2019, and, as of January 2020, it ranked third in oil refining capacity. Foreign suppliers, led by Saudi Arabia, Iraq, Ecuador, and Colombia, provided more than half of the crude oil refined in California in 2019. California is the largest consumer of both jet fuel and motor gasoline among the 50 states and accounted for 17% of the nation's jet fuel consumption and 11% of motor gasoline consumption in 2019. The state is the second-largest consumer of all petroleum products combined, accounting for 10% of the U.S. total.

Natural Gas/Propane

The State produces approximately 12 percent of its natural gas, while obtaining 22 percent from Canada and 65 percent from the Rockies and the Southwest (California Energy Commission, 2012). In 2006, California produced 325.6 billion cubic feet of natural gas (California Energy Commission,

2012). PG&E is the largest publicly-owned utility in California and provides natural gas for residential, industrial, and agency consumers within the Amador County area, including the City of Jackson. In 2018, natural gas consumption in Amador County was 8 million therms (California Energy Commission, 2022).

3.7.2 REGULATORY SETTING

FEDERAL

Clean Air Act

The Federal Clean Air Act (CAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The CAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: NAAQS for criteria air pollutants, hazardous air pollutant standards, State attainment plans, motor National Ambient Air Quality Standards (NAAQS) vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The EPA is responsible for administering the CAA. The CAA requires the EPA to set NAAQS for several problem air pollutants based on human health and welfare criteria. Two types of NAAQS were established: primary standards, which protect public health, and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

On April 2, 2007, in the court case of *Massachusetts et al. vs. the USEPA et al.* (549 U.S. 497), the U.S. Supreme Court found that GHGs are air pollutants covered by the federal Clean Air Act (42 USC Sections 7401-7671q). The Supreme Court held that the Administrator of the United States Environmental Protection Agency must determine whether or not emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the Administrator is required to follow the language of Section 202(a) of the Clean Air Act. On December 7, 2009, the Administrator signed two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, this action was a prerequisite for implementing GHG emission standards for vehicles. In collaboration with the National Highway Traffic Safety Administration (NHTSA) and CARB, the

USEPA developed emission standards for light-duty vehicles (2012-2025 model years), and heavy-duty vehicles (2014-2027 model years).

Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the U.S. would meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the Act, the National Highway Traffic and Safety Administration, which is part of the U.S. Department of Transportation (USDOT), is responsible for establishing additional vehicle standards and for revising existing standards.

Since 1990, the fuel economy standard for new passenger cars has been 27.5 mpg. Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 mpg. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel economy standards is determined on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the U.S. The Corporate Average Fuel Economy (CAFE) program, which is administered by the EPA, was created to determine vehicle manufacturers' compliance with the fuel economy standards. The EPA calculates a CAFE value for each manufacturer based on city and highway fuel economy test results and vehicle sales. Based on the information generated under the CAFE program, the USDOT is authorized to assess penalties for noncompliance.

Energy Policy Act of 1992 (EPAct)

The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. 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 included in EPAct. Federal tax deductions will be 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.

Energy Policy Act of 2005

The Energy Policy Act of 2005 was signed into law on August 8, 2005. Generally, the act provides for 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 a clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Federal Climate Change Policy

According to the EPA, "the United States government has established a comprehensive policy to address climate change" that includes slowing the growth of emissions; strengthening science, technology, and institutions; and enhancing international cooperation. To implement this policy,

“the Federal government is using voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science.” The EPA administers multiple programs that encourage voluntary GHG reductions, including “ENERGY STAR”, “Climate Leaders”, and Methane Voluntary Programs. However, as of this writing, there are no adopted federal plans, policies, regulations, or laws directly regulating GHG emissions.

Mandatory Greenhouse Gas Reporting Rule

In 2009, EPA issued a final rule for mandatory reporting of GHGs from large GHG emissions sources in the United States. In general, this national reporting requirement will provide EPA with accurate and timely GHG emissions data from facilities that emit 25,000 metric tons or more of CO₂ per year. This publicly available data will allow the reporters to track their own emissions, compare them to similar facilities, and aid in identifying cost effective opportunities to reduce emissions in the future. Reporting is at the facility level, except that certain suppliers of fossil fuels and industrial GHGs along with vehicle and engine manufacturers will report at the corporate level. An estimated 85% of the total U.S. GHG emissions, from approximately 10,000 facilities, are covered by this final rule.

STATE

The California Legislature has enacted a series of statutes in recent years addressing the need to reduce GHG emissions all across the State. These statutes can be categorized into four broad categories: (i) statutes setting numerical statewide targets for GHG reductions, and authorizing CARB to enact regulations to achieve such targets; (ii) statutes setting separate targets for increasing the use of renewable energy for the generation of electricity throughout the State; (iii) statutes addressing the carbon intensity of vehicle fuels, which prompted the adoption of regulations by CARB; and (iv) statutes intended to facilitate land use planning consistent with statewide climate objectives. The discussion below will address each of these key sets of statutes, as well as CARB “Scoping Plans” intended to achieve GHG reductions under the first set of statutes and recent building code requirements intended to reduce energy consumption.

Statutes Setting Statewide GHG Reduction Targets

ASSEMBLY BILL 32 (GLOBAL WARMING SOLUTIONS ACT)

In 2006, the California State Legislature enacted the California Global Warming Solutions Act of 2006 (Health & Safety Code Section 38500 et seq.), also known as Assembly Bill (AB) 32 (Stats. 2006, ch. 488). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished through an enforceable statewide cap on GHG emissions that was phased in starting in 2012. To effectively implement the cap, AB 32 directs the California Air Resources Board (CARB) to develop and implement regulations to reduce statewide GHG emissions from stationary sources.

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SENATE BILL 32

SB 32 (Stats. 2016, ch. 249) added Section 38566 to the Health and Safety Code. It provides that “[i]n adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by [Division 25.5 of the Health and Safety Code], [CARB] shall ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas emissions limit no later than December 31, 2030.” In other words, SB 32 requires California, by 2030, to reduce its statewide GHG emissions so that they are 40 percent below those that occurred in 1990.

Between AB 32 (2006) and SB 32 (2016), the Legislature has codified some of the ambitious GHG reduction targets included within certain high-profile Executive Orders issued by the last two Governors. The 2020 statewide GHG reduction target in AB 32 was consistent with the second of three statewide emissions reduction targets set forth in former Governor Arnold Schwarzenegger’s 2005 Executive Order known as S-3-05, which is expressly mentioned in AB 32. (See Health & Safety Code Section 38501, subd. (i).) That Executive Branch document included the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels. To meet the targets, the Governor directed several State agencies to cooperate in the development of a climate action plan. The Secretary of Cal-EPA leads the Climate Action Team, whose goal is to implement global warming emission reduction programs identified in the Climate Action Plan and to report on the progress made toward meeting the emission reduction targets established in the executive order.

In 2015, Governor Brown issued Executive Order, B-30-15, which created a “new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 is established in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050.” SB 32 codified this target.

In 2018, the Governor issued Executive Order B-55-18, which established a statewide goal to “achieve carbon neutrality as soon as possible, and no later than 2045, and maintain and achieve negative emissions thereafter.” The order directs the CARB to work with other State agencies to identify and recommend measures to achieve those goals.

Notably, the Legislature has not yet set a 2045 or 2050 target in the manner done for 2020 and 2030 through AB 32 and SB 32, though references to a 2050 target can be found in statutes outside the Health and Safety Code. Senate Bill 350 (SB 350) (Stats. 2015, ch. 547) added to the Public Utilities Code language that essentially puts into statute the 2050 GHG reduction target already identified in Executive Order S-3-05, albeit in the limited context of new state policies (i) increasing the overall share of electricity that must be produced through renewable energy sources and (ii) directing certain State agencies to begin planning for the widespread electrification of the California vehicle fleet. Section 740.12(a)(1)(D) of the Public Utilities Code now states that “[t]he Legislature finds and declares [that] ... [r]educing emissions of [GHGs] to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050 will require widespread transportation electrification.” Furthermore, Section 740.12(b) now states that the California

Public Utilities Commission (PUC), in consultation with CARB and the California Energy Commission (CEC), must “direct electrical corporations to file applications for programs and investments to accelerate widespread transportation electrification to reduce dependence on petroleum, meet air quality standards, ... and reduce emissions of greenhouse gases to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050.”

Statute Setting Target for the Use of Renewable Energy for the Generation of Electricity

CALIFORNIA RENEWABLES PORTFOLIO STANDARD

In 2002, the Legislature enacted Senate Bill 1078 (Stats. 2002, ch. 516), which established the Renewables Portfolio Standard program, requiring retail sellers of electricity, including electrical corporations, community choice aggregators, and electric service providers, to purchase a specified minimum percentage of electricity generated by eligible renewable energy resources such as wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas. (See Pub. Utilities Code, Section 399.11 et seq. [subsequently amended].) The legislation set a target by which 20 percent of the State’s electricity would be generated by renewable sources. (Pub. Utility Code, Section 399.11, subd. (a) [subsequently amended].) As described in the Legislative Counsel’s Digest, Senate Bill 1078 required “[e]ach electrical corporation ... to increase its total procurement of eligible renewable energy resources by at least one percent per year so that 20 percent of its retail sales are procured from eligible renewable energy resources. If an electrical corporation fails to procure sufficient eligible renewable energy resources in a given year to meet an annual target, the electrical corporation would be required to procure additional eligible renewable resources in subsequent years to compensate for the shortfall, if funds are made available as described. An electrical corporation with at least 20 percent of retail sales procured from eligible renewable energy resources in any year would not be required to increase its procurement in the following year.”

In 2006, the Legislature enacted Senate Bill 107 (Stats. 2006, ch. 464), which modified the Renewables Portfolio Standard to require that at least 20 percent of electricity retail sales be served by renewable energy resources by year 2010. (Pub. Utility Code, Section 399.11, subd (a) [subsequently amended].)

Senate Bill X1-2 (Stats. 2011, 1st Ex. Sess., ch. 1) set even more aggressive statutory targets for renewable electricity, culminating in the requirement that 33 percent of the State’s electricity come from renewables by 2020. This legislation applies to all electricity retailers in the State, including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities must meet renewable energy goals of 20 percent of retail sales from renewables by the end of 2013, 25 percent by the end of 2016, and 33 percent by the end of 2020. (See Pub. Utility Code, Section 399.11 et seq. [subsequently amended].)

SB 350, discussed above, increases the Renewable Portfolio Standard to require 50 percent of electricity generated to be from renewables by 2030. (Pub. Utility Code, Section 399.11, subd (a); see also Section 399.30, subd. (c)(2).) Of equal significance, Senate Bill 350 also embodies a policy

encouraging a substantial increase in the use of electric vehicles. As noted earlier, Section 740.12(b) of the Public Utilities Code now states that the PUC, in consultation with CARB and the CEC, must “direct electrical corporations to file applications for programs and investments to accelerate widespread transportation electrification to reduce dependence on petroleum, meet air quality standards, ... and reduce emissions of greenhouse gases to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050.”

Executive Order, B-16-12, issued in 2012, embodied a similar vision of a future in which zero-emission vehicles (ZEV) will play a big part in helping the State meet its GHG reduction targets. Executive Order B-16-12 directed State government to accelerate the market for in California through fleet replacement and electric vehicle infrastructure. The Executive Order set the following targets:

- By 2015, all major cities in California will have adequate infrastructure and be “ZEV ready”;
- By 2020, the State will have established adequate infrastructure to support 1 million ZEVs in California;
- By 2025, there will be 1.5 million ZEVs on the road in California; and
- By 2050, virtually all personal transportation in the State will be based on ZEVs, and GHG emissions from the transportation sector will be reduced by 80 percent below 1990 levels.

In 2018, Senate Bill 100 (Stats. 2018, ch. 312) revised the above-described deadlines and targets so that the State will have to achieve a 50% renewable resources target by December 31, 2026 (instead of by 2030) and achieve a 60% target by December 31, 2030. The legislation also establishes a State policy that eligible renewable energy resources and zero-carbon resources supply 100% of retail sales of electricity to California end-use customers and 100% of electricity procured to serve all State agencies by December 31, 2045.

In summary, California has set a statutory goal of requiring that, by the 2030, 60 percent of the electricity generated in California should be from renewable sources, with increased generation capacity intended to sufficient to allow the mass conversion of the statewide vehicle fleet from petroleum-fueled vehicles to electrical vehicles and/or other ZEVs. By 2045, all electricity must come from renewable resources and other carbon-free resources. Former Governor Brown had an even more ambitious goal for the State of achieving carbon neutrality as soon as possible and by no later than 2045. The Legislature is thus looking to California drivers to buy electric cars, powered by green energy, to help the State meet its aggressive statutory goal, created by SB 32, of reducing statewide GHG emissions by 2030 to 40 percent below 1990 levels. Another key prong to this strategy is to make petroleum-based fuels less carbon-intensive. A number of statutes in recent years have addressed that strategy. These are discussed immediately below.

Statutes and CARB Regulations Addressing the Carbon Intensity of Petroleum-based Transportation Fuels

ASSEMBLY BILL 1493, PAVLEY CLEAN CARS STANDARDS

In 2002, the Legislature enacted Assembly Bill 1493 (“Pavley Bill”) (Stats. 2002, ch. 200), which directed the CARB to develop and adopt regulations that achieve the maximum feasible reduction

of GHGs emitted by passenger vehicles and light-duty trucks beginning with model year 2009. (See Health and Safety Code Section 43018.5.) In September 2004, pursuant to this directive, CARB approved regulations to reduce GHG emissions from new motor vehicles beginning with the 2009 model year. These regulations created what are commonly known as the “Pavley standards.” In September 2009, CARB adopted amendments to the Pavley standards to reduce GHG emissions from new motor vehicles through the 2016 model year. These regulations created what are commonly known as the “Pavley II standards.” (See California Code of Regulations, Title 13, Sections 1900, 1961, and 1961.1 et seq.)

In 2012, CARB adopted an Advanced Clean Cars (ACC) program aimed at reducing both smog-causing pollutants and GHG emissions for vehicles model years 2017-2025. This historic program, developed in coordination with the USEPA and NHTSA, combined the control of smog-causing (criteria) pollutants and GHG emissions into a single coordinated set of requirements for model years 2015 through 2025. The regulations focus on substantially increasing the number of plug-in hybrid cars and zero-emission vehicles in the vehicle fleet and on making fuels such as electricity and hydrogen readily available for these vehicle technologies. The components of the ACC program are the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles in the 2018 through 2025 model years. (See California Code of Regulations, Title 13, Sections 1900, 1961, 1961.1, 1961.2, 1961.3, 1965, 1968.2, 1968.5, 1976, 1978, 2037, 2038, 2062, 2112, 2139, 2140, 2145, 2147, 2235, and 2317 et seq.)

It is expected that the Pavley regulations will reduce GHG emissions from California passenger vehicles by about 34 percent below 2016 levels by 2025, all while improving fuel efficiency and reducing motorists’ costs.

Statute Intended to Facilitate Land Use Planning Consistent with Statewide Climate Objectives

CALIFORNIA SENATE BILL 375 (SUSTAINABLE COMMUNITIES STRATEGY)

This 2008 legislation built on AB 32 by setting forth a mechanism for coordinating land use and transportation on a regional level for the purpose of reducing GHGs. The focus is to reduce miles traveled by passenger vehicles and light trucks. CARB is required to set GHG reduction targets for each metropolitan region for 2020 and 2035. Each of California’s metropolitan planning organizations then prepares a sustainable communities strategy that demonstrates how the region will meet its GHG reduction target through integrated land use, housing, and transportation planning. Once adopted by the metropolitan planning organizations, the sustainable communities strategy is to be incorporated into that region’s federally enforceable regional transportation plan. If a metropolitan planning organization is unable to meet the targets through the sustainable communities strategy, then an alternative planning strategy must be developed which demonstrates how targets could be achieved, even if meeting the targets is deemed to be infeasible.

Climate Change Scoping Plans

AB 32 SCOPING PLAN

In 2008, CARB adopted the Climate Change Scoping Plan, which contains the main strategies California will implement to achieve reduction of approximately 118 million metric tons (MMT) CO₂e, or approximately 22 percent from the State's projected 2020 emission level of 545 MMT of CO₂e under a business-as-usual scenario. This is a reduction of 47 MMT CO₂e, or almost 10 percent, from 2008 emissions. CARB's original 2020 projection was 596 MMT CO₂e, but this revised 2020 projection takes into account the economic downturn that occurred in 2008. The Scoping Plan also includes CARB recommended GHG reductions for each emissions sector of the State GHG inventory. CARB estimates the largest reductions in GHG emissions would be by implementing the following measures and standards:

- improved emissions standards for light-duty vehicles (26.1 MMT CO₂e);
- the Low Carbon Fuel Standard (15.0 MMT CO₂e);
- energy efficiency measures in buildings and appliances (11.9 MMT CO₂e); and
- renewable portfolio and electricity standards for electricity production (23.4 MMT CO₂e).

In 2011, CARB adopted a cap-and-trade regulation. The cap-and-trade program covers major sources of GHG emissions in the State such as refineries, power plants, industrial facilities, and transportation fuels. The cap-and-trade program includes an enforceable emissions cap that will decline over time. The State distributes allowances, which are tradable permits, equal to the emissions allowed under the cap. Sources under the cap are required to surrender allowances and offsets equal to their emissions at the end of each compliance period. Enforceable compliance obligations started in 2013. The program applies to facilities that comprise 85 percent of the State's GHG emissions.

With regard to land use planning, the Scoping Plan expects that reductions of approximately 3.0 MMT CO₂e will be achieved through implementation of Senate Bill (SB) 375, which is discussed further below.

2014 SCOPING PLAN UPDATE

CARB revised and reapproved the Scoping Plan, and prepared the First Update to the 2008 Scoping Plan in 2014 (2014 Scoping Plan). The 2014 Scoping Plan contains the main strategies California will implement to achieve a reduction of 80 MMT of CO₂e emissions, or approximately 16 percent, from the State's projected 2020 emission level of 507 MMT of CO₂e under the business-as-usual scenario defined in the 2014 Scoping Plan. The 2014 Scoping Plan also includes a breakdown of the amount of GHG reductions CARB recommends for each emissions sector of the State's GHG inventory. Several strategies to reduce GHG emissions are included: the Low Carbon Fuel Standard, the Pavley Rule, the ACC program, the Renewable Portfolio Standard, and the Sustainable Communities Strategy.

2017 SB 32 SCOPING PLAN

With the passage of SB 32, the Legislature also passed companion legislation AB 197, which provides additional direction for developing the scoping plan. In response, CARB adopted an

updated Scoping Plan in December 2017. The document reflects the 2030 target of reducing statewide GHG emissions by 40 percent below 1990 levels codified by SB 32. The GHG reduction strategies in the plan that CARB will implement to meet the target include:

- SB 350 - achieve 50 percent Renewables Portfolio Standard (RPS) by 2030 and doubling of energy efficiency savings by 2030;
- Low Carbon Fuel Standard - increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020);
- Mobile Source Strategy (Cleaner Technology and Fuels Scenario) - maintaining existing GHG standards for light- and heavy-duty vehicles, put 4.2 million zero-emission vehicles on the roads, and increase zero-emission buses, delivery and other trucks.
- Sustainable Freight Action Plan - improve freight system efficiency, maximize use of near-zero emission vehicles and equipment powered by renewable energy, and deploy over 100,000 zero-emission trucks and equipment by 2030;
- Short-Lived Climate Pollutant Reduction Strategy - reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030 and reduce emissions of black carbon 50 percent below 2013 levels by 2030;
- SB 375 Sustainable Communities Strategies - increased stringency of 2035 targets;
- Post-2020 Cap-and-Trade Program - declining caps, continued linkage with Québec, and linkage to Ontario, Canada;
- 20 percent reduction in GHG emissions from the refinery sector; and
- By 2018, develop an Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

2022 SCOPING PLAN FOR ACHIEVING CARBON NEUTRALITY (2022 SCOPING PLAN)

The 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) lays out a path to achieve targets for carbon neutrality and reduce anthropogenic greenhouse gas emissions by 85 percent below 1990 levels no later than 2045, as directed by Assembly Bill 1279. The roadmap proposes a shift away from petroleum in every sector of the economy and a rapid transition to renewable energy resources and zero-emission vehicles. Under this proposal, by 2045 California would:

- Cut greenhouse gas emissions by 85% below 1990 levels
- 71% reduction in smog-forming air pollution
- Reduce fossil fuel consumption (liquid petroleum) to less than one-tenth of what we use today – a 94% reduction in demand.

Building Code Requirements Intended to Reduce GHG Emissions

CALIFORNIA ENERGY CODE

The California Energy Code (California Code of Regulations, Title 24, Part 6), which is incorporated into the Building Energy Efficiency Standards, was first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Although these standards were not originally intended to reduce GHG emissions, increased energy efficiency results in decreased GHG

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emissions because energy efficient buildings require less electricity and thus less consumption of fossil fuels, which emit GHGs. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The current 2019 Building Energy Efficiency Standards, commonly referred to as the “Title 24” standards, include changes from the previous standards that were adopted, to do the following:

- Provide California with an adequate, reasonably priced, and environmentally sound supply of energy.
- Respond to Assembly Bill 32, the Global Warming Solutions Act of 2006, which mandates that California must reduce its GHG emissions to 1990 levels by 2020.
- Pursue California energy policy that energy efficiency is the resource of first choice for meeting California's energy needs.
- Act on the California Energy Commission's Integrated Energy Policy Report, which finds that standards are the most cost effective means to achieve energy efficiency, states an expectation that the Building Energy Efficiency Standards will continue to be upgraded over time to reduce electricity and peak demand, and recognizes the role of the Building Energy Efficiency Standards in reducing energy related to meeting California's water needs and in reducing GHG emissions.
- Meet the West Coast Governors' Global Warming Initiative commitment to include aggressive energy efficiency measures into updates of State building codes.
- Meet Executive Order S-20-04, the Green Building Initiative, to improve the energy efficiency of non-residential buildings through aggressive standards.

CALIFORNIA GREEN BUILDING STANDARDS CODE

The purpose of the California Green Building Standards Code (California Code of Regulations Title 24, Part 11) is to improve public health and safety and to promote the general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories: 1) planning and design; 2) energy efficiency; 3) water efficiency and conservation; 4) material conservation and resource efficiency; and 5) environmental quality. The California Green Building Standards, which became effective on January 1, 2011, instituted mandatory minimum environmental performance standards for all ground-up new construction of commercial, low-rise residential uses, and State-owned buildings, as well as schools and hospitals. The mandatory standards require the following:

- 20 percent mandatory reduction in indoor water use relative to baseline levels;
- 50 percent construction/demolition waste must be diverted from landfills;
- Mandatory inspections of energy systems to ensure optimal working efficiency; and
- Low-pollutant emitting exterior and interior finish materials such as paints, carpets, vinyl flooring, and particle boards.

The voluntary standards require the following:

- **Tier I:** 15 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 65 percent reduction in construction waste, 10 percent recycled content, 20 percent permeable paving, 20 percent cement reduction, and cool/solar reflective roof.
- **Tier II:** 30 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 75 percent reduction in construction waste, 15 percent recycled content, 30 percent permeable paving, 30 percent cement reduction, and cool/solar reflective roof.

LOCAL

Amador County Regional Transportation Plan (RTP)

The Amador County Transportation Commission (ACTC) is the Regional Transportation Planning Agency (RTPA) for Amador County, which includes the Cities of Jackson, Lone, Sutter Creek, Plymouth, and Amador City. Pursuant to state law, the ACTC's six Commissioners are comprised of three members appointed by the Amador County Board of Supervisors and three members appointed by the City Selection Committee. Together, these Commissioners represent the transportation interests of the region as a whole.

3.7.3 IMPACTS AND MITIGATION MEASURES

ENERGY AND GREENHOUSE GASES THRESHOLDS OF SIGNIFICANCE

Per Appendix G of the CEQA Guidelines, climate change-related impacts are considered significant if implementation of the proposed project would do any of the following:

- Generate greenhouse gas 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 greenhouse gases.
- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

IMPACTS AND MITIGATION MEASURES

Impact 3.7-1: General Plan implementation has the potential to generate GHG emissions that could have a significant impact on the environment and/or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases (Significant and Unavoidable)

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. A project's GHG emissions are at a micro-scale relative to global emissions, but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. Implementation of the proposed project would contribute to increases of GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to future development would be primarily associated with increases of CO₂ and other GHG pollutants, such as methane (CH₄) and nitrous oxide (N₂O), from mobile sources and utility usage.

Development anticipated under the proposed General Plan's Land Use Map would include activities that emit greenhouse gas emissions over the short and long term. A summary of short- and long-term emissions and the analysis for each are included below.

The major projected impacts of climate change in Jackson are expected to be more days of extreme heat over longer periods, as well as potential for localized flooding and drought conditions. The major sources of GHGs in Jackson are on-road transportation, non-residential energy, and residential energy use. Short-term and long-term emissions typically associated with construction and operations of future development projects.

SHORT-TERM EMISSIONS

Short-term greenhouse gas emissions would occur because of construction equipment used for the following: demolition, grading, paving, and building construction activities associated with future development and infrastructure projects that will be undertaken in Jackson over the next 20 years. GHG emissions would also result from worker and vendor trips to and from project sites and from demolition and soil hauling trips. Construction activities are short-term and cease to emit greenhouse gases upon completion, unlike operational emissions that are continuous year after year until operation of the use ceases. There is no threshold of significance for construction-related GHG emissions for plan-level impacts (including general plans).

Adoption of the proposed General Plan does not directly approve or otherwise entitle any new development projects or infrastructure improvement projects in Jackson. As such, the construction-related GHG emissions of future projects cannot be known or quantified at this time, as it would be highly speculative. Typically, construction-related GHG emissions contribute unsubstantially (less than one percent) to a project's annual greenhouse gas emissions inventory

and mitigation for construction-related emissions is not effective in reducing a project's overall contribution to climate change, given how small of a piece of the total emissions construction emissions are. Short-term climate change impacts due to future construction-related activities would be subject to State requirements for GHG emissions and would be assessed on project-by-project basis, as required by CEQA.

LONG-TERM EMISSIONS

Future development projects will result in continuous GHG emissions from mobile, area, and operational sources. Mobile sources, including vehicle trips to and from development projects, will result primarily in emissions of CO₂, with minor emissions of CH₄ and N₂O. Other significant GHG emission come from natural gas usage and methane. Electricity usage by future development and indirect usage of electricity for water and wastewater conveyance will result primarily in emissions of carbon dioxide. Disposal of solid waste will result in emissions of methane from the decomposition of waste at landfills coupled with CO₂ emission from the handling and transport of solid waste. These sources combine to define the long-term greenhouse gas inventory for typical development projects.

The effectiveness of efforts by the Amador County Regional Transportation Plan (RTP) to provide transportation alternatives and to implement policies and strategies consistent with State and national goals of reducing GHG emissions can be measured in terms of reductions in vehicle miles traveled (VMT) or expected growth in VMT. VMT reductions correlate directly with reductions in GHG emissions. Caltrans reports VMT by County on an annual basis. Amador County has experienced modest growth in population and employment over the past two decades and is forecast to continue this trend into the future. As described in greater detail in the 2020 Amador County Regional Transportation Plan, despite a short-term dip in regional traffic volumes attributed to the economic recession that began in 2008, an analysis of this data found that average-daily traffic volumes throughout the Amador County region had generally increased since 2004. This increase was particularly concentrated along the arterial State Highway System, as well as on major collectors such as Ridge Rd., New York Ranch Rd., Fiddletown Rd., and Latrobe Rd. Increase average-day traffic volumes correlate with higher VMT. The County will continue to monitor population and employment and VMT growth consistent with the RTP, RTP performance measures, and the County's General Plan policies to track changes in travel demand.

As shown in Chapter 2.0 of this Draft EIR, with implementation of the proposed Project, the Planning Area is estimated to grow to a total population of up to 6,506 persons. Separately, as described in Section 3.14: Transportation and Circulation of the Draft EIR, the City is expected to add 681 dwelling units and 300,000 square feet of non-residential building space by 2040, as described in Chapter 2.0, Project Description. Overall, as shown in Table 3.14-2 as described in Section 3.14: Transportation and Circulation of the Draft EIR, the 2040 cumulative VMT per single-family dwelling unit, VMT per multi-family dwelling unit, and VMT per employee are anticipated to be lower in the City of Jackson after implementation of the proposed General Plan, when compared to the existing condition (see Table 3.14-2 of Section 3.14: Transportation and Circulation of the Draft EIR, for further detail).

3.7 GREENHOUSE GASES, CLIMATE CHANGE, AND ENERGY

The City of Jackson plans for improved bicycle and pedestrian facilities in many parts of the City, which are expected to decrease VMT. Residents of Jackson in the future will likely engage in similar travel patterns to existing residents based on planned land use, roadways, and alternative modes of transportation in the City. The proposed general plan includes the following policies designed to reduce vehicle

According to the CARB's 2017 Climate Change Scoping Plan, the transportation sector remains the largest source of GHG emissions in the State, accounting for 37% of the inventory (CARB, 2017). A typical passenger vehicle emits approximately 4.6 metric tons of CO₂ per year (U.S. EPA, 2018). This number can vary based on a vehicle's fuel, fuel economy, and the number of miles driven per year.

In order to reduce community-wide GHG emissions, the proposed General Plan includes policies and programs that would limit increases to greenhouse gas emissions within the city. These policies and actions are included within various elements of the General Plan as listed at the end of this section.

The General Plan includes policies and actions aimed at reducing GHG throughout the Planning Area and region through promoting energy efficiency and expanding renewable energy installations, requiring that new development's internal circulation plans include provisions for promoting pedestrian, bicycle, and Neighborhood Electric Vehicles (NEV), requiring new development to construct or contribute financially for transit facilities, encouraging the coordination of bicycle use with mass transit by equipping all buses with bicycle racks, supporting land use with increased densities and mixed uses, and implementing various strategies to reduce VMT. For example, Policy CIRC-2.3 requires that the City shall require that new development's internal circulation plans include provisions for pedestrians, bicycles, automobiles, parking, and bus facilities as well as Neighborhood Electric Vehicles (NEVs), if deemed feasible and beneficial, consistent with separately adopted alternative transportation plans and/or guidelines. Separately, Policy COS 5.2 support and encourages the the implementation of innovative and green building best management practices (BMPs).

CONCLUSION

Overall, General Plan policies and implementing actions would minimize potential impacts associated with GHG emissions in the Planning Area through the promotion of VMT reduction strategies, multimodal support and transportation improvements, and the support of green building practices, among other policies and actions, and would support requirements under AB 32 and SB 375.

Subsequent development projects will be required to comply with the General Plan and adopted federal, state, and local regulations for the reduction of GHG emissions. The City of has prepared the General Plan to include numerous goals, policies and implementing actions intended to reduce GHG emissions associated with future development and improvement projects. GHG emissions would be minimized through the implementation of the goals, policies, and actions listed below. However, even with implementation of the goals, policies, and actions contained in the proposed

General Plan, there is no guarantee that the General Plan alone would be sufficient to limit GHGs to the extent required by AB 32 and SB 375, and other federal and state regulations, and a quantitative GHG at the program levels is not feasible. Therefore, out of an abundance of caution, General Plan implementation is considered to have the potential to generate GHG emissions that could have a significant impact on the environment and/or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. This impact is considered **significant and unavoidable**.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

SAFETY ELEMENT POLICIES

SA-6.1 Promote a well-prepared City that can effectively overcome natural disasters and scarcity of resources due to climate change.

SA-6.2 Collaborate with local, regional, state and/or federal jurisdictions and agencies on climate resiliency and adaptation strategies.

SA-6.3 Consider climate change impacts and adaptive responses in long-term planning and current development decisions.

SA-6.4 Implement necessary actions and programs to improve preparation and response for the most vulnerable community members.

CONSERVATION AND OPEN SPACE ELEMENT POLICIES

COS 5.1: Require all development projects to comply with the mandatory energy efficiency requirements of the California Green Building Standards Code (CALGreen) and Building and Energy Efficiency Standards.

COS 5.2: Support and encourage the implementation of innovative and green building best management practices (BMPs) including, but not limited to, sustainable site planning, solar opportunities, LEED certification, and exceeding the most current “green” development standards in the California Code of Regulations (CCR), Title 24, as feasible.

COS 5.3: Promote energy efficiency throughout City operations and install, as feasible, energy-efficient lighting, appliances, and alternative-energy infrastructure in City facilities during routine maintenance and as upgrades are needed.

COS 5.4: As City fleet vehicles are replaced, procure alternative energy and fuel-efficient City vehicles and equipment that meet or surpass state emissions requirements, to the extent feasible.

COS 5.5: Promote incentives from local, state, and federal agencies for improving energy efficiency and expanding renewable energy installations.

COS 6.1: Provide adequate waste disposal, recycling, and reuse services for present and future residents and businesses, including programs that improve public access to solid waste collection and recycling facilities.

3.7 GREENHOUSE GASES, CLIMATE CHANGE, AND ENERGY

COS 6.2: Participate in source reduction and recycling efforts to reduce the amount of solid waste sent to the landfill and extend the life of the landfill.

COS 6.3: Comply with Assembly Bill 939 source reduction and recycling requirements of 50 percent diversion of solid waste from landfills. Continue to strengthen local recycling efforts in order to assist the State in meeting the statewide source reduction, recycling, and composting requirements established by Assembly Bill 341.

COS 6.4: Increase the City's role in the source reduction and recycling components of waste management through recycling programs at City facilities to reduce the quantity of City-generated waste.

CIRCULATION ELEMENT POLICIES

CIRC 2.1: The City shall maintain an average daily Level of Service (LOS) "C" on all roadways. Projects may exceed the desired threshold if one of the following findings can be made:

- 1. The project is providing a public benefit which offsets the project's adverse traffic effects.*
- 2. The project will fund and construct traffic improvements which will offset the majority of the project's traffic effects.*
- 3. The project provides significant contributions to infill, mixed use, and non-automobile features or facilities.*

The following are examples of projects that may be permitted:

- a. Minor lot splits or housing developments involving five or less units and which are consistent with the City's General Plan.*
- b. Affordable housing projects that help achieve Housing Element goals and objectives.*
- c. Non-commercial public services, buildings, and facilities.*
- d. Infill, mixed use, or transit oriented developments that provide for significant reductions to automobile use by their residents, occupants, or visitors.*

CIRC 2.3: The City shall require that new development's internal circulation plans include provisions for pedestrians, bicycles, automobiles, parking, and bus facilities as well as Neighborhood Electric Vehicles (NEVs), if deemed feasible and beneficial, consistent with separately adopted alternative transportation plans and/or guidelines.

CIRC 2.6: Shuttle service shall be utilized wherever feasible during special events/activities to effectively minimize circulation conflicts.

CIRC 2.11: The City shall require that new developments design, construct, dedicate, and/or finance their fair share of off-site transportation improvements and facilities needed to manage additional traffic generated by the development.

CIRC 2.13: The City shall continue to solicit Amador Transit and Amador County School District for their comments on any development projects which may have an impact on the service area and ridership.

CIRC 2.18: Consider all modes of travel in planning, design, and construction of all transportation projects to create safe, livable, and inviting environments for pedestrians, bicyclists, motorists, and public transit users of all ages and capabilities.

CIRC 5.1: The City shall encourage alternatives to single-occupant vehicle trips and make alternatives available to the extent deemed practical and economical.

CIRC 5.2: The City shall require new development to construct or contribute financially for transit facilities, as deemed necessary, for purposes of public convenience and fuel conservation, and to ensure transportation for the elderly and disabled.

CIRC 5.3: The City shall promote ridesharing and the use of park-and-ride facilities.

CIRC 5.4: The City shall actively promote the use of transit during special community events.

CIRC 5.5: The City shall encourage the design of public and private outdoor seating to double as bus stop seating, where appropriate.

CIRC 6.1: The City shall implement best practices to improve the pedestrian and bicycle environment.

CIRC 6.12: The City shall continue to encourage the coordination of bicycle use with mass transit by equipping all buses with bicycle racks.

CIRC 8.1: Support land use with increased densities and mixed uses, consistent with the Land Use Element, to reduce vehicle miles traveled (VMT) and promote the use of walking, biking, and transit.

CIRC 8.2: Encourage employers to provide programs for carpooling/transit/biking/walking subsidies, bicycle facilities, ridesharing, telecommuting, and working at/from home.

CIRC 8.3: Monitor the deployment of new transportation technologies and services and develop policies that implement best practices to ensure these technologies and services benefit the public and the multimodal transportation system.

CIRC 8.4: Support the creation of electric vehicle charging stations at commercial, government, and other employment and community destinations.

SAFETY ELEMENT ACTIONS

SA-6a: Provide information and resources to the public and businesses regarding steps the City is taking to address the issue of climate change.

SA-6b: Coordinate with utility providers to protect interconnected infrastructure.

3.7 GREENHOUSE GASES, CLIMATE CHANGE, AND ENERGY

SA-6c: Periodically assess and monitor the effects of climate change and the associated levels of risk to the community in order to adapt to changing climate conditions.

SA-6d: Keep the public informed as to the location of important emergency facilities, such as reception centers, cooling centers, and emergency shelter points of distribution (PODs) for administering medical countermeasures (i.e. vaccines or medical testing), and distribution of emergency supplies and/or food.

CONSERVATION AND OPEN SPACE ELEMENT ACTIONS

COS-5a: Continue to review development projects to ensure that all new public and private development complies with the California Code of Regulations (CCR), Title 24 and CalGreen standards as well as the energy efficiency standards established by the General Plan and the Development Code.

COS-5b: Consider offering reduced permit fees and or expedited permit applications on solar installation projects and promote state, federal, and private rebate programs.

COS-5c: Consider the use of alternative fuel vehicles or electric vehicles for City use. If deemed appropriate, identify vehicle purchase needs in any fleet replacement plan.

COS-5d: Provide a conservation page (or similar page) on the City's website that provides links to resource agencies and provides information regarding local and regional conservation and energy upgrade and efficiency programs.

COS-6a: Continue existing, and develop new, diversion strategies (including source reduction, recycling, composting and yard waste programs) to reduce solid waste disposal volume to meet the State-mandated level.

COS-6b: Pursue public funding sources, such as grants, to reduce fiscal impacts of continued implementation of recycling programs.

CIRCULATION ELEMENT ACTIONS

CIR-2b: Review and revise roadway standards for community and rural areas to ensure that the standards are adequate to accommodate complete streets, addressing the following factors as applicable: number of travel lanes, lane width, medians, drainage control, shoulder width, pavement striping and markings, parking lanes, bike lanes, fire and emergency response standards, curb and gutter design, landscaped strip, and sidewalk width. Standards shall serve as evaluation criteria to determine whether development impacts on streets constrained by width, historic value, steepness or other factors exceed acceptable limits.

CIR-2f: Continue to work with ACTC to amend, as necessary, and implement the Regional Traffic Mitigation Fee program that requires new development to pay fees for its fair share of improvements to the regional transportation system.

CIR-2g: Continue to amend, as necessary, and implement the Local Development Impact Fee (DIF) Program which requires new development to pay fees for its fair share of improvements to the City's local transportation system.

CIR-5b: Continue to expand the use of Amador Transit public transit service including special event shuttle service during significant Main Street activities.

CIR-5c: Partner with Amador Transit and other regional transit providers to conduct regular service reviews to advance convenient transit service to employment centers, County and City service centers, other government centers, and regional destinations (i.e. Sacramento International Airport), as funding allows.

CIR-5d: Enhance transit stops through high quality, well-maintained shelters and provide transit timetables.

CIR-5e: Consider alternatives to conventional bus systems, such as smaller shuttle buses (micro-transit), on-demand transit services, or transportation networking company services that connect residential communities to regional activity centers with greater cost efficiency.

CIR-6a: Work with ACTC to implement the Amador Countywide Pedestrian and Bicycle Transportation Plan, and Pedestrian and Bicycle Design Guidelines and Recommended Standards. The City should also hold public workshops to update and refine the City's part in the countywide plan to clarify or expand upon the City's specific pedestrian and/or bicycle needs. These may include:

- *New roads to accommodate bicyclists and pedestrians;*
- *A designated bicycle route stop located along SR 49 in downtown Jackson to include such facilities as bike racks and lockers for storage;*
- *Pedestrian-actuated signal crossings at key locations such as Busi Municipal Parking Lot, French Bar Road, and Sutter Street;*
- *Parking facilities at trailheads; safe, well-lit, unobstructed walking routes; and quick and convenient services located street-side;*
- *Over- or underpass walkway between the Central Business District and City-owned Busi Municipal Parking Lot; and*
- *Bicycle lanes along new or reconstructed arterial and collector routes in, or adjacent to, the City, wherever possible.*

CIR-6b: Implement and build on recommendations for pedestrian and bicycle improvements included in the Amador Countywide Pedestrian and Bicycle Plan (2017).

CIR-6c: Work with appropriate agencies to implement a regional bikeway system that connects the City to other communities, recreation destinations, and scenic areas in Amador County.

CIR-6d: Pursue funding for construction and maintenance of bikeways and sidewalks, including off-road bikeways, where feasible.

CIR-6e: Add planned bicycle and pedestrian facilities in conjunction with road rehabilitation, reconstruction, or re-striping projects whenever feasible.

CIR-8b: Explore the feasibility of a VMT impact fee program to fund transportation demand

management (TDM) strategies that are proven to reduce VMT.

CIR-8c: Require proposed development projects that could have a potentially significant VMT impact to consider reasonable and feasible project modifications and other measures during the project design and environmental review stage of project development that would reduce VMT effects in a manner consistent with state guidance on VMT reduction.

CIR-8d: Consider requiring new development to incorporate electric vehicle charging in accordance with the California Green Building Standards Code and/or commit to using electric vehicles for a certain percentage of its vehicle fleet. Encourage installation of electric vehicle charging stations at existing development.

Impact 3.7-2: General Plan implementation has the potential to result in a significant impact due to wasteful, inefficient, or unnecessary consumption of energy resources, or conflict with or obstruct a state or local plan for renewable energy or energy efficiency (Less than Significant)

The State CEQA Guidelines require consideration of the potentially significant energy implications of a project. CEQA requires mitigation measures to reduce “wasteful, inefficient and unnecessary” energy usage (Public Resources Code Section 21100, subdivision [b][3]). According to Appendix G of the CEQA Guidelines, the means to achieve the goal of conserving energy include decreasing overall energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. In particular, a project would be considered “wasteful, inefficient, and unnecessary” if it were to violate state and federal energy standards and/or result in significant adverse impacts related to project energy requirements, energy inefficiencies, energy intensiveness of materials, cause significant impacts on local and regional energy supplies or generate requirements for additional capacity, fail to comply with existing energy standards, otherwise result in significant adverse impacts on energy resources, or conflict or create an inconsistency with applicable plan, policy, or regulation.

The proposed project is the updated Jackson General Plan, with a horizon year of 2040. Buildout of the General Plan includes residential, commercial, office, industrial, mixed-use, open space, and other land uses (see Chapter 2.0: Project Description for further detail). The amount of energy used in the Planning Area at buildout would directly correlate to the type and size of development, the energy consumption associated with unit appliances, outdoor lighting, and energy use associated with other buildings and activities. Other major sources of Planning Area energy consumption include fuel used by vehicle trips generated during construction and operational activities, and fuel used by off-road and on-road construction vehicles during construction. The following discussion provides a breakdown of the energy uses in the Planning Area upon buildout of the proposed project.

ELECTRICITY AND NATURAL GAS

At buildout, the City of Jackson’ electricity and natural gas consumption would be used primarily to power buildings (all types of buildings, including residential, commercial, office, industrial, public,

etc.). Pacific Gas and Electric Company (PG&E) provides electrical and natural gas services to residences and businesses throughout the City of Jackson, though on-site solar generation would generate a substantial source of energy for the community at General Plan buildout.

FUEL CONSUMPTION - ON-ROAD VEHICLES (OPERATION)

Buildout of the General Plan would generate vehicle trips during its operational phase. Based on the information included in Chapter 3.14 (Transportation and Circulation), the proposed General Plan would result in a decreased VMT per capita in the City of Jackson when compared to the existing (baseline) condition. Fuel consumption is anticipated to represent the largest sector of GHG emissions at General Plan buildout. Energy for on-road vehicles would derive from gasoline, diesel, as well as electricity from PG&E and from on-site solar generation.

FUEL CONSUMPTION - ON-ROAD VEHICLES (CONSTRUCTION)

The proposed project would also generate on-road vehicle trips during construction activities (from construction workers, vendors, and haulers). The vast majority of on-road mobile vehicle fuel used during the construction activities during buildout of the General Plan would occur during building construction.

OFF-ROAD VEHICLES (CONSTRUCTION)

Off-road construction vehicles would use diesel fuel during construction activities. A non-exhaustive list of off-road constructive vehicles expected to be used during construction activities includes: cranes, forklifts, generator sets, tractors, excavators, and dozers.

CONCLUSION

Buildout of the General Plan would use energy resources for the operation of buildings (electricity and natural gas), for on-road vehicle trips (e.g. gasoline and diesel fuel), and from off-road construction activities (e.g. diesel fuel) associated with buildout of the General Plan. Each of these activities would require the use of energy resources. Developers of individual projects within the Planning Area would be responsible for conserving energy, to the extent feasible, and would rely heavily on reducing per capita energy consumption to achieve this goal, including through Statewide and local measures.

Buildout of the General Plan would be in compliance with all applicable federal, state, and local regulations regulating energy usage. For example, PG&E is responsible for the mix of energy resources used to provide electricity for its customers, and it is in the process of implementing the Statewide Renewable Portfolio Standard (RPS) to increase the proportion of renewable energy (e.g. solar and wind) within its energy portfolio.

PG&E is expected to achieve at least 60% renewables by 2030, and 100 percent zero-carbon electricity by 2045 (in compliance with SB 100). Additionally, energy-saving regulations, including the latest State Title 24 building energy efficiency standards (“part 6”), would be applicable to the proposed project. Other Statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g. the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time. Furthermore,

additional project-specific the sustainability features individual development projects could further energy consumption of individual projects. The proposed project would also be in compliance with the planning documents described previously within this section.

As a result, the proposed project would not result in any significant adverse impacts related to project energy requirements, energy use inefficiencies, and/or the energy intensiveness of materials by amount and fuel type for during General Plan buildout, including during construction, operations, maintenance, and/or removal. PG&E, the electricity and natural gas provider to the site, maintains sufficient capacity to serve the Planning Area. The City of Jackson would comply with all existing energy standards, and would not result in significant adverse impacts on energy resources. Furthermore, connections exist between the Planning Area and nearby pedestrian and bicycle pathways, and public transit access exists nearby, reducing the need for local motor vehicle travel. Although improvements to the City's pedestrian, bicycle, and public transit systems would provide further opportunities for alternative transit, the Planning Area would be linked closely with existing networks that, in large part, are sufficient for most residents of the Planning Area and neighboring communities. For the reasons stated above, buildout of the General Plan would not be expected cause an inefficient, wasteful, or unnecessary use of energy resources nor conflict with or obstruct a state or local plan for renewable energy or energy efficiency. This is a **less than significant** impact.

GENERAL PLAN POLICIES, AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

CONSERVATION AND OPEN SPACE ELEMENT POLICIES

COS 5.1: Require all development projects to comply with the mandatory energy efficiency requirements of the California Green Building Standards Code (CALGreen) and Building and Energy Efficiency Standards.

COS 5.2: Support and encourage the implementation of innovative and green building best management practices (BMPs) including, but not limited to, sustainable site planning, solar opportunities, LEED certification, and exceeding the most current "green" development standards in the California Code of Regulations (CCR), Title 24, as feasible.

COS 5.3: Promote energy efficiency throughout City operations and install, as feasible, energy-efficient lighting, appliances, and alternative-energy infrastructure in City facilities during routine maintenance and as upgrades are needed.

COS 5.4: As City fleet vehicles are replaced, procure alternative energy and fuel-efficient City vehicles and equipment that meet or surpass state emissions requirements, to the extent feasible.

COS 5.5: Promote incentives from local, state, and federal agencies for improving energy efficiency and expanding renewable energy installations.

COS 6.1: Provide adequate waste disposal, recycling, and reuse services for present and future residents and businesses, including programs that improve public access to solid waste collection and recycling facilities.

COS 6.2: Participate in source reduction and recycling efforts to reduce the amount of solid waste sent to the landfill and extend the life of the landfill.

COS 6.3: Comply with Assembly Bill 939 source reduction and recycling requirements of 50 percent diversion of solid waste from landfills. Continue to strengthen local recycling efforts in order to assist the State in meeting the statewide source reduction, recycling, and composting requirements established by Assembly Bill 341.

COS 6.4: Increase the City's role in the source reduction and recycling components of waste management through recycling programs at City facilities to reduce the quantity of City-generated waste.

CIRCULATION ELEMENT POLICIES

CIRC 2.1: The City shall maintain an average daily Level of Service (LOS) "C" on all roadways. Projects may exceed the desired threshold if one of the following findings can be made:

- 1. The project is providing a public benefit which offsets the project's adverse traffic effects.*
- 2. The project will fund and construct traffic improvements which will offset the majority of the project's traffic effects.*
- 3. The project provides significant contributions to infill, mixed use, and non-automobile features or facilities.*

The following are examples of projects that may be permitted:

- a. Minor lot splits or housing developments involving five or less units and which are consistent with the City's General Plan.*
- b. Affordable housing projects that help achieve Housing Element goals and objectives.*
- c. Non-commercial public services, buildings, and facilities.*
- d. Infill, mixed use, or transit oriented developments that provide for significant reductions to automobile use by their residents, occupants, or visitors.*

CIRC 2.3: The City shall require that new development's internal circulation plans include provisions for pedestrians, bicycles, automobiles, parking, and bus facilities as well as Neighborhood Electric Vehicles (NEVs), if deemed feasible and beneficial, consistent with separately adopted alternative transportation plans and/or guidelines.

CIRC 2.6: Shuttle service shall be utilized wherever feasible during special events/activities to effectively minimize circulation conflicts.

CIRC 2.11: The City shall require that new developments design, construct, dedicate, and/or finance their fair share of off-site transportation improvements and facilities needed to manage additional traffic generated by the development.

3.7 GREENHOUSE GASES, CLIMATE CHANGE, AND ENERGY

CIRC 2.13: The City shall continue to solicit Amador Transit and Amador County School District for their comments on any development projects which may have an impact on the service area and ridership.

CIRC 2.18: Consider all modes of travel in planning, design, and construction of all transportation projects to create safe, livable, and inviting environments for pedestrians, bicyclists, motorists, and public transit users of all ages and capabilities.

CIRC 5.1: The City shall encourage alternatives to single-occupant vehicle trips and make alternatives available to the extent deemed practical and economical.

CIRC 5.2: The City shall require new development to construct or contribute financially for transit facilities, as deemed necessary, for purposes of public convenience and fuel conservation, and to ensure transportation for the elderly and disabled.

CIRC 5.3: The City shall promote ridesharing and the use of park-and-ride facilities.

CIRC 5.4: The City shall actively promote the use of transit during special community events.

CIRC 5.5: The City shall encourage the design of public and private outdoor seating to double as bus stop seating, where appropriate.

CIRC 6.1: The City shall implement best practices to improve the pedestrian and bicycle environment.

CIRC 6.12: The City shall continue to encourage the coordination of bicycle use with mass transit by equipping all buses with bicycle racks.

CIRC 8.1: Support land use with increased densities and mixed uses, consistent with the Land Use Element, to reduce vehicle miles traveled (VMT) and promote the use of walking, biking, and transit.

CIRC 8.2: Encourage employers to provide programs for carpooling/transit/biking/walking subsidies, bicycle facilities, ridesharing, telecommuting, and working at/from home.

CIRC 8.3: Monitor the deployment of new transportation technologies and services and develop policies that implement best practices to ensure these technologies and services benefit the public and the multimodal transportation system.

CIRC 8.4: Support the creation of electric vehicle charging stations at commercial, government, and other employment and community destinations.

CONSERVATION AND OPEN SPACE ELEMENT ACTIONS

COS-5a: Continue to review development projects to ensure that all new public and private development complies with the California Code of Regulations (CCR), Title 24 and CalGreen standards as well as the energy efficiency standards established by the General Plan and the Development Code.

COS-5b: Consider offering reduced permit fees and or expedited permit applications on solar installation projects and promote state, federal, and private rebate programs.

COS-5c: Consider the use of alternative fuel vehicles or electric vehicles for City use. If deemed appropriate, identify vehicle purchase needs in any fleet replacement plan.

COS-5d: Provide a conservation page (or similar page) on the City's website that provides links to resource agencies and provides information regarding local and regional conservation and energy upgrade and efficiency programs.

COS-6a: Continue existing, and develop new, diversion strategies (including source reduction, recycling, composting and yard waste programs) to reduce solid waste disposal volume to meet the State-mandated level.

COS-6b: Pursue public funding sources, such as grants, to reduce fiscal impacts of continued implementation of recycling programs.

CIRCULATION ELEMENT ACTIONS

CIR-2b: Review and revise roadway standards for community and rural areas to ensure that the standards are adequate to accommodate complete streets, addressing the following factors as applicable: number of travel lanes, lane width, medians, drainage control, shoulder width, pavement striping and markings, parking lanes, bike lanes, fire and emergency response standards, curb and gutter design, landscaped strip, and sidewalk width. Standards shall serve as evaluation criteria to determine whether development impacts on streets constrained by width, historic value, steepness or other factors exceed acceptable limits.

CIR-2f: Continue to work with ACTC to amend, as necessary, and implement the Regional Traffic Mitigation Fee program that requires new development to pay fees for its fair share of improvements to the regional transportation system.

CIR-2g: Continue to amend, as necessary, and implement the Local Development Impact Fee (DIF) Program which requires new development to pay fees for its fair share of improvements to the City's local transportation system.

CIR-5b: Continue to expand the use of Amador Transit public transit service including special event shuttle service during significant Main Street activities.

CIR-5c: Partner with Amador Transit and other regional transit providers to conduct regular service reviews to advance convenient transit service to employment centers, County and City service centers, other government centers, and regional destinations (i.e. Sacramento International Airport), as funding allows.

CIR-5d: Enhance transit stops through high quality, well-maintained shelters and provide transit timetables.

CIR-5e: Consider alternatives to conventional bus systems, such as smaller shuttle buses (micro-transit), on-demand transit services, or transportation networking company services that connect residential communities to regional activity centers with greater cost efficiency.

3.7 GREENHOUSE GASES, CLIMATE CHANGE, AND ENERGY

CIR-6a: Work with ACTC to implement the Amador Countywide Pedestrian and Bicycle Transportation Plan, and Pedestrian and Bicycle Design Guidelines and Recommended Standards. The City should also hold public workshops to update and refine the City's part in the countywide plan to clarify or expand upon the City's specific pedestrian and/or bicycle needs. These may include:

- *New roads to accommodate bicyclists and pedestrians;*
- *A designated bicycle route stop located along SR 49 in downtown Jackson to include such facilities as bike racks and lockers for storage;*
- *Pedestrian-actuated signal crossings at key locations such as Busi Municipal Parking Lot, French Bar Road, and Sutter Street;*
- *Parking facilities at trailheads; safe, well-lit, unobstructed walking routes; and quick and convenient services located street-side;*
- *Over- or underpass walkway between the Central Business District and City-owned Busi Municipal Parking Lot; and*
- *Bicycle lanes along new or reconstructed arterial and collector routes in, or adjacent to, the City, wherever possible.*

CIR-6b: Implement and build on recommendations for pedestrian and bicycle improvements included in the Amador Countywide Pedestrian and Bicycle Plan (2017).

CIR-6c: Work with appropriate agencies to implement a regional bikeway system that connects the City to other communities, recreation destinations, and scenic areas in Amador County.

CIR-6d: Pursue funding for construction and maintenance of bikeways and sidewalks, including off-road bikeways, where feasible.

CIR-6e: Add planned bicycle and pedestrian facilities in conjunction with road rehabilitation, reconstruction, or re-striping projects whenever feasible.

CIR-8b: Explore the feasibility of a VMT impact fee program to fund transportation demand management (TDM) strategies that are proven to reduce VMT.

CIR-8c: Require proposed development projects that could have a potentially significant VMT impact to consider reasonable and feasible project modifications and other measures during the project design and environmental review stage of project development that would reduce VMT effects in a manner consistent with state guidance on VMT reduction.

CIR-8d: Consider requiring new development to incorporate electric vehicle charging in accordance with the California Green Building Standards Code and/or commit to using electric vehicles for a certain percentage of its vehicle fleet. Encourage installation of electric vehicle charging stations at existing development.

Hazards include man-made or natural materials or man-made or natural conditions that may pose a threat to human health, life, property, or the environment. Hazardous materials and waste present health hazards for humans and the environment. These health hazards can result during the manufacture, transportation, use, or disposal of such materials if not handled properly. In Jackson, hazards to humans can also occur from natural or human induced wildfire and air traffic accidents.

This section provides a background discussion of the hazardous materials and waste, fire hazards, and hazards from air traffic related to the Planning Area. This section is organized with an existing setting, regulatory setting, and impact analysis. Additional analysis related to wildfire hazards is contained in Section 3.16, Wildfire, of this EIR.

Comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from Cal OES, and the Department of Toxic Substances Control (DTSC). Each of the comments related to this topic are addressed within this section. The NOP and full comments received are included in Appendix A of this Draft EIR.

3.8.1 ENVIRONMENTAL SETTING

HAZARDOUS MATERIALS AND WASTE

Hazardous Materials

A hazardous material is a substance or combination of substances which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may either (1) cause or significantly contribute to an increase in mortality or an increase in serious, irreversible, or incapacitating irreversible illness; or (2) pose a substantial present or potential hazard to human health and safety, or the environment when improperly treated, stored, transported, or disposed of. Hazardous materials are mainly present because of industries involving chemical byproducts from manufacturing, petrochemicals, and hazardous building materials.

Hazardous Waste

Hazardous waste is the subset of hazardous materials that has been abandoned, discarded, or recycled and is not properly contained, including soil or groundwater that is contaminated with concentrations of chemicals, infectious agents, or toxic elements sufficiently high to increase human mortality or to destroy the ecological environment. If a hazardous material is spilled and cannot be effectively picked up and used as a product, it is considered to be hazardous waste. If a hazardous material site is unused, and it is obvious there is no realistic intent to use the material, it is also considered to be a hazardous waste. Examples of hazardous materials include flammable and combustible materials, corrosives, explosives, oxidizers, poisons, materials that react violently with water, radioactive materials, and chemicals.

Transportation of Hazardous Materials

The transportation of hazardous materials within California is subject to various Federal, State, and local regulations. It is illegal to transport explosives or inhalation hazards on any public highway not designated for that purpose, unless the use of the highway is required to permit delivery, or the loading of such materials (California Vehicle Code §§ 31602(b), 32104(a)). The California Highway Patrol (CHP) designates through routes to be used for the transportation of hazardous materials. Transportation of hazardous materials is restricted to these routes except in cases where additional travel is required from that route to deliver or receive hazardous materials to and from users.

HAZARDOUS SITES

Envirostor Data Management System

The California Department of Toxic Substances Control (DTSC) maintains the *Envirostor Data Management System*, which provides information on hazardous waste facilities (both permitted and corrective action) as well as any available site cleanup information. This site cleanup information includes: Federal Superfund Sites (NPL), State Response Sites, Voluntary Cleanup Sites, School Cleanup Sites, Corrective Action Sites, Tiered Permit Sites, and Evaluation/Investigation Sites. The hazardous waste facilities include: Permitted–Operating, Post-Closure Permitted, and Historical Non-Operating.

There are 17 locations listed with a Jackson address that are listed in the Envirostor database. 2 sites are listed as active, 6 sites are referred to other agencies, 3 sites are listed Inactive – Action Required, 5 sites are listed Inactive – Needs Evaluation, and one is listed with no further action required. Table 3.8-1 lists the Envirostor sites for the City of Jackson.

TABLE 3.8-1: JACKSON SITE CLEANUP AND HAZARDOUS FACILITIES LIST (ENVIROSTOR)

NAME (ENVIROSTOR ID)	STATUS	LOCATION
<i>STATE RESPONSE</i>		
Allen Ranch Tailings	Active	West of Allen Road
ARCO	Refer: Other Agency	Hwy. 49
Argonaut Mine	Active	Argonaut Lane
Buffington Street Site, #131	Refer: Other Agency	131 Buffington Street
Fast Gas Service Station	Refer: RWQCB	851 North Highway 49
Home Depot Site	Inactive – Action Required	917 North Main Street
Jackson Butte RR Annex	No Further Action	--
Jackson Dump	Refer: RWQCB	Clinton Road
Jackson Hills Residential Golf Course	Inactive – Needs Evaluation	French Bar Road
Jackson Tire Service	Refer: Other Agency	801 South Highway 49
Jackson/Sutter Creek Community Assessment	Inactive – Needs Evaluation	Cities of Jackson and Sutter Creek
Manufactured Gas Plant	Inactive – Needs	Corner of Water and

<i>NAME (ENVIROSTOR ID)</i>	<i>STATUS</i>	<i>LOCATION</i>
– Jackson 1	Evaluation	Main Street
Manufactured Gas Plant – Jackson 2	Inactive - Needs Evaluation	South Bank Middle Fork Jackson Creek
Oro De Amador	Inactive – Active Required	Between North Main Street and New York Ranch Road
Pioneer Property	Inactive – Needs Evaluation	Pioneer Street & Argonaut Lane
Prospect Motors	Refer: Other Agency	645 North Highway 49
Sutter Street Extension	Inactive – Action Required	City of Jackson, Sutter street and intersection of Argonaut Drive

SOURCE: CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL, ENVIROSTOR DATABASE, 2022.

Cortese List

The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies, and developers to comply with the California Environmental Quality Act requirements in providing information about the location of hazardous materials release sites. Government Code Section 65962.5 requires the California Environmental Protection Agency to develop at least annually an updated Cortese List. California Department of Toxic Substances Control (DTSC) is responsible for a portion of the information contained in the Cortese List. Other State and local government agencies are required to provide additional hazardous material release information for the Cortese List.

There are two active sites with a Jackson address that are listed on the Cortese List. These sites include the Allen Ranch Tailings located approximately one half mile west of Allen Ranch Road, and two miles north of state route 104. This site is located outside the Planning Area north of the City Limits and SOI; and the Argonaut Mine, located on Argonaut Lane in within the City of Jackson.

The Argonaut Mine (site # 03100002) Past use(s) that caused contamination included past mining activities. Potential media affected includes: sediments, soil, surface waters. Additional information related to this site is included below under the impact discussion.

GeoTracker

GeoTracker is the California Water Resources Control Board's data management system for managing sites that impact groundwater, especially those that require groundwater cleanup (Underground Storage Tanks, Department of Defense, Site Cleanup Program) as well as permitted facilities such as operating USTs and land disposal sites.

LEAKING UNDERGROUND STORAGE TANKS

There are 23 locations identified with a City of Jackson address that are listed in the GeoTracker database for Leaking Underground Storage Tanks (LUST). Of these, 22 of the locations have

3.8 HAZARDS AND HAZARDOUS MATERIALS

undergone LUST cleanup and the State has closed the cases, one case is open for site assessment. Table 3.8-2 lists the location of open and closed cases for LUSTs in Jackson.

TABLE 3.8-2: JACKSON LUST CLEANUP SITES

<i>NAME</i>	<i>ACTIVITY</i>	<i>LOCATION</i>
<i>OPEN CASES</i>		
Jon's Pit Stop	Open - Site Assessment	10773 Highway 49
<i>CLOSED CASES (CLEANUP COMPLETED)</i>		
ACUSD District Office	Completed - Case Closed	217 Rex Avenue
Beacon #	Completed - Case Closed	851 Highway 49 & Highway 88
Boles Residence	Completed - Case Closed	425 Sargent Street
Chervon #9-2797	Completed - Case Closed	115 Highway 49 S
Exxon	Completed - Case Closed	505 Sutter Street
Former Standard Oil Service Station	Completed - Case Closed	16 Water Street
Gate House Inn	Completed - Case Closed	1330 Jackson Gate Road
Home & Farm Kitchen Supply	Completed - Case Closed	215 Main Street
Jackson Shell	Completed - Case Closed	306 Sutter Street
L & M Automotive	Completed - Case Closed	315 Sutter Street
Old County Hospital	Completed - Case Closed	810 Court Street
Pacific Bell	Completed - Case Closed	951 Highway 49 S
Piccardo Brother's Estate	Completed - Case Closed	843-846 Main Street
Private Residence	Completed - Case Closed	Private Residence
Private Residence	Completed - Case Closed	Private Residence
Prospect Motors	Completed - Case Closed	645 Highway 88/49
Ratto Theater	Completed - Case Closed	149 Main Street
SBC Corporation yard	Completed - Case Closed	951 Highway 49 S
Scotty's Gas	Completed - Case Closed	857 Highway 88 E
Sierra Trading Post #1	Completed - Case Closed	601 HWY 49 S
Water Street Antiques	Completed - Case Closed	19 Water Street
Webb/Jones Building	Completed - Case Closed	19 Main Street

SOURCE: CALIFORNIA WATER RESOURCES CONTROL BOARD GEOTRACKER DATABASE, 2020.

PERMITTED UNDERGROUND STORAGE TANK (UST)

There are 7 locations with a listed Jackson address that have permitted Underground Storage Tanks (UST) that are permitted through the California Water Resources Control Board. Table 3.8-3 lists the location of the permitted USTs listed with a Jackson Address.

TABLE 3.8-3: JACKSON PERMITTED UST SITES

<i>NAME</i>	<i>LOCATION</i>
Jackson Fast Gas	851 N Highway 49
Jackson Chevron	306 Sutter St
Amador County of-Jail	700 Court St
Kwik Serv - Jackson (BW # 102)	115 S. Hwy. 49

<i>NAME</i>	<i>LOCATION</i>
California Highway Patrol Amador #295	301 Clinton Road
Gold Country Depot	601 S Highway 49
City of Jackson Wastewater Treatment	39 N Highway 49 & 88

SOURCE: CALIFORNIA WATER RESOURCES CONTROL BOARD GEOTRACKER DATABASE, 2020.

Solid Waste Information System (SWIS)

The Solid Waste Information System (SWIS) is a database of solid waste facilities that is maintained by the California Integrated Waste Management Board (CIWMB). The SWIS database contains information on solid waste facilities, operations, and disposal sites throughout the State of California. The types of facilities found in this database include landfills, transfer stations, material recovery facilities, composting sites, transformation facilities, waste tire sites, and closed disposal sites. For each facility, the database contains information about location, owner, operator, facility type, regulatory and operational status, authorized waste types, local enforcement agency and inspection and enforcement records.

There are no solid waste facilities listed in the database within the City of Jackson. There are two facilities near Jackson in Martell, of which one is an active Emergency Transfer/Processing Operation and the other is Wood Waste Disposal Site that is closed. Other facilities near Jackson include the Jackson City-County Dump and Lagomasino Dump, both of which are closed Solid Waste Disposal Site. The site details are listed in Table 3.8-4 below.

TABLE 3.8-4: CIWMB FACILITIES/SITES

<i>NUMBER</i>	<i>NAME</i>	<i>ACTIVITY</i>	<i>REGULATORY</i>	<i>STATUS</i>
03-AA-0010	Jackson Debris Management Site	Emergency Transfer/Processing Operation	Notification	Active
03-AA-0002	Sierra Pacific Industries Woodwaste Land	Wood Waste Disposal Site	Unpermitted	Closed
03-CR-0002	Jackson City-County Dump	Solid Waste Disposal Site	Unpermitted	Closed
03-CR-0001	Lagomarsino Dump	Solid Waste Disposal Site	Unpermitted	Closed

SOURCE: CALIFORNIA DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY, 2020.

HAZARDS FROM AIR TRAFFIC

The State Division of Aeronautics has compiled extensive data regarding aircraft accidents around airports in California. This data is much more detailed and specific than data currently available from the FAA and the National Transportation Safety Board (NTSB). According to the California Airport Land Use Planning Handbook (2011), prepared by the State Division of Aeronautics, 21 percent of general aviation accidents occur during takeoff and initial climb and 44.2 percent of general aviation accidents occur during approach and landing. The State Division of Aeronautics has plotted accidents during these phases at airports across the country and has determined certain theoretical areas of high accident probability.

Approach and Landing Accidents

As nearly half of all general aviation accidents occur in the approach and landing phases of flight, considerable work has been done to determine the approximate probability of such accidents. Nearly 77% of accidents during this phase of flight occur during touchdown onto the runway or during the roll-out. These accidents typically consist of hard or long landings, ground loops (where the aircraft spins out on the ground), departures from the runway surface, etc. These types of accidents are rarely fatal and often do not involve other aircraft or structures. Commonly these accidents occur due to loss of control on the part of the pilot and, to some extent, weather conditions. (California Division of Aeronautics, 2002).

The remaining 23% of accidents during the approach and landing phase of flight occur as the aircraft is maneuvered towards the runway for landing, in a portion of the airspace around the airport commonly called the traffic pattern. Common causes of approach accidents include the pilot's misjudging of the rate of descent, poor visibility, unexpected downdrafts, or tall objects beneath the final approach course. Improper use of rudder on an aircraft during the last turn toward the runway can sometimes result in a stall (a cross-control stall) and resultant spin, causing the aircraft to strike the ground directly below the aircraft. The types of events that lead to approach accidents tend to place the accident site fairly close to the extended runway centerline. The probability of accidents increases as the flight path nears the approach end of the runway. (California Division of Aeronautics, 2002).

According to aircraft accident plotting provided by the State Division of Aeronautics, most accidents that occur during the approach and landing phase of flight occur on the airport surface itself. The remainder of accidents that occur during this phase of flight are generally clustered along the extended centerline of the runway, where the aircraft is flying closest to the ground and with the lowest airspeed. (California Division of Aeronautics, 2002).

Takeoff and Departure Accidents

According to data collected by the State Division of Aeronautics, nearly 65 percent of all accidents during the takeoff and departure phase of flight occur during the initial climb phase, immediately after takeoff. This data is correlated by two physical constraints of general aviation aircraft:

- The takeoff and initial climb phase are times when the aircraft engine(s) is under maximum stress and is thus more susceptible to mechanical problems than at other phases of flight; and
- Average general aviation runways are not typically long enough to allow an aircraft that experiences a loss of power shortly after takeoff to land again and stop before the end of the runway.

While the majority of approach and landing accidents occur on or near to the centerline of the runway, accidents that occur during initial climb are more dispersed in their location as pilots are not attempting to get to any one specific point (such as a runway). Additionally, aircraft vary widely in payload, engine power, glide ratio, and several other factors that affect glide distance, handling characteristics after engine loss, and general response to engine failure. This further

disperses the accident pattern. However, while the pattern is more dispersed than that seen for approach and landing accidents, the departure pattern is still generally localized in the direction of departure and within proximity of the centerline. This is partially due to the fact that pilots are trained to fly straight ahead and avoid turns when experiencing a loss of power or engine failure. Turning flight causes the aircraft to sink faster and flying straight allows for more time to attempt to fix the problem (California Division of Aeronautics, 2002).

Local Airport Facilities

There is one airport facility, Amador County Airport (also known as Westover Field), located within the Jackson Planning Area as described below.

Westover Field/ Amador County Airport: The Amador County Airport - Westover Field, is located in the Martell area, approximately one mile northwest of the City of Jackson and is adjacent the northwest limits of the City's SOI. Westover Field is considered a general aviation airport with hangars, tie downs, fuel and aircraft maintenance services (City of Jackson, 2002). The airport provides for the general aviation needs of the County including direct-by-air access to other airfields in the region. Westover Field has one 3,400 foot runway which runs in a northeast-to-southwest direction. A twenty-four hour Automated Weather Observation System (AWOS) is available at 121.05 MHz. AWOS systems include a collection of electronic sensors, connected to a computer that provide near realtime observations of weather conditions. The airport is located at an elevation of 1,690 feet above mean sea level (MSL) with a flight pattern altitude of 2,700 MSL. Fuel stored onsite includes 100LL and Jet A. A large percentage of the flights originating at Westover Field take-off toward the southwest due to the prevailing wind patterns.

Airport-related hazards are generally associated with aircraft accidents, particularly during takeoffs and landings. Airport operation hazards include incompatible land uses, power transmission lines, wildlife hazards (e.g., bird strikes), and tall structures that penetrate the imaginary surfaces surrounding an airport.

The Airport Land Use Plan (ALUP) for Westover Field was prepared in October 1987 and amended in July 1990 by the Amador ALUC. The plan provides a basis for determining which land uses which are compatible with airport operations. The Amador ALUC is currently pursuing an update to the Airport Land Use Plan.

Other Local airports in Amador County, CA

Eagles Nest Airport: The Eagles Field Airport is located on 1080 acres owned by the Eagle's Nest Owners Association on Lambert Road approximately 7 miles SE of Ione, CA. The Airport Master Plan was prepared in 1989.

The Eagles Nest Airport has a 4000 foot square asphalt mat on which most of the facilities are located. Runway #1/19 is 4000 feet long, 100 feet wide, paved, and lighted.

Domestic airports near Jackson

- 45 miles: Auburn, CA (AUO) Auburn Municipal Airport

- 40 miles: Stockton, CA (SCK) Stockton Metropolitan Airport

Local airports near Jackson

- 26 miles: Placerville, CA (KPVF) Placerville Airport
- 25 miles: Cameron Park, CA (061) Cameron Airpark
- 33 miles: Georgetown, CA (KGTU) Georgetown Airport
- 32 miles; Sulice, CA (01CL) Swansboro County Airport
- 32 Miles: Rancho Cordova, CA (MA) Mather Airport
- 31 miles: Lodi, CA (103) Lodi Airport

Major Regional Airport Facilities

Sacramento International Airport (SMF): The Sacramento Airport (approximately 50 mile northwest of Jackson serves approximately 9 million passengers a day. SMF serves the Greater Sacramento Area, and it is run by the Sacramento County Airport System. The Airport covers approximately 6,000 acres and has two parallel runways, oriented north–south to align with prevailing winds. The airport has two terminals, terminal A and terminal B, with 32 gates.

National Transportation Safety Board Aviation Accident Database

The National Transportation Safety Board Aviation Accident Database identifies 9 aircraft within Amador County of which 7 accidents were associated within the vicinity of Jackson. (National Transportation Safety Board, 2019). Table 3.8-5 below details each identified aircraft incidents listed by the database within Amador County.

TABLE 3.8-5: NATIONAL TRANSPORTATION SAFETY BOARD AVIATION ACCIDENTS WITHIN AMADOR COUNTY

EVENT DATE	LOCATION	MAKE/MODEL	EVENT SEVERITY
06/03/2020	Ione, CA	Beech D 45	Nonfatal
09/08/2018	Jackson, CA	Piper J3C	Nonfatal
01/06/2017	Jackson, CA	Cessna 421c	Nonfatal
01/10/2015	Jackson, CA	Cessna 180	Nonfatal
06/20/2012	Jackson, CA	Cessna 150F	Nonfatal
02/27/2001	Ione, CA	Ascher Yakolev YAK 11	Nonfatal
06/09/2001	Jackson, CA	Mooney M20J	Nonfatal
04/10/2000	Jackson, CA	Cessna 305A	Nonfatal
09/25/2000	Ione, CA	Culver LFA	Nonfatal

SOURCE: NATIONAL TRANSPORTATION SAFETY BOARD ACCIDENT DATABASE 2019

FIRE HAZARDS

Fuel Rank

Fuel rank is a ranking system developed by CalFire that incorporates four wildfire factors: fuel model, slope, ladder index, and crown index.

The U.S. Forest Service has developed a series of fuel models, which categorize fuels based on burn characteristics. These fuel models help predict fire behavior. In addition to fuel characteristics, slope is an important contributor to fire hazard levels. A surface ranking system has been developed by CalFire, which incorporates the applicable fuel models and slope data. The model categorizes slope into six ranges: 0-10%, 11-25%, 26-40%, 41-55%, 56-75% and >75%. The combined fuel model and slope data are organized into three categories, referred to as surface rank. Thus, surface rank is a reflection of the quantity and burn characteristics of the fuels and the topography in a given area.

The ladder index reflects the distance from the ground to the lowest leafy vegetation for tree and plant species. The crown index reflects the quantity of leafy vegetation present within individual specimens of a given species.

The surface rank, ladder index, and crown index for a given area are combined in order to establish a fuel rank of medium, high, or very high. Fuel rank is used by CalFire to identify areas in the California Fire Plan where large, catastrophic fires are most likely.

Amador County contains areas with “moderate” “High” “Very High” and “non-wildland fuel” ranks. Generally the more developed areas within the county near the Highway 49 corridor including the City of Jackson are considered non-wildland with the fuel rank increasing in the eastern foothill areas of the county. The areas warranting “moderate” to “Very High” fuel ranks possess combustible material in sufficient quantities combined with topographic characteristics that pose a wildfire risk.

Fire Hazard Severity Zones

The state has charged CalFire with the identification of Fire Hazard Severity Zones (FHSZ) within State Responsibility Areas. In addition, CalFire must recommend Very High Fire Hazard Severity Zones (VHFHSZ) identified within any Local Responsibility Areas. The FHSZ maps are used by the State Fire Marshall as a basis for the adoption of applicable building code standards. Fire Hazard Severity Zones within the City of Jackson planning area are shown on Figure 3.8-1.

LOCAL RESPONSIBILITY AREAS

The Jackson Planning Area is located within a Local Responsibility Area (LRA). CalFire has determined that the City of Jackson has no Very High Fire Hazard Severity Zones (VHFHSZ) within Local Responsibility Areas. Figure 3.8-2 shows Fire Hazard Severity Zones for Local, State, and Federal Responsibility Areas within Amador County.

STATE RESPONSIBILITY AREAS

There are State Responsibility Areas (SRAs) within the Jackson Planning Area. SRAs surround the City of Jackson and are located outside the City Limits within the City’s SOI. FHSZ within the SRAs within the Jackson Planning Area range from “Moderate” to “High”. Figure 3.8-1 show Fire Hazard Severity Zones for State Responsibility Areas within the City of Jackson. FHSZ within the SRAs range from “Moderate” to “Very High”. Figure 3.8-2 show Fire Hazard Severity Zones for State Responsibility Areas within Amador County.

FEDERAL RESPONSIBILITY AREAS

There are no Federal Responsibility Areas within the Jackson Planning Area. As shown on Figure 3.8-2 the majority of Federal Responsibility Areas (FRA) are located on the eastern side of Amador County.

3.8.2 REGULATORY SETTING

FEDERAL

Aviation Act of 1958

The Federal Aviation Act resulted in the creation of the Federal Aviation Administration (FAA). The FAA is charged with the creation and maintenance of a National Airspace System.

Federal Aviation Regulations (CFR, Title 14)

The Federal Aviation Regulation (FAR) establish regulations related to aircraft, aeronautics, and inspection and permitting.

Clean Air Act

The Federal Clean Air Act (FCAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The FCAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: NAAQS for criteria air pollutants, hazardous air pollutant standards, state attainment plans, motor vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

Clean Water Act

The Clean Water Act (CWA), which amended the Water Pollution Control Act (WPCA) of 1972, sets forth the §404 program to regulate the discharge of dredged and fill material into Waters of the U.S. and the §402 National Pollutant Discharge Elimination System (NPDES) to regulate the discharge of pollutants into Waters of the U.S. The §401 Water Quality Certification program establishes a framework of water quality protection for activities requiring a variety of Federal permits and approvals (including CWA §404, CWA §402, FERC Hydropower and §10 Rivers and Harbors).

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) introduced active Federal involvement to emergency response, site remediation, and spill prevention, most notably the Superfund program. The Act was intended to be comprehensive in encompassing both the prevention of, and response to, uncontrolled hazardous material releases. CERCLA deals with environmental response, providing mechanisms for reacting to emergencies and to chronic hazardous material releases. In addition to establishing procedures to prevent and remedy problems, it establishes a system for compensating appropriate individuals and assigning

appropriate liability. It is designed to plan for and respond to failure in other regulatory programs and to remedy problems resulting from action taken before the era of comprehensive regulatory protection.

Environmental Protection Agency

The primary regulator of hazards and hazardous materials is the EPA, whose mission is to protect human health and the environment. The City of Jackson is located within EPA Region 9, which includes Arizona, California, Hawaii, and New Mexico.

FY 2001 Appropriations Act

Title IV of the Appropriations Act required the identification of “Urban Wildland Interface Communities in the Vicinity of Federal Lands that are at High Risk from Wildfire” by the U.S. Departments of the Interior and Agriculture.

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act, as amended, is the statute regulating hazardous materials transportation in the United States. The purpose of the law is to provide adequate protection against the risks to life and property inherent in transporting hazardous materials in interstate commerce. This law gives the U.S. Department of Transportation (USDOT) and other agencies the authority to issue and enforce rules and regulations governing the safe transportation of hazardous materials (DOE 2002).

Natural Gas Pipeline Safety Act

The Natural Gas Pipeline Safety Act authorizes the U.S. Department of Transportation Office of Pipeline Safety to regulate pipeline transportation of natural (flammable, toxic, or corrosive) gas and other gases as well as the transportation and storage of liquefied natural gas. The Office of Pipeline Safety regulates the design, construction, inspection, testing, operation, and maintenance of pipeline facilities. While the Federal government is primarily responsible for developing, issuing, and enforcing pipeline safety regulations, the pipeline safety statutes provide for State assumption of the intrastate regulatory, inspection, and enforcement responsibilities under an annual certification. To qualify for certification, a state must adopt the minimum Federal regulations and may adopt additional or more stringent regulations as long as they are not incompatible.

Resource Conservation and Recovery Act

The Resources Conservation and Recovery Act (RCRA) established EPA’s “cradle to grave” control (generation, transportation, treatment, storage and disposal) over hazardous materials and wastes. In California, the DTSC has RCRA authorization.

The 1976 Federal Resource Conservation and Recovery Act (RCRA) and the 1984 RCRA Amendments regulate the treatment, storage, and disposal of hazardous and non-hazardous wastes. The legislation mandated that hazardous wastes be tracked from the point of generation to their ultimate fate in the environment. This includes detailed tracking of hazardous materials during transport and permitting of hazardous material handling facilities.

The 1984 RCRA amendments provided the framework for a regulatory program designed to prevent releases from USTs. The program established tank and leak detection standards, including spill and overflow protection devices for new tanks. The tanks must also meet performance standards to ensure that the stored material will not corrode the tanks. The RCRA was further amended in 1988 to set additional standards for USTs.

In July 2015, the EPA revised the federal UST regulation, which strengthened the 1988 federal UST regulations by increasing emphasis on properly operating and maintaining UST equipment. The revision added new operation and maintenance requirements and addressed UST systems deferred in the 1988 UST regulation. The purpose of the revision was to help prevent and detect UST releases, which are a leading source of groundwater contamination. To ensure compliance performance measures reflect the 2015 UST regulation, the Environmental Protection Agency (EPA) and the Association of State and Territorial Solid Waste Management Officials coordinated to update existing compliance performance measures and add new measures. The measures required states to switch from tracking compliance against significant operational compliance measures to the more stringent technical compliance rate (TCR) measures. As of October 2019, only 43.7 percent of USTs were in compliance with all TCR categories.

STATE

Aeronautics Act (Public Utilities Code §21001)

The Caltrans Division of Aeronautics bases the majority of its aviation policies on the Aeronautics Act. Policies include permits and annual inspections for public airports and hospital heliports and recommendations for schools proposed within two miles of airport runways.

Airport Land Use Commission Law (Public Utilities Code §21670 et seq.)

The law, passed in 1967, authorized the creation of Airport Land Use Commissions (ALUC) in California. Per the Public Utilities Code, the purpose of an ALUC is to protect *public health, safety, and welfare by encouraging orderly expansion of airports and the adoption of land use measures that minimizes exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses* (Pub. Util. Code §21670). Furthermore, each ALUC must prepare an ALUCP. Each ALUCP, which must be based on a twenty-year planning horizon, should focus on broadly defined noise and safety impacts.

Assembly Bill 337

Per AB 337, local fire prevention authorities and CalFire are required to identify Very High Fire Hazard Severity Zones (VHFHSZ) in LRAs. Standards related to brush clearance and the use of fire resistant materials in fire hazard severity zones are also established.

California Code of Regulations

Title 3 of the California Code of Regulations (CCR) pertains to the application of pesticides and related chemicals. Parties applying regulated substances must continuously evaluate application

equipment, the weather, the treated lands and all surrounding properties. Title 3 prohibits any application that would:

- Contaminate persons not involved in the application;
- Damage non-target crops or animals or any other public or private property; and
- Contaminate public or private property or create health hazards on said property.

Title 8 of the CCR establishes California Occupational Safety and Health Administration (Cal OSHA) requirements related to public and worker protection. Topics addressed in Title 8 include materials exposure limits, equipment requirements, protective clothing, hazardous materials, and accident prevention. Construction safety and exposure standards for lead and asbestos are set forth in Title 8.

Title 14 of the CCR establishes minimum standards for solid waste handling and disposal.

Title 17 of the CCR establishes regulations relating to the use and disturbance of materials containing naturally occurring asbestos.

Title 19 of the CCR establishes a variety of emergency fire response, fire prevention, and construction and construction materials standards.

Title 22 of the CCR sets forth definitions of hazardous waste and special waste. The section also identifies hazardous waste criteria and establishes regulations pertaining to the storage, transport, and disposal of hazardous waste.

Title 26 of the CCR is a medley of State regulations pertaining to hazardous materials and waste that are presented in other regulatory sections. Title 26 mandates specific management criteria related to hazardous materials identification, packaging, and disposal. In addition, Title 26 establishes requirements for hazardous materials transport, containment, treatment, and disposal. Finally, staff training standards are set forth in Title 26.

Title 27 of the CCR sets forth a variety of regulations relating to the construction, operation, and maintenance of the state's landfills. The title establishes a landfill classification system and categories of waste. Each class of landfill is constructed to contain specific types of waste (household, inert, special, and hazardous).

California Government Code Section 65302

This section, which establishes standards for developing and updating General Plans, includes fire hazard assessment and Safety Element content requirements.

California Health and Safety Code

Division 11 of the Health and Safety Code establishes regulations related to a variety of explosive substances and devices, including high explosives and fireworks. Section 12000 et seq. establishes regulations related to explosives and explosive devices, including permitting, handling, storage, and transport (in quantities greater than 1,000 pounds).

Division 12 establishes requirements for buildings used by the public, including essential services buildings, earthquake hazard mitigation technologies, school buildings, and postsecondary buildings.

Division 20 establishes DTSC authority and sets forth hazardous waste and underground storage tank regulations. In addition, the division creates a State superfund framework that mirrors the Federal program.

Division 26 establishes California Air Resources Board (CARB) authority. The division designates CARB as the air pollution control agency per Federal regulations and charges the Board with meeting Clean Air Act requirements.

California Health and Safety Code and Uniform Building Code Section 13000 et seq.

State fire regulations are set forth in §13000 *et seq.* of the California Health and Safety Code, which is divided into “Fires and Fire Protection” and “Buildings Used by the Public.” The regulations provide for the enforcement of the Uniform Building Code and mandate the abatement of fire hazards.

The code establishes broadly applicable regulations, such as standards for buildings and fire protection devices, in addition to regulations for specific land uses, such as childcare facilities and high-rise structures.

California Vehicle Code §31600 (Transportation of Explosives)

This code establishes requirements related to the transportation of explosives in quantities greater than 1,000 pounds, including licensing and route identification.

California Public Resources Code

The State’s Fire Safety Regulations are set forth in Public Resources Code §4290, which include the establishment of SRAs.

Public Resources Code §4291 sets forth defensible space requirements, which are applicable to anyone who “...owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered with flammable material” (§4291(a)).

Food and Agriculture Code

Division 6 of the California Food and Agriculture Code (FAC) establishes pesticide application regulations. The division establishes training standards for pilots conducting aerial applications as well as permitting and certification requirements.

State Oversight of Hazards and Hazardous Materials

The DTSC is chiefly responsible for regulating the handling, use, and disposal of toxic materials. The State Water Resources Control Board (SWRCB) regulates discharge of potentially hazardous

materials to waterways and aquifers and administers the basin plans for groundwater resources in the various regions of the state. The RWQCB oversees surface and groundwater. Programs intended to protect workers from exposure to hazardous materials and from accidental upset are covered under OSHA at the Federal and California Division of Occupational Safety and Health (Cal/OSHA) and the California Department of Health Services (DHS) at the state level. Air quality is regulated through the CARB and Amador Valley Air Pollution Control District. The State Fire Marshal is responsible for the protection of life and property through the development and application of fire prevention engineering, education, and enforcement; CalFire provides fire protection services for State and privately-owned wildlands.

Water Code

Division 7 of the California Water Code, commonly referred to as the Porter-Cologne Water Quality Control Act, created the SWRCB and the RWQCB. In addition, water quality responsibilities are established for the SWRCB and RWQCBs.

LOCAL

Certified Unified Program Agencies

Senate Bill 1082 (1993) required the establishment of a unified hazardous waste and hazardous materials management program. The result was Cal EPA's United Program, which consolidates the actions of DTSC, the SWRCB, the RWQCB's, OES, and the State Fire Marshall. DTSC oversees the implementation of the hazardous waste generator and onsite treatment program, one of six environmental programs at the local level, through Certified Unified Program Agencies (CUPAs). CUPAs have authority to enforce regulations, conduct inspections, administer penalties, and hold hearings. Amador County implements the CUPA that has enforcement authority over the City of Jackson. Offices are located in Stockton.

Amador Air Pollution Control District

Amador Valley Air Pollution Control District (SJVAPCD) has jurisdiction over the City of Jackson and deals with pollutants that get into the air from stationary (including fumes, dust and smoke, some asbestos) and mobile sources. SJVAPCD's mission is to improve the health and quality of life for all Valley residents through efficient, effective and entrepreneurial air quality management strategies. SJVAPCD responds to complaints about smells, answers questions about air quality management permits, and reviews development projects for compliance with air quality and greenhouse gas significance thresholds. The SJVAPCD and air quality are addressed in detail in Section 3.3, Air Quality, of this EIR.

Amador County

Hazardous waste programs are managed and implemented locally through the County of Amador CUPA. The County hosts a variety of hazardous waste collection events throughout the County in an effort to deter improper disposal of hazardous wastes.

Household Hazardous Waste (HHW) Collection Facilities receive hazardous waste that comes from homes and, in some cases, from small business hazardous waste generators. Household wastes include pesticides, batteries, old paint, solvents, used oil, antifreeze, and other chemicals that should not go into a regular municipal landfill.

Amador County Public Health Services monitors the possible groundwater and soil contamination from underground tanks. Its funding mechanism is a billing contract with the State Water Quality Control Board. Public Health Services clean-up enforcement falls under Title 23, California Code of Regulations. Case workers monitor site-specific development and must be contacted prior to development.

The City of Jackson and Amador County Public Works Department deal with illegal discharges to sanitary or industrial sewers, and sometimes collect household hazardous waste. They also help to guard against illegal discharges to storm sewers (releases to the street, etc.).

Households Hazardous Waste

HHWs include pesticides, batteries, old paint, solvents, used oil, antifreeze, and other chemicals that should not go into a regular municipal landfill. HHW programs focus on removing dangerous substances from homes and preventing their release into the environment through landfills, sewer systems and illegal dumping. The City of Jackson and Amador County Public Works Solid Waste Division host a variety of hazardous waste collection events throughout the year to assist in the elimination of household hazardous waste. HHW Collection Facilities receive hazardous waste that comes from homes and, in some cases, from small business hazardous waste generators.

3.8.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact from hazards and hazardous materials if it will:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter 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 two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;

- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

IMPACTS AND MITIGATION MEASURES

Impact 3.8-1: General Plan implementation has the potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (Less than Significant)

Future development, infrastructure, and other projects allowed under the General Plan may involve the transportation, use, and/or disposal of hazardous materials. Hazardous materials are typically used in industrial, and commercial uses, as well as residential uses. Future uses may involve the transport and disposal of such materials from time to time. Future activities may involve equipment or construction activities that use hazardous materials (e.g., coatings, solvents and fuels, and diesel-fueled equipment), cleanup of sites with known hazardous materials, the transportation of excavated soil and/or groundwater containing contaminants from areas that are identified as being contaminated, or disposal of contaminated materials at an approved disposal site. While hazardous materials may be associated with industrial activities, hazardous materials may also be associated with the regular cleaning and maintenance of residential and other less intense uses. Accidental release of hazardous materials that are used in the construction or operation of a project may occur. There is also the potential for accidental release of pre-existing hazardous materials, associated with previous activities on a site. This is considered a potential impact, which would be minimized through the implementation of the General Plan's policies and actions listed below, and through compliance with Federal, State, and local laws.

The use, transportation, and disposal of hazardous materials is regulated and monitored by local fire departments, CUPAs, the Cal OSHA and the DTSC consistent with the requirements of Federal, State, and local regulations and policies. Facilities that store hazardous materials on-site are required to maintain a Hazardous Materials Business Plan in accordance with State regulations. In the event of an accidental release of hazardous materials, the local CUPA and emergency management agencies (e.g., Police and Fire) would respond. All future projects allowed under the General Plan would be required to comply with the provisions of Federal, State, and local requirements related to hazardous materials. As future development and infrastructure projects are considered by the City, each project would be evaluated for potential impacts, specific to the project, associated with hazardous materials as required under CEQA.

In addition to the requirements associated with Federal and State regulations and the Municipal Code, the General Plan includes policies and actions to address potential impacts associated with hazardous materials among other issues. These policies and actions in the General Plan, which are listed below, would ensure that potential hazards are identified on a project site, that

development is located in areas where potential exposure to hazards and hazardous materials can be mitigated to an acceptable level, and that business operations comply with Federal and State regulations regarding the use, transport, storage, and disposal of hazardous materials. The General Plan also includes policies and actions to ensure that the City has adequate emergency response plans and measures to respond in the event of an accidental release of a hazardous substance.

As described previously in the regulatory setting, hazardous materials regulations related to the use, handling, and transport of hazardous materials are codified in Titles 8, 22, and 26 of the CCR, and their enabling legislation set forth in Chapter 6.95 of the California Health and Safety Code. These laws were established at the state level to ensure compliance with federal regulations to reduce the risk to human health and the environment from the routine use of hazardous substances. These regulations must be implemented by employers/businesses, as appropriate, and are monitored by the state (e.g., Cal OSHA in the workplace or DTSC for hazardous waste) and/or the County. Implementation of Title 49, Parts 171-180, of the Code of Federal Regulations would reduce any impacts associated with the potential for accidental release of hazardous materials. Therefore, implementation of the proposed General Plan policies and actions listed below, as well as Federal and State regulations, would result in a **less than significant** impacts associated with the routine use, transport, storage, or disposal or accidental release of hazardous materials.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

POLICIES

SA-5.1: Encourage the use of pesticides consistent with State and Federal requirements and product-specific safety recommendations.

SA-5.2: Encourage local producers and users of hazardous materials to reduce the amounts of hazardous materials generated.

SA-5.3: Require hazardous waste generated within the City to be disposed of in a safe manner, consistent with all applicable local, State, and Federal laws.

SA-5.4: Require hazardous materials to be stored in a safe manner, consistent with all applicable local, State, and Federal laws.

SA-5.5: Require compliance with the Amador County Environmental Health Department's consolidated hazardous materials program.

SA-5.6: Work with the County and/or other agencies to limit the effects of former mining activities.

ACTIONS

SA-5a: Work with Amador County Waste Management and the City's waste hauler to require acceptance of oils, paints, and other recyclable hazardous materials.

SA-5b: Coordinate with the Amador County Environmental Health Department as the Certified Unified Program Agency (CUPA) to ensure that businesses that handle hazardous materials prepare and file a Hazardous Materials Business Plan (HMBP). The HMBP shall consist of general business information, basic information on the location, type, quantity, and health risks of hazardous materials, and emergency response and training plans.

SA-5c: Provide educational opportunities for generators of small quantity, household, and urban agriculture waste products regarding their responsibilities for source reduction and proper and safe hazardous waste management and disposal.

SA-5d: Provide information about drop-off programs for the local disposal of household hazardous waste offered in Amador County. The availability of the programs should be widely publicized throughout the community.

SA-5e: Refer all permits for new projects or major additions to existing uses located on sites identified by the State as having or containing likely hazardous substances or materials to the Amador County Environmental Health Department to ensure compliance with applicable State and local regulations. If warranted, identify and require mitigation measures to ensure the exposure to hazardous materials from historical uses has been mitigated to acceptable levels consistent with EPA and/or California Department of Toxic Substances Control standards.

Impact 3.8-2: General Plan implementation has the potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (Less than Significant)

The Amador County Unified School District (ACUSD), which provides public school services for elementary and high schools (grades K-12) throughout Amador County serves the Planning Area. The District is divided into five separate areas for planning purposes. The City of Jackson and the SOI are located in Area 4. The following schools are located in the ACUSD and would serve the entire planning area: Jackson Elementary serves grades K-6 and is located at 220 Church Street in the City of Jackson; the Jackson Junior High School serves grades 6 through 8 and is located at 333 Rex Avenue, also in the City of Jackson; and Argonaut High School is located at 501 Argonaut Lane in the City of Jackson. Table 3.8-6 lists schools in Jackson and the most recent enrollment for each school.

TABLE 3.8-6: PUBLIC SCHOOLS SERVING JACKSON

<i>SCHOOL</i>	<i>GRADES SERVED</i>	<i>ADDRESS</i>	<i>ENROLLMENT 2019-2020 SCHOOL YEAR</i>
<i>ELEMENTARY AND MIDDLE SCHOOLS</i>			
Jackson Elementary	K-5	220 Church Street	430
Jackson Junior High School	6-8	217 Rex Avenue	375
<i>HIGH SCHOOLS</i>			
Argonaut High School	9-12	501 Argonaut Lane	479

SOURCE: CALIFORNIA DEPARTMENT OF EDUCATION EDUCATIONAL DEMOGRAPHICS UNIT ENROLLMENT FOR 2019-20

The General Plan Land Use Element includes land use designations, but does not propose actual development projects, businesses, or school facilities. As such, it is not possible to determine if a specific use will result in hazardous emissions or require handling of hazardous or acutely hazardous materials, substances, or waste in proximity to a school site. The land use designations with the highest possibility of having businesses that result in hazardous emissions or require handling of hazardous or acutely hazardous materials, substances, or waste would be industrial,

and commercial type uses. Some of these uses would likely occur within ¼ mile of an existing school. Each of these uses may use a variety of hazardous materials commonly found in developed areas including: paints, cleaners, and cleaning solvents. If handled appropriately, these materials do not pose a significant risk. The Industrial designation is intended for land which is suitable for manufacturing and light industrial uses. The Commercial designation is applied to those areas of the City where retail, commercial, and professional business services are acceptable.

The proposed General Plan is not anticipated to directly lead to the establishment of new businesses that would emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste because the General Plan does not approve any specific development project. However, given the unknown nature of future business establishments within the commercial and industrial use areas, the potential for hazardous materials is present. This is considered a potentially significant impact, which would be mitigated to a less than significant level through the implementation of the policies and actions listed below.

All hazardous materials would be required to be handled in accordance with Federal, State, and County requirements, which would limit the potential for a project to expose nearby uses, including schools, to hazardous emissions or an accidental release. Hazardous emissions are monitored by RWQCB, DTSC and the local CUPA. In the event of a hazardous materials spill or release, notification and cleanup operations would be performed in compliance with applicable Federal, State, and local regulations and policies, including hazard mitigation plans. As part of the development review process, the City's proposed General Plan also requires projects that may result in significant risks associated with hazardous materials to include measures to address and reduce the risks to an acceptable level such that surrounding uses are not exposed to hazardous materials in excess of adopted state and federal standards. Compliance with all existing regulations as well as the proposed General Plan policies and actions related to land use compatibility and hazardous materials would result in a **less than significant** impact related to this topic.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

POLICIES

SA-5.1: Encourage the use of pesticides consistent with State and Federal requirements and product-specific safety recommendations.

SA-5.2: Encourage local producers and users of hazardous materials to reduce the amounts of hazardous materials generated.

SA-5.3 Require hazardous waste generated within the City to be disposed of in a safe manner, consistent with all applicable local, State, and Federal laws.

SA-5.4: Require hazardous materials to be stored in a safe manner, consistent with all applicable local, State, and Federal laws.

SA-5.5: Require compliance with the Amador County Environmental Health Department's consolidated hazardous materials program.

SA-5.6: Work with the County and/or other agencies to limit the effects of former mining activities.

ACTIONS

SA-5a: Work with Amador County Waste Management and the City's waste hauler to require acceptance of oils, paints, and other recyclable hazardous materials.

SA-5b: Coordinate with the Amador County Environmental Health Department as the Certified Unified Program Agency (CUPA) to ensure that businesses that handle hazardous materials prepare and file a Hazardous Materials Business Plan (HMBP). The HMBP shall consist of general business information, basic information on the location, type, quantity, and health risks of hazardous materials, and emergency response and training plans.

SA-5c: Provide educational opportunities for generators of small quantity, household, and urban agriculture waste products regarding their responsibilities for source reduction and proper and safe hazardous waste management and disposal.

SA-5d: Provide information about drop-off programs for the local disposal of household hazardous waste offered in Amador County. The availability of the programs should be widely publicized throughout the community.

SA-5e: Refer all permits for new projects or major additions to existing uses located on sites identified by the State as having or containing likely hazardous substances or materials to the Amador County Environmental Health Department to ensure compliance with applicable State and local regulations. If warranted, identify and require mitigation measures to ensure the exposure to hazardous materials from historical uses has been mitigated to acceptable levels consistent with EPA and/or California Department of Toxic Substances Control standards.

Impact 3.8-3: General Plan implementation has the potential to have projects located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Less than Significant)

There are 17 locations listed within Jackson that are listed in the Envirostor database. 2 sites are listed as active, 6 sites are referred to other agencies, 3 sites are listed Inactive – Action Required, 5 sites are listed Inactive – Needs Evaluation, and one is listed with no further action required. Table 3.8-1 lists the Envirostor sites within the City of Jackson. There are 23 locations identified with a City of Jackson address that are listed in the GeoTracker database for Leaking Underground Storage Tanks (LUST). Of these, 22 of the locations have undergone LUST cleanup and the State has closed the cases, one case is open for site assessment. Table 3.8-2 lists the location of open and closed cases for LUSTs in Jackson.

The City of Jackson does not have any active solid waste facilities listed in the SWIS database. The vast majority of landfill disposal from the City of goes to the Kiefer Landfill located in eastern Sacramento County.

As described in the Environmental Setting Section, there are two hazardous materials release sites compiled pursuant to Government Code Section 65962.5 that are identified as having a Jackson address. Of these Argonaut Mine (site # 03100002) is located in the Planning Area. Past use(s) that

caused contamination included past mining activities. Potential media affected includes: sediments, soil, surface waters.

The Argonaut Mine site consists of approximately 65 acres of mine tailings derived from the Argonaut Mine/Mill, located approximately 1000 feet to the north. The Argonaut Mine was a below ground hard rock gold mine and mill which was in operation between 1850 and 1942. Ore was processed onsite using stamp mill, oil flotation, and mercury amalgamation techniques; processing between 1923 and 1938 was performed using cyanide vat leaching techniques. No mining operations are known to have occurred at the site after 1942, but various organized efforts to recover gold from existing tailings occurred in the 1980s and 1990s. In the early 1990s, approximately 60,000 tons of unprocessed ore was reportedly removed from the property for gold processing in Nevada.

A site screening conducted by the Regional Water Quality Control Board (RWQCB) in 1990 resulted in the issuance of Cleanup and Abatement Order 90-722, to clean up surface impoundments and unprocessed ore in the northern portion of the site. The Department of Toxic Substances Control (DTSC) issued a fence and post order for the site in March 1995, completed in 1996.

In 2007, DTSC issued an Imminent and Substantial Endangerment determination for the site. Site characterization was completed in 2010 and a Removal Action Workplan was approved in 2012. A 2010 letter was sent to the property owner and Amador County describing the deteriorated condition of the concrete dam on site.

DTSC requested USEPA reevaluate the site for placement on the National Priorities List (NPL), also known as Superfund. USEPA requested the Army Corp of Engineers (ACE) evaluate the stability of the concrete dam. In 2015, the ACE determined that the concrete dam was unstable and had potential for a catastrophic failure resulting in over a 100 million in damages and possible loss of life. DTSC decided to design and construct a stormwater diversion system behind the dam to prevent water from pooling directly behind the dam and increasing the load on the dam.

The site was listed on the NPL in September 2016. USEPA requested DTSC remain the lead agency on the retrofit of the concrete dam. DTSC worked with the ACE and Department of Water Resources to evaluate designs for the retrofit of the dam. A Remedial Action Plan was approved in January 2018 and construction began in May 2018. The retrofit was completed in December 2018.

USEPA has started a Non Time-Critical Removal Action that is expected to be completed in 2023. DTSC plans to install the Phase II Stormwater Drainage System beginning in 2023.

The above-mentioned sites are subject to various Federal and State laws and regulatory agencies, including the CERCLA, EPA, DTSC, and RWQCB. Development allowed by the General Plan could create a hazard to the public or the environment through a disturbance or release of contaminated materials if the development occurs on or adjacent to contaminated sites without appropriate measures to contain or mitigate the existing contamination.

The City of Jackson has prepared the General Plan to include policies and actions (listed under impacts 3.8-1, and 3.8-2) intended to ensure future developments are consistent with Federal,

State, and Local regulations regarding existing hazardous areas. These include policies such as SA 5.6 that call for the City to work with the County and/or other agencies to limit the effects of former mining activities. And actions including Action SA-5e which would refer all permits for new projects or major additions to existing uses located on sites identified by the State as having or containing likely hazardous substances or materials to the Amador County Environmental Health Department to ensure compliance with applicable State and local regulations. If warranted, policy SA-5e would also identify and require mitigation measures to ensure the exposure to hazardous materials from historical uses has been mitigated to acceptable levels consistent with EPA and/or California Department of Toxic Substances Control standards.

Federal and State regulations ensure that existing hazards, including those associated with known hazardous materials sites, are addressed prior to development. Compliance with Federal and State regulations would ensure that potential impacts associated with the hazardous conditions on sites listed pursuant to Government Code Section 65962.5 would be **less than significant**.

Impact 3.8-4: General Plan implementation is not located within an airport land use plan, two miles of a public airport or public use airport, and would not result in a safety hazard for people residing or working in the project area (Less than Significant)

Hazards related to airports are typically grouped into two categories: air hazards and ground hazards. Air hazards jeopardize the safety of an airborne aircraft and expose passengers, pilots, and crews to danger. Examples of air hazards include tall structures, glare-producing objects, bird and wildlife attractants, radio waves from communication centers, or other features that have the potential to interfere with take-off or landing procedures, posing a risk to aircraft. Ground hazards jeopardize the safety of current and future residents and/or workers in the vicinity of an airport. The most obvious ground hazard is a crash, which may produce a serious, immediate risk to those residing in or using areas adjacent to the airport. Most accidents occur during take-off and landing. Therefore, the higher the density around an airport, including transportation facilities, the higher the risk associated with this type of hazard.

There is one airport facility located near the Planning Area. The Amador County Airport, known as Westover Field, is located in the Martell area, approximately one mile northwest of the City of Jackson and is adjacent the northwest of the City limits.

The National Transportation Safety Board Aviation Accident (NTSBAA) Database identifies 9 aircraft within Amador County of which 7 accidents were associated within the vicinity of Jackson. (National Transportation Safety Board, 2019).

The Airport Land Use Commission established three safety zones for Westover Field Airport: Safety Area 1 (Clear Zone), Safety Area 2 (Approach/Departure Zone), and Safety Area 3 (Overflight Zone). There are no areas within the City limits or SOI that lie within Safety Areas 1 and 2. However, Safety Area 3 (Overflight Zone) includes areas within the City limits and the SOI. The land uses within the City limits that are affected by Area 3 are generally Commercial, Limited Commercial, and Residential Single Family. Within the area of the SOI that is affected included Residential Low

Density land use is proposed. While these land uses are listed as compatible under the Land Use Compatibility Guidelines for Safety in the ALUP, development within the City has the potential to place structures or objects in a height restriction area or safety zone, which may be considered an air navigation hazard according to FAA FAR Part 77 or may result in the placement of structures or facilities that are inconsistent with the ALUP. The ALUC Airport Safety Map and Land Use Compatibility Guidelines for Safety, contained within the Airport Master Plan, regulate land uses and structure heights that may constitute a hazard to air navigation. Any proposed object or structure that would penetrate any of these imaginary surfaces as they apply to the Westover Field Airport is considered by the Federal Aviation Administration (FAA) to be an obstruction to air navigation. The City of Jackson has prepared the General Plan to include policies and actions intended to ensure future developments are consistent with Airport's Comprehensive Airport Land Use Plan. These include policies such as LU-2.8 that would ensure that development within the Westover Field Airport Influence Area is consistent with the Westover Field Airport Land Use Compatibility Plan and implementing actions such as LU-2e which would refer all applications for development within the Westover Airport Influence Area to the ALUC for review and comment. Implementation of the General Plan policies and actions discussed above and listed below, as well as Federal and State regulations, would ensure that potential impacts from General Plan implementation relative to this topic would be **less than significant**.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

POLICIES

SA-7.1: Ensure that land uses within the vicinity of the Westover Field Airport are compatible with airport operations.

SA-7.2: Ensure that new development proposals do not result in encroachments into future airport expansion areas and do not result in adverse impacts to airport operations.

LU 2.8: Ensure that development within the Westover Field Airport Influence Area is consistent with the Westover Field Airport Land Use Compatibility Plan.

ACTIONS

LU-2e: Refer all applications for development within the Westover Airport Influence Area to the Airport Land Use Commission (ALUC) for comment.

SA-7a: As part of the development review process, new development and expansion proposals within the vicinity of the Westover Field Airport shall be:

- *Reviewed for consistency with setbacks, land use restrictions, and height as determined by the Federal Aviation Administration (FAA) and the County Airport Land Use Commission; and*
- *Provided to the Airport Land Use Commission for review.*

Impact 3.8-5: General Plan implementation has the potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (Less than Significant)

The General Plan would allow a variety of new development, including residential, commercial, industrial, and public projects, which would result in increased jobs and population in Jackson. Road and infrastructure improvements would occur to accommodate the new growth. Future development and infrastructure projects are not anticipated to remove or impede any established evacuation routes within the City. Furthermore, the General Plan does not include land uses, policies, or other components that conflict with adopted emergency response or evacuation plans. However, given that the type, location, and size of future development and infrastructure projects is not known at this time, there is the potential that the City could receive a development proposal that could potentially interfere with an established emergency evacuation route or plan. The General Plan ensures that the City's emergency access routes, emergency contact lists, and public information regarding designated facilities and routes are regularly reviewed to ensure that up to date information is available to the City and the public in the event of an emergency. Important new critical facilities would be located to ensure resiliency in the event of a natural disaster. Implementation of the General Plan policies and actions listed below would ensure impacts to adopted emergency response plan or emergency evacuation plans are **less than significant**.

GENERAL PLAN POLICIES AND ACTION THAT MINIMIZE POTENTIAL IMPACTS

POLICIES

SA-3.1: *Ensure that new critical facilities are located in areas that minimize exposure to potential natural hazards.*

SA-3.2: *Promote ongoing training of City staff on their functions and responsibilities in disaster preparedness.*

SA-3.3: *Ensure that critical facilities are properly supplied and equipped to provide emergency services.*

SA-3.4: *Support local and regional disaster planning and emergency response planning efforts, and look for opportunities to collaborate and share resources with other municipalities in the region.*

SA-3.5: *Continue to promote public safety through public education programs.*

SA-3.6: *Maintain effective mutual aid agreements for police, fire, medical response, and other functions as appropriate.*

SA 4.1: *Provide adequate funding for fire and law enforcement services, facilities, and personnel to accommodate existing and future citizens' needs to ensure a safe and secure environment for people and property.*

SA 4.2: *Emphasize the use of physical site planning as an effective means of enhancing safety and preventing crime. Open spaces, landscaping, parking lots, parks, play areas, and other public spaces should be designed with maximum feasible visual exposure to community residents.*

SA 4.3: Ensure that fire and emergency medical services meet existing and future demand.

SA 4.4: Ensure that adequate water supplies are available for fire suppression throughout the City.

SA 4.5: Support efforts to remedy any deficiencies in the water delivery system to ensure adequate fire suppression flows.

SA 4.6: Require development to construct and fund all fire suppression infrastructure and equipment needed to provide adequate fire protection services.

SA 4.7: Promote fire safety through education and building design.

SA 4.8: Promote public outreach to increase community safety. Public outreach should include information related to defensible space and evacuation routes.

SA 4.9: Ensure development projects are reviewed for consistency with the Amador County Local Hazard Mitigation Plan.

ACTIONS

SA-3a: Coordinate with the Amador County Office of Emergency Services (OES) and other local agencies, as necessary, to participate in and implement the multi-jurisdictional Amador County Local Hazard Mitigation Plan (LHMP).

SA-3b: Conduct periodic emergency response training exercises and or participate in regional exercises to ensure that key members, local leaders, and emergency response personnel are adequately trained and prepared for emergency situations. Critical facilities within Jackson should also be annually assessed to ensure they are properly supplied.

SA-3c: Encourage residents and community leaders to participate in disaster training programs.

SA-3d: Provide signage at public buildings and critical facilities that contain Automated External Defibrillators (AEDs).

SA-3e: Develop and annually update an emergency contact list and emergency response information on the City's website. The information should include emergency access routes, available emergency resources, and contact information for emergency responders.

SA-3f: As part of the development review process, consult with the Fire Department in order to ensure that development projects provide adequate emergency access.

Impact 3.8-6: General Plan implementation has the potential to expose people or structures to a significant risk of loss, injury or death involving wildland fires (Less than Significant)

Wildfires are a potential hazard to development and land uses located in the foothill and forested areas of the city. The severity of wildfire problems depends on a combination of vegetation, climate, slope, and people. The vegetation and topography found in the Planning Area, coupled with hot, dry summers, present fire hazards during critical fire periods for much of the county. In

addition to natural factors such as lightning, human activity is a primary factor contributing to the incidence of wildfires. Campfires, smoking, debris burning, arson, public utility infrastructure, and equipment use are common human-related causes of wildfires.

The City of Jackson is not categorized as a “Very High” FHSZ by CalFire. Amador County, including the City of Lone, contains areas with “moderate” “High” “Very High” and “non-wildland fuel” ranks. The majority of the Planning Area, within City Limits, is located within an LRA and categorized as Urban Unzoned or Non-Wildland/Non-Urban.

As shown in Figure 3.8-1 and 3.8-2, portions of the Planning Area are located within an LRA categorized as a Moderate FHSZ in southeastern corner of the City Limits. As shown on Figure 3.8-2, the Planning Area contains concentrations of land categorized as high fire hazard severity to people generally found at various locations within the SOI, along Jackson Creek, Highway 49, French bar Road, and Middle Bar Road. It should also be noted that the majority of the Planning Area within the SOI is considered to have a moderate fire hazard severity. It should be noted that there are no State Responsibility Areas or Federal Responsibility Areas within the vicinity of the Planning Area.

Fire threat determinations is a combination of two factors: 1) fire frequency, or the likelihood of a given area burning, and 2) potential fire behavior (hazard). These two factors are combined to create four threat classes ranging from moderate to extreme. Fire threat can be used to estimate the potential for impacts on various assets and values susceptible to fire. Impacts are more likely to occur and/or be of increased severity for the higher threat classes. The Jackson Planning Area is located within a Local Responsibility Area. CalFire has determined that the City of Jackson has no Very High Fire Hazard Severity Zones within Local Responsibility Areas.

The General Plan includes policies and actions, listed below, for adequate water supply and water flow availability, ensuring adequate emergency access, adequate fire protection services, fire safe design site standards, and ensuring public awareness regarding fire safety. All future projects allowed under the General Plan would be required to comply with the provisions of Federal, State, and local requirements related to wildland fire hazards, including State fire safety regulations associated with wildland-urban interfaces, fire-safe building standards, and defensible space requirements. As future development and infrastructure projects are considered by the City, each project would be evaluated for potential impacts, specific to the project, associated with wildland fire hazards as required under CEQA. Additionally development allowed under the General Plan would allow development to place people and/or structures in undeveloped areas that are generally identified as having a low to moderate risk of wildland fires so there is always a potential for urban wildland interface fire risk, however, as described previously compliance with general plan policies, fire code requirements, and review and compliance with emergency planning for fire related impacts this impact is considered a **less than significant** impact at the program level.

GENERAL PLAN POLICIES AND ACTION THAT MINIMIZE POTENTIAL IMPACTS

POLICIES

SA 4.1: Provide adequate funding for fire and law enforcement services, facilities, and personnel to

accommodate existing and future citizens' needs to ensure a safe and secure environment for people and property.

SA 4.3: Ensure that fire and emergency medical services meet existing and future demand.

SA 4.4: Ensure that adequate water supplies are available for fire suppression throughout the City.

SA 4.5: Support efforts to remedy any deficiencies in the water delivery system to ensure adequate fire suppression flows.

SA 4.6: Require development to construct and fund all fire suppression infrastructure and equipment needed to provide adequate fire protection services.

SA 4.7: Promote fire safety through education and building design.

SA 4.10: Consider amendments to the Land Use Map in the event of significant structure loss from wildfire to ensure that redevelopment of homes and business does not lead to unreasonable future risk from wildfires.

ACTIONS

SA-4b: As part of the development review process, consult with the Fire Department in order to ensure that development projects facilitate adequate fire services and fire prevention measures.

SA-4c: Continue to require all new development to be reviewed for consistency with the relevant State and local Fire Safe Regulations, and the most recently adopted fire code standards.

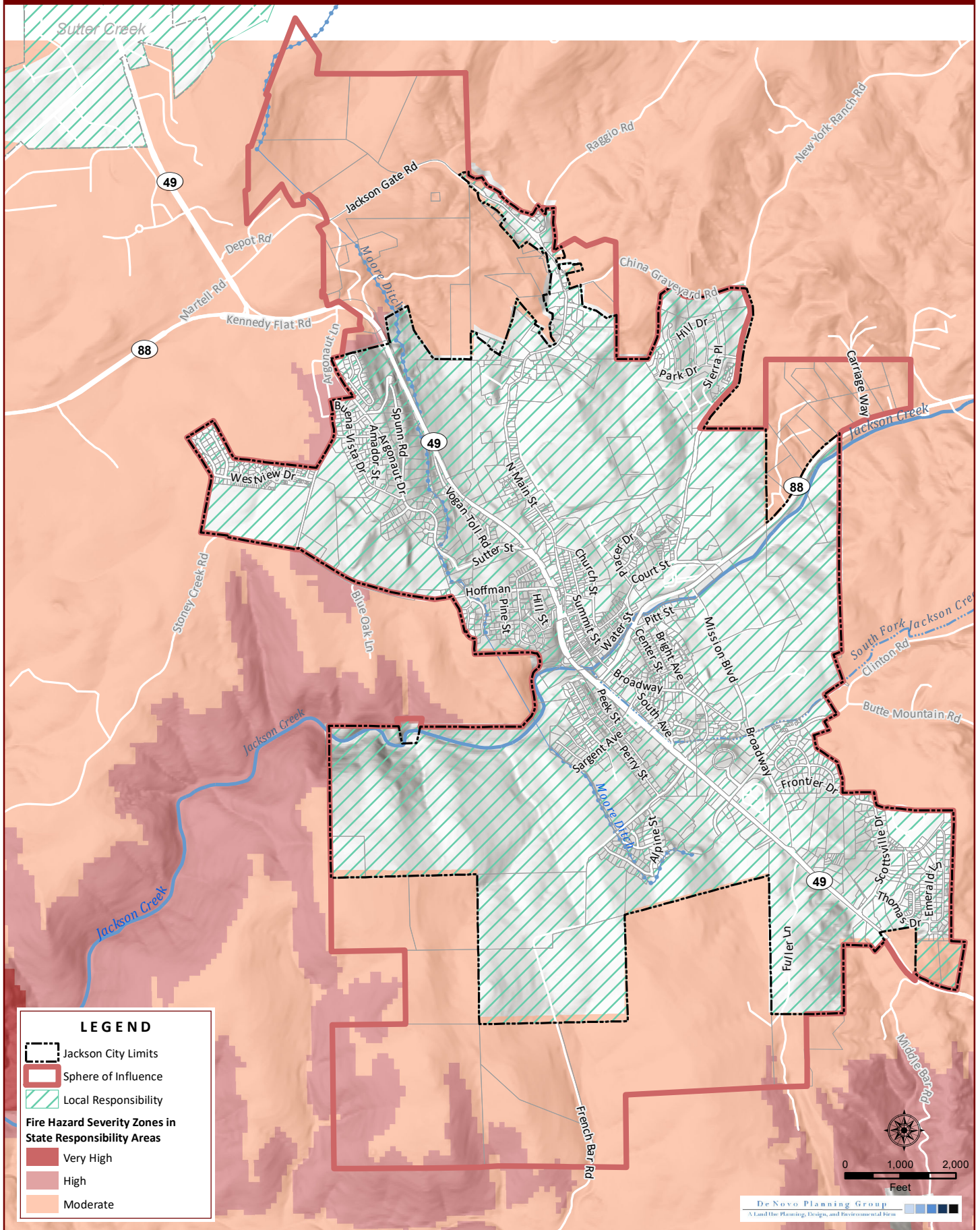
SA-4d: Reduce the risk of wildfire hazards by working with property owners, the Fire Department, and Public Works Division to maintain fire retardant landscaping, buffer zones, community fire breaks, and private road and public road clearance in areas of high wildfire risk.

SA-4e: Work with Amador County and other partner agencies to review and update local and regional hazard plans, including emergency operation plans and the Amador County Local Hazard Mitigation Plan, to include an analysis of evacuation routes, fire breaks, and other community needs.

SA-4f: Seek funding from state, federal, and other sources to assist in emergency management planning, including community education and outreach describing public procedures and evacuation routes in the event of an emergency or natural disaster.

SA-4g: Promote cooperation between the Jackson Fire Department, Amador Fire Protection District, and other countywide fire districts for training and mutual aid.

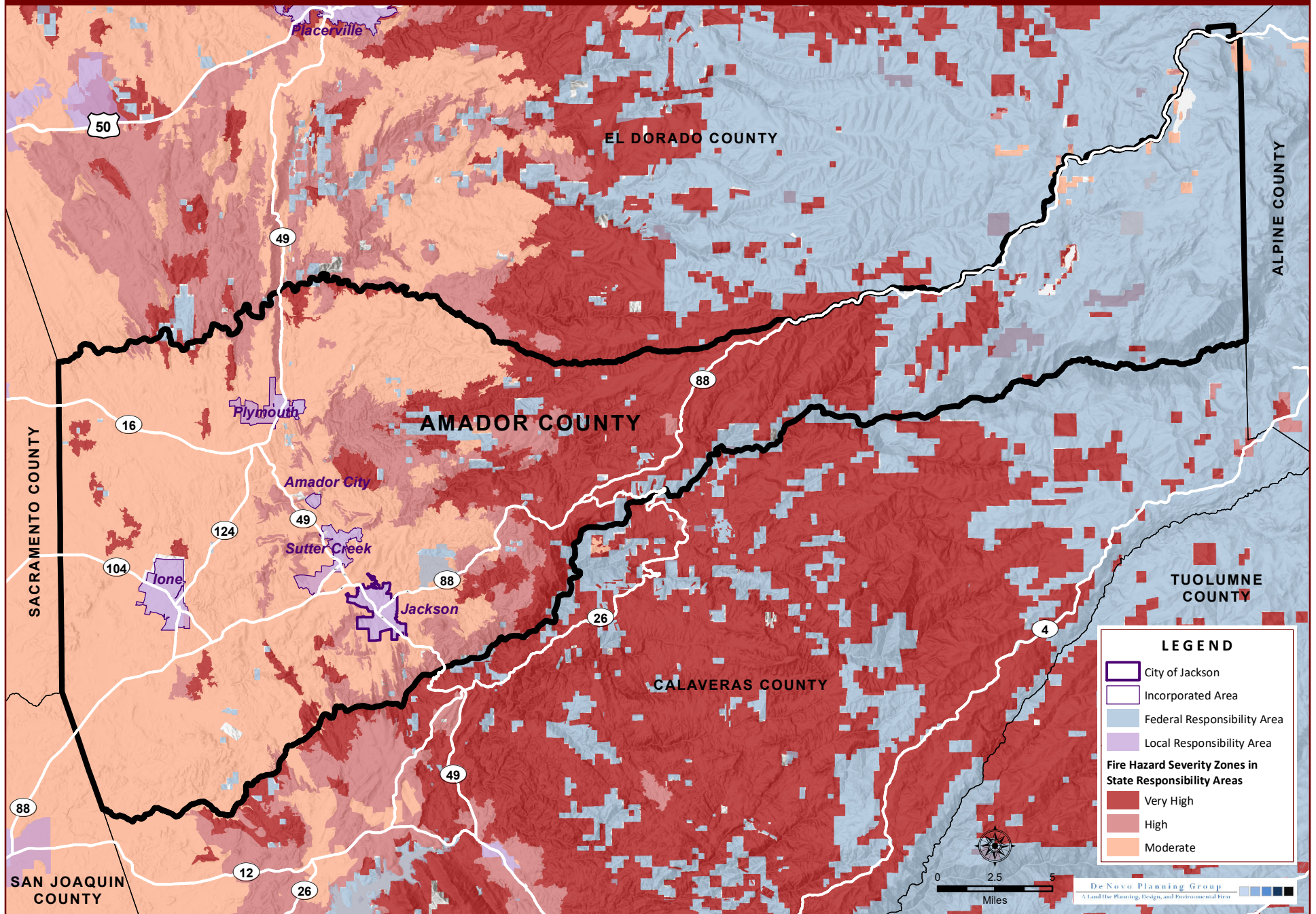
Figure 3.8-1 Fire Hazard Severity Zones -City of Jackson



Sources: City of Jackson; ACTC; ArcGIS Online World Elevation/Terrain Image Service. Map date: April 9, 2021.

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Figure 3.8-2. Fire Hazard Severity Zones - Amador County



Sources: California State Geoportal; ArcGIS Online World Elevation/Terrain Image Service. Map date: April 9, 2021.

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This section provides a background discussion of the regional hydrology, flooding, water quality, water purveyors, and water sources in Jackson. This section is organized with an existing setting, regulatory setting, and impact analysis.

Comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from Cal OES. Each of the comments related to this topic are addressed within this section. Full comments received are included in Appendix A.

KEY TERMS

Groundwater: Water that is underground and below the water table, as opposed to surface water, which flows across the ground surface. Water beneath the earth's surface fills the spaces in soil, gravel, or rock formations. Pockets of groundwater are often called "aquifers" and are the source of drinking water for a large percentage of the population in the United States. Groundwater is often extracted using wells which pump the water out of the ground and up to the surface. Groundwater is naturally replenished by surface water from precipitation, streams, and rivers when this recharge reaches the water table.

Surface water: Water collected on the ground or from a stream, river, lake, wetland, or ocean. Surface water is naturally replenished through precipitation but is naturally lost through evaporation and seepage into soil.

3.9.1 ENVIRONMENTAL SETTING

REGIONAL HYDROLOGY

The City of Jackson is located within the Jackson Creek and Upper Mokelumne River Watersheds. The County is situated in a region that dramatically drops in elevation from the Sierra Nevada Mountains in the east to the central and western portions, where excess rain or snow can contribute to downstream flooding. The Cosumnes and Mokelumne Rivers, which border the planning area to the north and south, respectively, are both tributary to the San Joaquin River. The North Fork Mokelumne River originates in the Sierra Nevada and flows west to its confluence with the San Joaquin River in the Central Valley. With a watershed encompassing approximately 660 square miles, the annual average runoff of the Mokelumne River at Pardee Reservoir is 753,000 acre-feet, with the majority of flow derived from snowmelt. Annual precipitation and streamflow in the Mokelumne River are extremely variable both month to month and year to year. Stream flow is modified by upstream diversions and regulated by reservoir storage operations for hydroelectric power generation and water supply. The Mokelumne River watershed is typically subdivided into the Upper Mokelumne River Watershed, extending from its upper reaches in eastern Alpine County to the southwestern side of Pardee Reservoir, and the Lower Mokelumne River watershed, extending from its shared boundary with the upper watershed, southwest through the river's confluence with the Cosumnes River.

The Cosumnes River forms the northern boundary of the western portion of Amador County. The South and Middle Forks of the River converge into the main stem of the Cosumnes River near State

3.9 HYDROLOGY AND WATER QUALITY

Highway 49. The Cosumnes passes through southern Sacramento County in the Sacramento Valley, joining with the Mokelumne River in San Joaquin County and emptying into the Sacramento-San Joaquin Delta.

Other significant rivers or streams in the western foothills region include Sutter Creek and Jackson Creek. With headwaters near Pine Grove, Sutter Creek flows through the cities of Sutter Creek and Lone. West of Lone, below Lake Camanche, Sutter Creek flows into Dry Creek which eventually discharges to the Mokelumne River. The cities of Sutter Creek and Lone both operate wastewater treatment plants adjacent to Sutter Creek. Jackson Creek, with headwaters east of the community of Pioneer, flows through the City of Jackson, west through Jackson Valley and into Dry Creek. The City of Jackson wastewater treatment plant is located adjacent to Jackson Creek and discharges into that water body. Significant rivers or streams east towards the upland County area are Tiger Creek, Panther Creek, Bear River, and Cole Creek. Lake Amador (also known as Jackson Valley Reservoir) is an impoundment on Jackson Creek located southwest of Jackson, downstream of that community's wastewater treatment plant discharge and east of the community of Buena Vista. The spillway elevation of Lake Amador is approximately 500 feet. Lake Amador serves as an irrigation water supply for the Jackson Valley area and is managed by the Jackson Valley Irrigation District. Jackson Creek flows out of Lake Amador and eventually into Dry Creek which joins the Mokelumne River to the west.

CLIMATE AND PRECIPITATION

Runoff from precipitation and snowmelt from the Sierra Nevada mountains are the main sources of surface water supply in the Planning Area. Precipitation in the foothills region is dependent mainly on both climate and topography. Regional climate in the winter months is dominated by westerly, on-shore flows of moist marine air from the Pacific Ocean. In the summer months, relatively stable high-pressure cells are found over the area. Because of the area's low elevations, mild, wet winters and long, hot summers characterize the local climate. Most of the annual precipitation is received in the winter months and falls as rain as a result of storms during the winter months.

The region generally has warm, dry summers and mild winters. Temperatures of more than 100 degrees F occur every year and temperatures drop below freezing during winter months. The seasonal rain totals range from less than 20 inches at lower elevations to more than 40 inches at higher elevations. In the lower foothills region surrounding the site, there is little snowfall, but at higher elevations, the amount of snowfall is fairly large. For the area surrounding the subject site, the following generalizations can be made:

- Average maximum temperature is approximately 97 degrees F;
- Highest temperature observed was approximately 115 degrees F;
- Lowest temperature observed has been approximately 16 degrees F; and
- Average annual precipitation is approximately 30 inches.

WATERSHEDS

A watershed is a region that is bound by a divide that drains to a common watercourse or body of water. Watersheds serve an important biological function, oftentimes supporting an abundance of aquatic and terrestrial wildlife including special status species and anadromous and native local fisheries. Watersheds provide conditions necessary for riparian habitat.

The State uses a hierarchical naming and numbering convention to define watershed areas for management purposes. This means that boundaries are defined according to size and topography, with multiple sub-watersheds within larger watersheds. Table 3.9-1 shows the primary watershed classification levels used by the State of California. The second column indicates the approximate size that a watershed area may be within a particular classification level, although variation in size is common.

TABLE 3.9-1: STATE OF CALIFORNIA WATERSHED HIERARCHY NAMING CONVENTION

<i>WATERSHED LEVEL</i>	<i>APPROXIMATE SQUARE MILES (ACRES)</i>	<i>DESCRIPTION</i>
Hydrologic Region (HR)	12,735 (8,150,000)	Defined by large-scale topographic and geologic considerations. The State of California is divided into ten HRs.
Hydrologic Unit (HU)	672 (430,000)	Defined by surface drainage; may include a major river watershed, groundwater basin, or closed drainage, among others.
Hydrologic Area (HA)	244 (156,000)	Major subdivisions of hydrologic units, such as by major tributaries, groundwater attributes, or stream components.
Hydrologic Sub-Area (HSA)	195 (125,000)	A major segment of an HA with significant geographical characteristics or hydrological homogeneity.

SOURCE: CALWATER, CALIFORNIA INTERAGENCY WATERSHED MAPPING COMMITTEE, 2008.

Hydrologic Region

The Planning Area is located in the easterly portion of the San Joaquin River hydrologic region. This region is bound to the north by the Cosumnes River basin, San Joaquin River watershed to the south, ridgelines of the Sierra Nevada Mountains to the east, and crest of the Diablo Range in the coastal mountains to the west.

The San Joaquin River is the principal river of the region, and all other streams of the region are tributary to it. The Mokelumne River and its tributary the Cosumnes River originate in the central Sierra Nevada, along with the more southerly Stanislaus and Tuolumne rivers. The Merced River flows from the south central Sierra Nevada and enters the San Joaquin near the City of Newman. The Chowchilla and Fresno rivers also originate in the Sierra south of the Merced River and trend westward toward the San Joaquin River. Creeks originating in the Coast Range and draining eastward into the San Joaquin River include Del Puerto Creek, Orestimba Creek, and Panoche Creek. Del Puerto Creek enters the San Joaquin near the City of Patterson, and Orestimba Creek enters north of the City of Newman. During flood years, Panoche Creek may enter the San Joaquin

River or the Fresno Slough near the town of Mendota. The Kings River is a stream of the Tulare Lake Hydrologic Region, but in flood years it may contribute to the San Joaquin River, flowing northward through the James Bypass and Fresno Slough to enter near the City of Mendota. The Mud, Salt, Berrenda, and Ash sloughs also add to the San Joaquin River, and numerous lesser streams and creeks also enter the system, originating in both the Sierra Nevada and the Coast Range. The entire San Joaquin River system drains northwesterly through the Delta to Suisun Bay.

Local Watersheds (Hydrologic Sub-Areas)

Within the San Joaquin River Hydrological Region, the Planning Area is located in the Jackson Creek and Upper Mokelumne River watersheds as shown on Figure 3.9-1. The planning area is also located within the following watersheds:

Jackson Creek: The Jackson Creek watershed encompasses approximately 60.0 square miles and is located in the northeastern portion of the Planning Area. The Jackson Creek watershed includes the sub-basins of the North Fork Jackson Creek, Middle Fork Jackson Creek, and South Fork Jackson Creek upstream of their confluences near the center of the City of Jackson.

Jackass Gulch: The Jackass Gulch watershed is located in the western portion of the Planning Area. Jackass Gulch flows south through this portion of Planning Area and drains into Jackson Creek west of downtown Jackson.

Lake Tabeaud: The Lake Tabeaud watershed is located in the southeastern portion of the Planning Area. The South Fork of Jackson Creek is the main tributary to Jackson Creek collecting surface flow through this watershed area.

Butte Canyon: A portion of both the City's incorporated area and the City's Sphere of Influence is located within the Butte Canyon watershed in the southeastern portion of the Planning Area. This watershed includes the North and Middle forks of the Mokelumne River.

Rock Creek: The Rock Creek watershed encompasses the western edge of the city and a small portion of the City's SOI. This watershed is immediately west of the Jackass Gulch watershed. Jackass Creek flows through both watersheds.

Gopher Gulch: A small portion of the City's Sphere of Influence juts into the Gopher Gulch watershed area in the most northwestern portion of the Planning Area. Copper Creek flows through this watershed northwest of the city.

LOCAL DRAINAGE

The City of Jackson Public Works Department is responsible for operating, maintaining, and improving the City's drainage and stormwater infrastructure, and facilities. Key areas of responsibility include the maintaining and improvements to streets, sewer, and storm drains.

The drainage system consists of approximately 15 miles of open storm drains and 10 miles of covered storm drains, with approximately 250 inlets. All inlets are inspected at least once per year. Newer subdivisions have open ditches, which drain into Jackson Creek or other small streams or

drainage basins. Sixty percent of the total creek flow during critical flow to Jackson Creek is made up of treated Jackson wastewater treatment plant effluent.

Drainage infrastructure and maintenance are financed through the City's general fund. The City reports it has submitted grant applications for funding to correct additional flood areas, such as the FEMA/OES Hazard Mitigation grant program.

STORMWATER QUALITY

Surface water quality is affected by point source and non-point source pollutants. Point source pollutants are those emitted at a specific point, such as a pipe, while non-point source pollutants are typically generated by surface runoff from diffuse sources, such as streets, paved areas, and landscaped areas. Point source pollutants are controlled with pollutant discharge regulations or waste discharge requirements (WDRs). Non-point source pollutants are more difficult to monitor and control, although they are important contributors to surface water quality in urban areas.

Stormwater runoff pollutants vary based on land use, topography, the amount of impervious surface, and the amount and frequency of rainfall and irrigation practices. Runoff in developed areas typically contains oil, grease, and metals accumulated in streets, driveways, parking lots, and rooftops, as well as pesticides, herbicides, particulate matter, nutrients, animal waste, and other oxygen-demanding substances from landscaped areas. The highest pollutant concentrations usually occur at the beginning of the wet season during the "first flush."

303(d) Impaired Water Bodies

Water quality in the City is governed by the Central Valley Regional Water Quality Control Board (CVRWQCB), which set water quality standards in their Water Quality Control Plan for the respective basins (Basin Plans). The Basin Plans identify beneficial uses for surface water and groundwater and establish water quality objectives to attain those beneficial uses.

Section 303(d) of the federal CWA requires States to identify waters that do not meet water quality standards or objectives and thus, are considered "impaired." Once listed, Section 303(d) mandates prioritization and development of a Total Maximum Daily Load (TMDL). The TMDL is a tool that establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby the basis for the States to establish water quality-based controls. The purpose of TMDLs is to ensure that beneficial uses are restored and that water quality objectives are achieved.

According to the California Water Quality Control Monitoring Council, which is part of California Environmental Protection Agency, Natural Resources, there are many areas within Amador County which are considered Section 303(d) impaired waterbodies. The impaired water bodies are located within the Consumes River, Big Indian Creek, Sutter Creek, Mokelumne River, Bear River, Pardee Reservoir, Amador Lake, and the Camanche Reservoir. These hydrologic areas extend beyond the county boundary so not all impaired water body segments are located within Amador County. The pollution source is predominantly agricultural and crop related, although resource extraction is also a pollution source.

3.9 HYDROLOGY AND WATER QUALITY

Storm water runoff may play a role in the water quality impairments described above. Runoff that occurs as overland flow across yards, driveways, and public streets is intercepted by the storm water drainage system and conveyed to local drainages before eventually being routed to the Pacific. This storm water can carry pollutants that can enter the local waterways and result in the types of water quality impairments described above. Common sources of storm water pollution in the city include litter, trash, pet waste, paint residue, organic material (yard waste), fertilizers, pesticides, sediments, construction debris, metals from automobile brake pad dust, air pollutants that settle on the ground or attach to rainwater, cooking grease, illegally dumped motor oil, and other harmful fluids.

Potential hazards to surface water quality include the following nonpoint pollution problems: high turbidity from sediment resulting from erosion of improperly graded construction projects, concentration of nitrates and dissolved solids from agriculture or surfacing septic tank failures, contaminated street and lawn run-off from urban areas, and warm water drainage discharges into cold water streams.

The most critical period for surface water quality is following a rainstorm which produces significant amounts of drainage runoff into streams at low flow, resulting in poor dilution of contaminants in the low flowing stream. Such conditions are most frequent during the fall at the beginning of the rainy season when stream flows are near their lowest annual levels. Besides the greases, oils, pesticides, litter, and organic matter associated with such runoff, heavy metals such as copper, zinc, and cadmium can cause considerable harm to aquatic organisms when introduced to streams in low flow conditions.

Urban stormwater runoff was managed as a non-point discharge (a source not readily identifiable) under the Federal Water Pollution Control Amendments of 1972 (PL 92-500, Section 208) until the mid-1980's. However, since then, the Federal Environmental Protection Agency has continued to develop implementing rules which categorize urban runoff as a point source (an identifiable source) subject to NPDES permits. Rules now affect medium and large urban areas, and further rulemaking is expected as programs are developed to meet requirements of Federal water pollution control laws.

Surface water pollution is also caused by erosion. Excessive and improperly managed grading, vegetation removal, quarrying, logging, and agricultural practices all lead to increased erosion of exposed earth and sedimentation of watercourses during rainy periods. In slower moving water bodies these same factors often cause a buildup of siltation, which ultimately reduces the capacity of the water system to percolate and recharge groundwater basins, as well as adversely affecting both aquatic resources and flood control efforts.

GROUNDWATER

Within the foothill region of the Sierra Nevada Mountains, groundwater resources are highly variable with respect to quantity, depth, dependability, and quality. Annual rainfall for the area is approximately 30 inches and soils are relatively thin with shallow underlying bedrock. Since deep alluvium is absent, groundwater resources reside mostly in fractures within underlying bedrock.

According to studies by the U. S. Geology Survey in foothill areas of the Sierra Nevada Mountains, the fracture front in underlying bedrock normally terminates at depths of about 215 feet and porosity ranges between 0 to 5 percent for more massive volcanic rocks.

Per the California Department of Water Resources Bulletin No 118, titled "California's Ground Water," the Planning Area located within the Upper Mokelumne unit does not contain a principal aquifer and is not contained within the boundaries of a defined groundwater basin (DWR 2003). This estimate is supported by the existing climate, geology, and soils located on and in the immediate region surrounding the property.

Although the southwestern portion of Amador County is within the Cosumnes Subbasin, the Planning Area is not in a defined groundwater basin. In the undefined region, where water is drawn from fractured bedrock, groundwater quantity and quality vary greatly from well site to well site due to the small and unpredictable yields of the fractured rock system that typifies the foothill geology.

FLOODPLAIN MAPPING

FEMA Flood Zones

Federal Emergency Management Agency (FEMA) mapping provides important guidance for the City in planning for flooding events and regulating development within identified flood hazard areas. FEMA's National Flood Insurance Program (NFIP) is intended to encourage State and local governments to adopt responsible floodplain management programs and flood measures. As part of the program, the NFIP defines floodplain and floodway boundaries that are shown on Flood Insurance Rate Maps (FIRMs). The FEMA FIRM for the Planning Area is shown on Figure 3.9-2.

The FEMA FIRM for the Planning Area shows that a portion of the city is within the 100-year and 500-year floodplain area. The floodplain centers on the most developed portion of the city and stretches out in most directions from there, including along Jackson Creek, the South Fork of Jackson Creek, and Oneida Creek. Nearly 550 parcels are located in the plain. The Fire Department, Civic Center, County Sheriff Department and Sutter-Amador Hospital are located near the floodplain.

Flooding is generally confined to narrow areas along the streams, typically less than 150 feet wide. Flood waters seldom rise above the natural banks of the streams. However, there have been two flood events in the last 20 years. In 1997, heavy rains caused Jackson Creek to flood. Water went over the Pitt Street and Broadway Street bridges and evacuations of homes and businesses along the creek were ordered. The parking garage in downtown Jackson was under water. More recently, there was a wet spring in 2006, but damages in the city were indirect, cutting off the water supply to the City and road damages throughout the County.

Dam Inundation

Earthquakes centered close to a dam are typically the most likely cause of dam failure. Dam Inundation maps have been required in California since 1972, following the 1971 San Fernando

Earthquake and near failure of the Lower Van Norman Dam. A major dam failure event has not occurred in the Jackson Planning Area or within Amador County. A catastrophic failure of various dams in the region would have a significant impact on Amador County. According to CalOES, there are 9 dams in Amador County that could impact portions of Amador County.

According to the California Department of Water Resources, there are no major dams located within the upper reaches of the Jackson Creek watershed area and the City of Jackson is not located in a substantial dam failure inundation area that would be subject to large-scale inundation in the event of dam failure. However, the Lake Tabeaud Dam Inundation Area does include small portions of land adjacent to Jackson Creek within the City Limits. Figure 3.9-3 shows potential inundation areas along Jackson Creek within the City of Jackson.

Section 8589.5 of the California Government Code requires local jurisdictions to adopt emergency procedures for the evacuation of populated inundation areas identified by dam owners. The local Office of Emergency Services has prepared a Dam Failure Plan. This plan includes a description of dams, direction of floodwaters, responsibilities of local jurisdictions, and evacuation plans.

3.9.2 REGULATORY SETTING

There are a number of regulatory agencies whose responsibility includes the oversight of the water resources of the state and nation including FEMA, the US EPA, the State Water Resources Control Board (SWRCB), and the CVRWQCB. The following is an overview of the federal, state and local regulations that are applicable to the proposed project.

FEDERAL

Clean Water Act

The CWA, initially passed in 1972, regulates the discharge of pollutants into watersheds throughout the nation. Section 402(p) of the act establishes a framework for regulating municipal and industrial stormwater discharges under the National Pollutant Discharge Elimination System (NPDES) Program. Section 402(p) requires that stormwater associated with industrial activity that discharges either directly to surface waters or indirectly through municipal separate storm sewers must be regulated by an NPDES permit.

The CWA establishes the basic structure for regulating the discharges of pollutants into the waters of the United States and gives the US Environmental Protection Agency (EPA) the authority to implement pollution control programs. The statute's goal is to regulate all discharges into the nation's waters and to restore, maintain, and preserve the integrity of those waters. The CWA sets water quality standards for all contaminants in surface waters and mandates permits for wastewater and stormwater discharges.

The CWA also requires states to establish site-specific water quality standards for navigable bodies of water and regulates other activities that affect water quality, such as dredging and the filling of wetlands. The following CWA sections assist in ensuring water quality for the water of the United States:

CWA Section 208 requires the use of best management practices (BMPs) to control the discharge of pollutants in stormwater during construction CWA Section 303(d) requires the creation of a list of impaired water bodies by states, territories, and authorized tribes; evaluation of lawful activities that may impact impaired water bodies, and preparation of plans to improve the quality of these water bodies. CWA Section 303(d) also establishes TMDLs, which is the maximum amount of a pollutant that a water body can receive and still safely meet water quality standards CWA Section 404 authorizes the US Army Corps of Engineers to require permits that will discharge dredge or fill materials into waters in the US, including wetlands.

In California, the EPA has designated the SWRCB and its nine RWQCBs with the authority to identify beneficial uses and adopt applicable water quality objectives.

The SWRCB is responsible for implementing the CWA and does so through issuing NPDES permits to cities and counties through regional water quality control boards. Federal regulations allow two permitting options for storm water discharges (individual permits and general permits).

Federal Emergency Management Agency

FEMA operates the NFIP. Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years, although such a flood may occur in any given year. Communities are occasionally audited by the California Department of Water Resources to insure the proper implementation of FEMA floodplain management regulations.

Flood Control Act

The Flood Control Act (1917) established survey and cost estimate requirements for flood hazards in the Sacramento Valley. All levees and structures constructed per the Act were to be maintained locally but controlled federally. All rights of way necessary for the construction of flood control infrastructure were to be provided to the Federal government at no cost.

Federal involvement in the construction of flood control infrastructure, primarily dams and levees, became more pronounced upon passage of the Flood Control Act of 1936.

Flood Disaster Protection Act (FDPA)

The FDPA of 1973 was a response to the shortcomings of the NFIP, which were experienced during the flood season of 1972. The FDPA prohibited Federal assistance, including acquisition, construction, and financial assistance, within delineated floodplains in non-participating NFIP communities. Furthermore, all Federal agencies and/or federally insured and federally regulated lenders must require flood insurance for all acquisitions or developments in designated Special Flood Hazard Areas (SFHAs) in communities that participate in the NFIP.

Improvements, construction, and developments within SFHAs are generally subject to the following standards:

3.9 HYDROLOGY AND WATER QUALITY

- All new construction and substantial improvements of residential buildings must have the lowest floor (including basement) elevated to or above the base flood elevation (BFE).
- All new construction and substantial improvements of non-residential buildings must either have the lowest floor (including basement) elevated to or above the BFE or dry-floodproofed to the BFE.
- Buildings can be elevated to or above the BFE using fill, or they can be elevated on extended foundation walls or other enclosure walls, on piles, or on columns.
- Extended foundation or other enclosure walls must be designed and constructed to withstand hydrostatic pressure and be constructed with flood-resistant materials and contain openings that will permit the automatic entry and exit of floodwaters. Any enclosed area below the BFE can only be used for the parking of vehicles, building access, or storage.

National Flood Insurance Program (NFIP)

Per the National Flood Insurance Act of 1968, the NFIP has three fundamental purposes: *Better indemnify individuals for flood losses through insurance; Reduce future flood damages through State and community floodplain management regulations; and Reduce Federal expenditures for disaster assistance and flood control.*

While the Act provided for subsidized flood insurance for existing structures, the provision of flood insurance by FEMA became contingent on the adoption of floodplain regulations at the local level.

National Pollutant Discharge Elimination System

NPDES permits are required for discharges to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, oceans, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal CWA, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.)

The RWQCB issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the EPA Regional Administrator (EPA Region 9). The terms of these NPDES permits implement pertinent provisions of the Federal CWA and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti-degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the CWA's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the CWA.

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and groundwater cleanup discharges. NPDES permits are issued for five years or less, and are therefore to be updated regularly. The rapid and dramatic population and urban growth in the Central Valley Region has caused a significant increase in NPDES permit applications for new waste discharges. To expedite the permit issuance process, the SWRCB has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes. The SWRCB has issued general permits for

stormwater runoff from industrial and construction sites statewide. Stormwater discharges from industrial and construction activities in the Central Valley Region can be covered under these general permits, which are administered jointly by the SWRCB and RWQCB.

Individual projects in the City that disturb more than one acre would be required to obtain NPDES coverage under the California General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit). The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) describing Best Management Practices (BMP) the discharger would use to prevent and retain storm water runoff. The SWPPP must contain a visual monitoring program; a chemical monitoring program for “non-visible” pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a waterbody listed on the 303(d) list for sediment.

Rivers and Harbors Appropriation Act of 1899

One of the country’s first environmental laws, this Act established a regulatory program to address activities that could affect navigation in Waters of the United States.

Water Pollution Control Act of 1972

The Water Pollution Control Act (WPCA) established a program to regulate activities that result in the discharge of pollutants to waters of the United States

STATE

California Fish and Wildlife Code

The California Department of Fish and Wildlife (CDFW) protects streams, water bodies, and riparian corridors through the streambed alteration agreement process under Section 1600 to 1616 of the California Fish and Game Code. The California Fish and Game Code establishes that “an entity may not substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river stream, or lake” (Fish and Game Code Section 1602(a)) without notifying the CDFW, incorporating necessary mitigation and obtaining a streambed alteration agreement. The CDFW’s jurisdiction extends to the top of banks and often includes the outer edge of riparian vegetation canopy cover.

California Code of Regulations

California Code of Regulations (CCR) Title 22, Chapter 15, Article 20 requires all public water systems to prepare a Consumer Confidence Report for distribution to its customers and to the Department of Health Services. The Consumer Confidence Report provides information regarding the quality of potable water provided by the water system. It includes information on the sources of the water, any detected contaminants in the water, the maximum contaminants levels set by regulation, violations and actions taken to correct them, and opportunities for public participation in decisions that may affect the quality of the water provided.

California Government Code

Relevant sections of the California Government Code are identified below.

SECTION 65302

Revised safety elements must include maps of any 200-year flood plains and levee protection zones within the Planning Area.

SECTION 65584.04

Any land having inadequate flood protection, as determined by FEMA or DWR, must be excluded from land identified as suitable for urban development within the planning area.

SECTION 8589.4

California Government Code §8589.4, commonly referred to as the Potential Flooding-Dam Inundation Act, requires owners of dams to prepare maps showing potential inundation areas in the event of dam failure. A dam failure inundation zone is different from a flood hazard zone under the National Flood Insurance Program (NFIP). NFIP flood zones are areas along streams or coasts where storm flooding is possible from a “100-year flood.” In contrast, a dam failure inundation zone is the area downstream from a dam that could be flooded in the event of dam failure due to an earthquake or other catastrophe. Dam failure inundation maps are reviewed and approved by the California Office of Emergency Services (OES). Sellers of real estate within inundation zones are required to disclose this information to prospective buyers.

California Department of Health Services

The Department of Health Services, Division of Drinking Water and Environmental Management, oversees the Drinking Water Program. The Drinking Water Program regulates public water systems and certifies drinking water treatment and distribution operators. It provides support for small water systems and for improving their technical, managerial, and financial capacity. It provides subsidized funding for water system improvements under the State Revolving Fund (“SRF”) and Proposition 50 programs. The Drinking Water Program also oversees water recycling projects, permits water treatment devices, supports and promotes water system security, and oversees the Drinking Water Treatment and Research Fund for MTBE and other oxygenates.

Consumer Confidence Report Requirements

California Code of Regulations (CCR) Title 22, Chapter 15, Article 20 requires all public water systems to prepare a Consumer Confidence Report for distribution to its customers and to the Department of Health Services. The Consumer Confidence Report provides information regarding the quality of potable water provided by the water system. It includes information on the sources of the water, any detected contaminants in the water, the maximum contaminant levels set by regulation, violations and actions taken to correct them, and opportunities for public participation in decisions that may affect the quality of the water provided.

California Water Code

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and each of the RWQCBs power to protect water quality, and is the primary vehicle for implementation of California's responsibilities under the Federal CWA. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites, and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a Water Quality Control Plan (Basin Plan) for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

Assembly Bill 162

Assembly Bill (AB) 162 requires a general plan's land use element to identify and annually review those areas covered by the general plan that are subject to flooding as identified by flood plain mapping prepared by FEMA or DWR. The bill also requires, upon the next revision of the housing element, on or after January 1, 2009, the conservation element of the general plan to identify rivers, creeks, streams, flood corridors, riparian habitat, and land that may accommodate floodwater for purposes of groundwater recharge and stormwater management. By imposing new duties on local public officials, the bill creates a State-mandated local program.

This bill also requires, upon the next revision of the housing element, on or after January 1, 2009, the safety element to identify, among other things, information regarding flood hazards and to establish a set of comprehensive goals, policies, and objectives, based on specified information for the protection of the community from, among other things, the unreasonable risks of flooding.

Assembly Bill 70

AB 70 provides that a city or county may be required to contribute its fair and reasonable share of the property damage caused by a flood to the extent that it has increased the State's exposure to liability for property damage by unreasonably approving, as defined, new development in a previously undeveloped area, as defined, that is protected by a State flood control project, unless the city or county meets specified requirements.

Senate Bill 610 and Assembly Bill 901

The State Legislature passed SB 610 and AB 901 in 2001. Both measures modified the Urban Water Management Planning Act.

SB 610 requires additional information in an urban water management plan if groundwater is identified as a source of water available to an urban water supplier. It also requires that the plan include a description of all water supply projects and programs that may be undertaken to meet total projected water use. SB 610 requires a city or county that determines a project is subject to CEQA to identify any public water system that may supply water to the project and to request identified public water systems to prepare a specified water supply assessment. The assessment must include, among other information, an identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and water received in prior years pursuant to these entitlements, rights, and contracts.

AB 901 requires an urban water management plan to include information, to the extent practicable, relating to the quality of existing sources of water available to an urban water supplier over given time periods. AB 901 also requires information on the manner in which water quality affects water management strategies and supply reliability. The bill requires a plan to describe plans to supplement a water source that may not be available at a consistent level of use, to the extent practicable. Additional findings and declarations relating to water quality are required.

Senate Bill 221

SB 221 adds Government Code Section 66455.3, requiring that the local water agency be sent a copy of any proposed residential subdivision of more than 500 dwelling units within five days of the subdivision application being accepted as complete for processing by the city or county. It also adds Government Code Section 66473.7, establishing detailed requirements for establishing whether a “sufficient water supply” exists to support any proposed residential subdivisions of more than 500 dwellings, including any such subdivision involving a development agreement. When approving a qualifying subdivision tentative map, the city or county must include a condition requiring availability of a sufficient water supply. The applicable public water system must provide proof of availability. If there is no public water system, the city or county must undertake the analysis described in Government Code Section 66473.7. The analysis must include consideration of effects on other users of water and groundwater.

State Updated Model Landscape Ordinance

Under AB 1881, the updated Model Landscape Ordinance requires cities and counties to adopt landscape water conservation ordinances by January 31, 2010 or to adopt a different ordinance that is at least as effective in conserving water as the updated Model Ordinance. Chapter 17.48, Landscaping, of the Jackson Municipal Code includes landscaping water use standards.

Water Quality Control Basin Plan

The Water Quality Control Plan for the Sacramento-San Joaquin River Basins (Basin Plan), amended by the CVRWQCB in 2018, identifies the beneficial uses of water bodies and provides water quality objectives and standards for waters of the Sacramento River and SJR basins, including the Delta.

State and federal laws mandate the protection of designated “beneficial uses” of water bodies. State law defines beneficial uses as “domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves” (Water Code Section 13050[f]). Additional protected beneficial uses of the SJR include groundwater recharge and freshwater replenishment.

State Water Resources Control Board Storm Water Strategy

The Storm Water Strategy is founded on the results of the Storm Water Strategic Initiative, which served to direct the State Water Board’s role in storm water resources management and evolve the Storm Water Program by a) developing guiding principles to serve as the foundation of the storm water program, b) identifying issues that support or inhibit the program from aligning with the guiding principles, and c) proposing and prioritizing projects that the Water Boards could implement to address those issues.

The State Water Board staff created a strategy-based document called the Strategy to Optimize Management of Storm Water (STORMS). STORMS includes a program vision, missions, goals, objectives, projects, timelines, and consideration of the most effective integration of project outcomes into the Water Board’s Storm Water Program.

LOCAL

City of Jackson Municipal Code

Section 17.030.050 of Article III, Site Planning and General Development Standards, of the City’s Municipal Code requires all applications for Zoning Clearance, Development Permit, Minor Use Permit, or Use Permit, except single-family dwellings, secondary residential units, and duplexes, to include drainage and erosion control plans and be designed and constructed to provide facilities for the proper conveyance, treatment, and disposal of storm water in compliance. Drainage and erosion control plans are submitted to the Engineering Department for review for compliance with the requirements of this Section.

Title 13 Article II Chapter 13.20 of the Jackson Municipal Code requires sewer extension and connection to sewer facilities directly within and outside of the city for each person, firm, individual business, or corporation using the city sewer system. It also includes standards for discharge, services fees, permitting requirements, and technical specifications for sewage connections.

Mokelumne/Amador/Calaveras Integrated Regional Water Management Plan

The Upper Mokelumne River Watershed Authority (UMRWA) has been leading an effort to prepare an update to the Mokelumne/Amador/Calaveras Integrated Regional Water Management Plan (MAC IRWM Plan). EBMUD, as an UMRWA member, participated in that effort. The Updated MAC IRWM Plan was completed in early 2013. UMRWA adopted the Updated MAC IRWM Plan on Friday January 25, 2013. The EBMUD Board of Directors adopted the Updated MAC IRWM Plan on

3.9 HYDROLOGY AND WATER QUALITY

Tuesday March 12, 2013. The MAC IRWM Plan is both an account of the region's water resource conditions, geography, and needs, and a set of projects which if implemented will help fulfill the plan's four main policies:

- Maintain and improve water quality;
- Improve water supply reliability and ensure long-term balance of supply and demand;
- Practice resource stewardship; and
- Focus on areas of common ground and avoid prolonged conflict.

These regional policies, along with related sets of water resource goals, objectives and performance measures, were developed by a stakeholder group comprised of 14 agencies and organizations called the Regional Participants Committee (RPC).

City of Jackson Ordinance No. 646

Ordinance No. 646 (An Ordinance of the City of Jackson Establishing a Resource Allocation Program Limiting Development within the City of Jackson) acknowledges limitations in the City's ability to provide sewer, water, road capacity and other infrastructure and services necessary to support development. The purpose of the Ordinance is to coordinate the timing and amount of development consistent with available resources and provisions of the General Plan. The Ordinance establishes an allocation process for new development based on public facility (e.g., traffic conditions, water supply, wastewater capacity) and resource constraints that exist in the City consistent with the requirements of state law and city policy. Specifically, in January of each year the City of Jackson City Council establishes the number of Housing Equivalent Units (HEUs) that will be available that year for development. HEUs are based on the public facility and resource constraints that exist in the City and the status of planned infrastructure improvements as prescribed in the City's Circulation Element of the General Plan and the Amador County Regional Transportation Plan, the AWA's Urban Water Resource Plan, and the City's Waste Water Treatment Plant Facilities Plan.

Amador Water Agency Urban Water Management Plan

The Amador Water Agency 2015 Urban Water Management Plan (UWMP) is utilized by the AWA for the management of AWA's water supplies and water demands covering a range of normal and drought conditions. The UWMP provides information and projections regarding water supply availability and future water demands for AWA's four service areas.

City of Jackson Sanitary Sewer Management Plan

The goal of the Sanitary Sewer Management Plan (SSMP) is to provide a plan and schedule to properly manage, operate and maintain all parts of the sanitary sewer system. The plan helps the city to determine where maintenance is needed in the collection system to prevent and mitigate future sewer overflows. In addition, the SSMP shall include elements that will help the city develop

a routine preventive operation and maintenance program, a rehabilitation and replacement plan, a regular training program for staff and an inventory of replacement parts.

Amador County Multi-Hazard Mitigation Plan

The purpose of hazard mitigation and this plan is to reduce or eliminate long-term risk to people and property from natural hazards and their effects in Amador County, California. This plan has been prepared to meet the Disaster Mitigation Act of 2000 (DMA 2000) requirements in order to maintain Amador's eligibility for the Federal Emergency Management Agency (FEMA) Pre-Disaster Mitigation (PDM) and Hazard Mitigation Grant Programs (HMGP). More importantly, this plan and planning process lays out the strategy that will enable Amador County to become less vulnerable to future disaster losses. The multi-jurisdictional plan includes the County, and the incorporated communities of Amador City, Lone, Jackson, Plymouth, and Sutter Creek. This plan also covers two participating districts: Amador Water Agency and the Jackson Valley Irrigation District.

3.9.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on the environment associated with hydrology and water quality if it will:

- 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.
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - Result in substantial erosion or siltation on- or off-site;
 - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
 - Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
 - Impede or redirect flood flows.
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

IMPACTS AND MITIGATION

Impact 3.9-1: General Plan implementation could violate water quality standards or waste discharge requirements or otherwise substantially degrade water quality or obstruct implementation of a water quality control plan (Less than Significant)

CONSTRUCTION-RELATED WATER QUALITY IMPACTS

Grading, excavation, removal of vegetation cover, and loading activities associated with future construction activities could temporarily increase runoff, erosion, and sedimentation. Construction activities also could result in soil compaction and wind erosion impacts that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas.

As required by the CWA, each subsequent development project or improvement project will require an approved SWPPP that includes best management practices for grading and preservation of topsoil. A SWPPP is required if the project will disturb more than one acre. SWPPPs are designed to control storm water quality degradation to the extent practicable using best management practices during and after construction.

Future development project applicants must submit the SWPPP with a Notice of Intent to the CVRWQCB to obtain a General Permit. The CVRWQCB is an agency responsible for reviewing the SWPPP with the Notice of Intent, prior to issuance of a General Permit for the discharge of storm water during construction activities. The CVRWQCB accepts General Permit applications (with the SWPPP and Notice of Intent) after specific projects have been approved by the lead agency. The lead agency for each specific project that is larger than one acre is required to obtain a General Permit for discharge of storm water during construction activities prior to commencing construction (per the CWA).

The General Plan sets policies and actions for build-out of the city, but it does not envision or authorize any specific development project. Because of this, the site-specific details of potential future development projects are currently unknown and analysis of potential impacts of such projects is not feasible and would be speculative. However, each future project must include detailed project specific drainage plans that control storm water runoff and erosion, both during and after construction. The CVRWQCB will require a project specific SWPPP to be prepared for each future project that disturbs an area one acre or larger. The SWPPPs will include project specific best management measures that are designed to control drainage and erosion.

NEW DEVELOPMENT-RELATED WATER QUALITY IMPACTS

New development and infrastructure improvements projects under the proposed General Plan could introduce constituents into the storm water system that are typically associated with urban runoff. These constituents include sediments, petroleum hydrocarbons, pesticides, fertilizers, and heavy metals such as lead, zinc, and copper. These pollutants tend to build up during the dry months of the year. Precipitation during the early portion of the wet season (generally from November to April) washes away most of these pollutants, resulting in high pollutant

concentrations in the initial wet weather runoff. This initial runoff is referred to as the “first flush” of storm events. Subsequent periods of rain would result in less concentrated pollutant levels in the runoff.

The majority of development allowed under the General Plan would be within areas currently developed with urban type uses, and the amount and type of runoff generated by various future development and infrastructure projects would be similar to existing conditions. However, new development and infrastructure projects have the potential to result in increases in the amount of impervious surfaces throughout Jackson. Future increases in impervious surfaces would result in increased urban runoff, pollutants, and first flush roadway contaminants, as well as an increase in nutrients and other chemicals from landscaped areas. These constituents could result in water quality impacts to onsite and offsite drainage flows to area waterways.

Waters that are listed under Section 303(d) of the CWA are known as “impaired.” CWA Section 303(d) lists many water bodies within the County. Those areas in the regional vicinity of the Planning Area that are impaired by the Water Quality Control Monitoring Council include the Consumes River, Big Indian Creek, Sutter Creek, Mokelumne River, Bear River, Pardee Reservoir, Amador Lake, and the Camanche Reservoir. These hydrologic areas extend beyond the county boundary so not all impaired water body segments are located within Amador County. The pollution source is predominantly agricultural and crop related, although resource extraction is also a pollution source.

Storm water runoff may play a role in the water quality impairments described above. Runoff that occurs as overland flow across yards, driveways, and public streets is intercepted by the storm water drainage system and conveyed to local drainages before eventually being routed to the Pacific. This storm water can carry pollutants that can enter the local waterways and result in the types of water quality impairments described above. Common sources of storm water pollution in the city include litter, trash, pet waste, paint residue, organic material (yard waste), fertilizers, pesticides, sediments, construction debris, metals from automobile brake pad dust, air pollutants that settle on the ground or attach to rainwater, cooking grease, illegally dumped motor oil, and other harmful fluids.

Due to future development and infrastructure projects, the overall volume of runoff in Jackson could be increased compared to existing conditions. If the City’s drainage system is not adequately designed, General Plan buildout could result in localized higher peak flow rates. Localized increases in flow would be significant if increases exceeded system capacity or contributed to bank erosion. The implementation of the policies and actions including General Plan Policy SA 2.2: requires all new development projects to demonstrate how stormwater runoff will be detained or retained on-site, treated, and/or conveyed to the nearest drainage facility as part of the development review process. Project applicants shall demonstrate that project implementation would not result in increases in the peak flow runoff to adjacent lands or drainage facilities that would exceed the design capacity of the drainage facility or result in an increased potential for off-site flooding.

The General Plan sets policies and actions for build-out of the city, but it does not envision or authorize any specific development project. Because of this, the site-specific details of potential

3.9 HYDROLOGY AND WATER QUALITY

future development projects are currently unknown and analysis of potential impacts of such projects is not feasible and would be speculative. However, each future development and infrastructure project is required to prepare a detailed project specific drainage plan, Water Quality Management Plan, and a SWPPP that will control storm water runoff and erosion, both during and after construction. If the project involves the discharge into surface waters the project proponent will need to acquire a Dewatering permit, NPDES permit, and Waste Discharge permit from the CVRWQCB.

As described above, under the Regulatory Setting, the City is required to implement a range of measures and procedures when reviewing new development and infrastructure projects.

Section 17.030.050 of article III, Site Planning and General Development Standards, of the City's Municipal Code requires all applications for Zoning Clearance, Development Permit, Minor Use Permit, or Use Permit, except single-family dwellings, secondary residential units, and duplexes, to include drainage and erosion control plans and be designed and constructed to provide facilities for the proper conveyance, treatment, and disposal of storm water in compliance. Drainage and erosion control plans are submitted to the Engineering Department for review for compliance with the requirements of this Section.

While the primary regulatory mechanisms for ensuring that future development and infrastructure projects do not result in adverse water quality impacts are contained in the Jackson Municipal Code, the City of Jackson has developed the General Plan to include additional policies and actions that, when implemented, will further reduce water pollution from construction, new development, and new infrastructure projects, and protect and enhance natural storm drainage and water quality features. The policies and actions identified below include numerous requirements that would reduce the potential for General Plan implementation to result in increased water quality impacts. Actions by the City during the development review process require the review of development projects to identify potential stormwater and drainage impacts and require development to include measures to ensure that off-site runoff is not increased beyond pre-development levels during rain and flood events. In addition, compliance with the CWA and regulations enforced by the Regional Water Quality Control Board would ensure that construction-related impacts to water quality are minimized and future projects comply with all applicable laws and regulations.

The City of Jackson provides and maintains a system of storm drains, detention basins, and pumping facilities as well as monitoring and control of the operations of the storm drain system. Provision of stormwater detention facilities as needed would reduce runoff rates and peak flows. The implementation of the General Plan policies and implementation actions listed below include policies aimed to maximize stormwater quality and infiltration as well as actions to review development projects to identify potential stormwater and drainage impacts and require development to identify potential stormwater and drainage impacts and require development to include measures to ensure that off-site runoff is not increased as a during rain and flood events. Existing regulatory requirements that manage water quality include requirements to obtain approval from the CVRWQCB for NPDES permits, other discharge permits, SWPPPs, and to implement Best Management Practices. These regulatory requirements are intended to ensure

that water quality does not degrade to levels that would violate water quality standards. Through implementation of the General Plan policies and actions listed below, implementation of the Jackson Municipal Code requirements identified above, compliance with mandatory Federal and State regulations, and compliance with the existing regulations for the San Joaquin River Hydrological Region would ensure that impacts to drainage patterns and water quality would be **less than significant**.

GENERAL PLAN POLICIES AND IMPLEMENTATION ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

CONSERVATION AND OPEN SPACE ELEMENT POLICIES

COS 7.1: Protect floodways and other areas with high groundwater water recharge capability.

COS 7.2: Require discretionary projects, as well as new flood control and stormwater conveyance projects, to integrate best management practices (BMPs) and natural features to the greatest extent feasible, while ensuring that these features adequately convey and control stormwater to protect human health, safety, and welfare.

COS 7.3: Protect surface water quality and prioritize the use of natural features such as bioswales, vegetation, retention ponds, and other measures to remove surface water pollutants prior to discharge into surface waters.

COS 7.6: Where feasible, encourage and support multipurpose detention basins that provide water quality protection, storm water detention, open space amenities, and recreational amenities.

COS 7.7: Monitor groundwater extraction activities, encourage groundwater recharge, and ensure the health of the groundwater basin.

SAFETY ELEMENT POLICIES

SA 2.2: Require all new development projects to demonstrate how stormwater runoff will be detained or retained on-site, treated, and/or conveyed to the nearest drainage facility as part of the development review process. Project applicants shall demonstrate that project implementation would not result in increases in the peak flow runoff to adjacent lands or drainage facilities that would exceed the design capacity of the drainage facility or result in an increased potential for off-site flooding.

SA 2.5: Encourage flood control measures that respect natural drainage features, vegetation, and natural waterways, while still providing for adequate flood control and protection.

SA 2.6: Ensure that any development activity that requires a grading permit does not impact adjacent properties, local creeks, and storm drainage systems by designing and building the site to drain properly to minimize drainage issues and erosion.

CONSERVATION AND OPEN SPACE ELEMENT ACTIONS

COS-3e: Require new development which has the potential to result in water quality impacts on the City's creeks and the local groundwater basin to implement all feasible mitigation measures to reduce impacts.

COS-7a: Continue to identify stormwater and drainage facilities in need of repair and address these needs through capital improvement planning. As feasible, seek to incorporate BMPs and Low

3.9 HYDROLOGY AND WATER QUALITY

Impact Development (LID) techniques into repairs and upgrades that promote water quality objectives.

SAFETY ELEMENT ACTIONS

SA-2a: As part of the development review process, require new development projects to prepare hydraulic and storm drainage studies as necessary to define the net increase in stormwater run-off resulting from construction and require mitigation to reduce impacts. Drainage and grading plans shall identify BMP protections and include standards established and recommended by the City that shall be incorporated into development.

Impact 3.9-2: General Plan implementation could result in the depletion of groundwater supplies or interfere substantially with groundwater recharge or conflict with a groundwater management plan. (Less than Significant)

The quantity of ground water in the San Joaquin Valley has been declining for decades, as evidenced by the substantial lowering of water levels in the aquifers. Impacts on groundwater in the Jackson area are an important consideration in any development plan. See Impact 3.15-1 in Section 3.15, Utilities, for further discussions regarding water demand and groundwater supplies. Impacts related to groundwater supplies and interference with groundwater recharge are considered in two ways: (1) conversion of pervious surfaces (which allow for groundwater recharge), and (2) use of groundwater as a water supply (which reduces the amount of local groundwater supply).

Future development projects in the Planning Area would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge in those areas. Infiltration rates vary depending on the overlying soil types. In general, sandy soils have higher infiltration rates and can contribute to significant amounts of ground water recharge; clay soils tend to have lower percolation potential; and impervious surfaces such as pavement significantly reduce infiltration capacity and increase surface water runoff.

Although the southwestern portion of Amador County is within the Cosumnes Subbasin, the Planning Area is not in a defined groundwater basin. In the undefined region, where water is drawn from fractured bedrock, groundwater quantity and quality vary greatly from well site to well site due to the small and unpredictable yields of the fractured rock system that typifies the foothill geology.

The Amador Water Agency (AWA) was formed in 1959 for the purpose of providing water and wastewater services to the residents of Amador County. The Agency has four general service areas: the AWS (Amador Water System), the Central Amador Water Project (CAWP) System, La Mel Heights, and Lake Camanche Village. The City of Jackson is located in the AWS water system, but provides water distribution services to its own customers that are separate from AWA.

As discussed in Section 3.15, Utilities and Service Systems, the City's 2015 UWMP projected future water demands and supplies through 2040, as shown in Table 3.15-1. Supply projections for all multiple-dry year scenarios are the same as for a normal year as the Agency has not experienced a

reduction in available supplies, even in multiple-dry year periods. Demand projections are also the same as a normal year for the first two years of a drought. However, demands are expected to decrease by 25 percent in the third year of the drought. This pattern mimics the recent 2013 to 2015 drought, where mandatory restrictions were not enforced until the third year of the drought, in which the Agency declared a Water Warning and required 25 percent water use reductions for its customers in response to state- wide cutback mandates. As shown in Table 3.15-1, the Agency expects to have adequate supplies to fully meet demand for future multiple-dry years.

Subsequent development projects under the General Plan, such as residential, commercial, industrial, and roadway projects would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. However, the majority of the developable areas within the city are currently developed with urban uses. The majority of open undeveloped lands within the city are designated for Recreation and Open Space uses, while the majority of open undeveloped lands outside the Planning Area but within the SOI are proposed for Urban Reserve uses. The proposed General Plan Land Use Map does not re-designate any areas currently designated for Open Spaces use to urban uses. The amount of new pavement and impervious surfaces, and the extent to which they affect infiltration, depends on the site-specific features and soil types of a given project site. Projects located in urban areas would have less of an impact than projects converting open lands and spaces.

Given that implementation and future buildout of the proposed General Plan would not appreciably add to the volume of impervious surfaces in Jackson, when compared to the overall size of the regional groundwater basin recharge area, and that there are adequate water supplies (including groundwater) to serve the projected buildout demand of the General Plan, this impact would be less than significant.

The General Plan includes policies and implementation actions that support water conservation and aim to diversify the City's water sources. Implementation of the following General Plan policies and implementation actions would further ensure that the General Plan would have a **less than significant** impact relative to this topic.

GENERAL PLAN POLICIES AND IMPLEMENTATION ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

CONSERVATION AND OPEN SPACE ELEMENT POLICIES

COS 7.1: Protect floodways and other areas with high groundwater water recharge capability.

COS 7.2: Require discretionary projects, as well as new flood control and stormwater conveyance projects, to integrate best management practices (BMPs) and natural features to the greatest extent feasible, while ensuring that these features adequately convey and control stormwater to protect human health, safety, and welfare.

COS 7.7: Monitor groundwater extraction activities, encourage groundwater recharge, and ensure the health of the groundwater basin.

SAFETY ELEMENT POLICIES

SA 1.6: Prevent land subsidence and maintain adequate groundwater supplies.

3.9 HYDROLOGY AND WATER QUALITY

CONSERVATION AND OPEN SPACE ELEMENT ACTIONS

COS-7a: Continue to identify stormwater and drainage facilities in need of repair and address these needs through capital improvement planning. As feasible, seek to incorporate BMPs and Low Impact Development (LID) techniques into repairs and upgrades that promote water quality objectives.

COS-7c: Collaborate with Amador County and other regional groundwater management agencies to support and promote Groundwater Sustainability Plans and implementation strategies for the groundwater basin.

COS-7d: Work with the Amador Water Agency and private developers to encourage water conservation in the following ways:

- *Implementing aquifer and groundwater recharge programs;*
- *Participating in water conservation programs operated by the Amador Water Agency;*
- *Establishing water conservation education programs;*
- *Requiring the use of drought resistant plant species in landscaping for public and private areas, including parks and recreational facilities;*
- *Expanding the production and use of reclaimed water; and*
- *Requiring the incorporation of water conservation devices, including low flush toilets, flow restriction devices, and water conserving appliances in both new public and private development projects and rehabilitation projects.*

Impact 3.9-3: General Plan implementation could alter the existing drainage pattern in a manner which would result in substantial erosion, siltation, flooding, impeded flows, or polluted runoff (Less than Significant)

The City is within the jurisdictional boundary of the CVRWQCB. Under the CVRWQCB NPDES permit system, all existing and future municipal and industrial discharges to surface water within the city would be subject to regulation. NPDES permits are required for operators of municipal separate storm sewer systems, construction projects, and industrial facilities. These permits contain limits on the amount of pollutants that can be contained in each facility's discharge.

General Plan implementation has the potential to impact the Planning Area's storm drainage system. The potential impacts would be primarily derived from development in what are now underdeveloped and/or underutilized areas. Construction activities are regulated by the NPDES General Construction Storm Water Permit. Compliance with the storm water permit during construction activities requires the preparation of a SWPPP that contains BMPs to control the discharge of pollutants, including sediment, into local surface water drainages.

A gradual increase in impervious cover associated with new development could increase operational storm water runoff. The City monitors stormwater discharges to facilities to make sure

that facilities capacities are not exceeded. The City is also required to control stormwater quality to meet applicable regulations. The detention basins are used to detain stormwater to attenuate peak flows before pumping drainage flows into facilities. Where required, to meet NPDES permit requirements, stormwater is treated prior to release to natural water bodies within the area. Treatment is provided at detention basin sites, or by on-site source control.

In addition to complying with the NPDES programs and Municipal Code stormwater requirements, the General Plan contains policies and implementation actions to reduce impacts associated with stormwater and drainage including policies which require new development to demonstrate how storm water runoff will be detained or retained on-site and/or conveyed to the nearest drainage facility as part of the development review process. Additionally, the General Plan actions require the City to continue to review development projects to identify potential stormwater and drainage impacts.

Individual future projects developed after adoption of the General Plan would create new impervious surfaces. This would result in an incremental reduction in the amount of natural soil surfaces available for infiltration of rainfall and runoff, potentially generating additional runoff during storm events. In addition, the increase in impervious surfaces, along with the increase in surface water runoff, could increase the non-point source discharge of pollutants. Anticipated runoff contaminants include sediment, pesticides, oil and grease, nutrients, metals, bacteria, and trash. Contributions of these contaminants to stormwater and non-stormwater runoff would degrade the quality of receiving waters. During the dry season, vehicles and other urban activities release contaminants onto the impervious surfaces, where they can accumulate until the first storm event. During this initial storm event, or first flush, the concentrated pollutants would be transported via runoff to stormwater drainage systems. Contaminated runoff waters could flow into the stormwater drainage systems that discharge into rivers, agricultural ditches, sloughs, and channels, and ultimately could degrade the water quality of any of these water bodies.

The General Plan sets policies and actions for build-out of the city, but it does not envision or authorize any specific development project. Because of this, the site-specific details of potential future development projects are currently unknown and analysis of potential impacts of such projects is not feasible and would be speculative. As previously discussed in the Regulatory Setting section of this chapter, future project applicants would be required to obtain permits from the Army Corps of Engineers and the Department of Fish and Wildlife if any work is performed within a waterway. Each future development project must also include detailed project specific floodplain and drainage studies that assess the drainage characteristics and flood risks so that an appropriate storm drainage plan can be prepared to control storm water runoff, both during and after construction. The drainage plan will ultimately include project specific best management measures that are designed to allow for natural recharge and infiltration of stormwater. Construction of storm drainage improvements would occur as part of an overall development or infrastructure project, and is considered in the environmental impacts associated with project construction and implementation as addressed throughout this EIR.

The City provides and maintains a system of storm drains, detention basins, and pumping facilities as well as monitoring and control of the operations of the storm drain system. Provision of

3.9 HYDROLOGY AND WATER QUALITY

stormwater detention facilities as needed would reduce runoff rates and peak flows. The City has developed the General Plan to include policies and actions that, when implemented, will reduce flooding from new development, reduce storm water pollution from new development, and protect and enhance natural storm drainage and water quality features, which will in turn reduce water quality impacts.

Through implementation of the General Plan policies and actions listed below, implementation of the Jackson Municipal Code requirements identified above, and compliance with mandatory Federal and State regulations would ensure that impacts related to increased flooding or water quality impacts associated with increased runoff would be considered **less than significant**.

GENERAL PLAN POLICIES AND IMPLEMENTATION ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

LAND USE ELEMENT POLICIES

LU 2.9: Ensure that the impacts from flooding are adequately analyzed when considering development in flood prone areas.

CONSERVATION AND OPEN SPACE ELEMENT POLICIES

COS 7.1: Protect floodways and other areas with high groundwater water recharge capability.

COS 7.3: Protect surface water quality and prioritize the use of natural features such as bioswales, vegetation, retention ponds, and other measures to remove surface water pollutants prior to discharge into surface waters.

COS 7.6: Where feasible, encourage and support multipurpose detention basins that provide water quality protection, storm water detention, open space amenities, and recreational amenities.

COS 7.7: Monitor groundwater extraction activities, encourage groundwater recharge, and ensure the health of the groundwater basin.

SAFETY ELEMENT POLICIES

SA 2.1: Support and participate in planning efforts undertaken at the local, regional, state, and federal levels to improve flood management facilities and dam safety.

SA 2.2: Require all new development projects to demonstrate how stormwater runoff will be detained or retained on-site, treated, and/or conveyed to the nearest drainage facility as part of the development review process. Project applicants shall demonstrate that project implementation would not result in increases in the peak flow runoff to adjacent lands or drainage facilities that would exceed the design capacity of the drainage facility or result in an increased potential for off-site flooding.

SA 2.6: Ensure that any development activity that requires a grading permit does not impact adjacent properties, local creeks, and storm drainage systems by designing and building the site to drain properly to minimize drainage issues and erosion.

LAND USE ELEMENT ACTIONS

LU-2c: Maintain and revise, as necessary, a grading ordinance which protects the natural topography and directs that all roads and structures be designed, built, and landscaped to control

erosion and other pollutants during and after construction. This shall include the use of Best Management Practices (BMPs) that demonstrate the ability to treat storm water drainage consistent with Regional Water Quality Control Board (RWQCB), state, and federal requirements.

CONSERVATION AND OPEN SPACE ELEMENT ACTIONS

COS-7a: Continue to identify stormwater and drainage facilities in need of repair and address these needs through capital improvement planning. As feasible, seek to incorporate BMPs and Low Impact Development (LID) techniques into repairs and upgrades that promote water quality objectives.

COS-7c: Collaborate with Amador County and other regional groundwater management agencies to support and promote Groundwater Sustainability Plans and implementation strategies for the groundwater basin.

SAFETY ELEMENT ACTIONS

SA-2a: As part of the development review process, require new development projects to prepare hydraulic and storm drainage studies as necessary to define the net increase in stormwater run-off resulting from construction and require mitigation to reduce impacts. Drainage and grading plans shall identify BMP protections and include standards established and recommended by the City that shall be incorporated into development.

Impact 3.9-4: General Plan implementation would not release pollutants due to project inundation by flood hazard, tsunami, or seiche. (Less than Significant)

FLOOD

The FEMA FIRM for the Planning Area is shown on Figure 3.9-2. The Planning Area is subject to flooding problems immediately adjacent to the natural creeks and drainages that traverse the area. The FEMA FIRM for the Planning Area shows that a portion of the city is within the 100-year flood plain. The floodplain centers on the most developed portion of the city and stretches out in most directions from there, including along Jackson Creek, the South Fork of Jackson Creek, and Oneida Creek. Nearly 550 parcels are located in the plain. The Fire Department, Civic Center, County Sheriff Department and Sutter-Amador Hospital are located near the floodplain. There are no major dams located within the upper reaches of the Jackson Creek watershed area located up gradient from the city.

The General Plan would allow development and improvement projects that would involve some land clearing, grading, and other ground-disturbing activities that could temporarily increase soil erosion rates during and shortly after project construction. As required by the CWA, each subsequent development project or improvement project will require an approved SWPPP that includes best management practices for grading and preservation of topsoil. SWPPPs are designed to control storm water quality degradation to the extent practicable using best management practices during and after construction.

As described previously in the Regulatory Setting, the City of Jackson regulates storm water discharge in accordance with the NPDES permit. In addition to complying with the NPDES

3.9 HYDROLOGY AND WATER QUALITY

programs and Municipal Code requirements, the General Plan contains policies to reduce impacts associated with stormwater and drainage including policies to maintain sufficient levels of storm drainage service, maintain drainage channels in a naturalized condition where appropriate, and other best practices in order to protect the community from flood hazards and minimize the discharge of materials into the storm drain system that are toxic.

Lastly, the proposed General Plan includes policies and actions in order to reduce impacts associated with flooding. For example, Policy LU 2.9 ensures that the impacts from flooding are adequately analyzed when considering development in flood prone areas. The implementation of the General Plan would result in a **less than significant** impact relative to this topic.

TSUNAMI AND SEICHES

Tsunamis and seiches are standing waves that occur in the ocean or relatively large, enclosed bodies of water that can follow seismic, landslide, and other events from local sources (California, Oregon, Washington coast) or distant sources (Pacific Rim, South American Coast, Alaska/Canadian coast). Based on tsunami inundation maps prepared by the Department of Conservation, California Emergency Management Agency, and California Geological Survey, Jackson is not identified as being within a tsunami inundation or run-up zone.

Seiches are typically caused when strong winds and rapid changes in atmospheric pressure push water from one end of a body of water to the other. When the wind stops, the water rebounds to the other side of the enclosed area. The water then continues to oscillate back and forth for hours or even days. In a similar fashion, earthquakes, tsunamis, or severe storm fronts may also cause seiches along ocean shelves and ocean harbors, or other bodies large of water. Any body of water may experience limited oscillation during storm events or following seismic events, however oscillation in small bodies of water is generally limited. In smaller water bodies seiches may have the potential to damage or overtop dams. Generally, in lakes the threat of large-scale damage from seiches comes from downstream flooding that would be caused by large volumes of water overtopping a dam or reservoir.

According to the California Department of Water Resources, there are no major dams located within the upper reaches of the Jackson Creek watershed area and the City of Jackson is not located in a substantial dam failure inundation area that would be subject to large-scale inundation in the event of dam failure. However, the Lake Tabeaud Dam Inundation Area does include small portions of land adjacent to Jackson Creek within the City Limits. Figure 3.9-3 shows potential inundation areas along Jackson Creek within the City of Jackson. Dam failure is generally a result of structural instability caused by improper design or construction, instability resulting from seismic shaking, or overtopping and erosion of the dam. As discussed previously, larger dams that are higher than 25 feet or with storage capacities over 50 acre-feet of water are regulated by the California Dam Safety Act, which is implemented by the California Department of Water Resources, DSD. The DSD is responsible for inspecting and monitoring these dams. The Act also requires that dam owners submit to the California Office of Emergency Services inundation maps for dams that would cause significant loss of life or personal injury as a result of dam failure. The County Office of Emergency Services is responsible for developing and implementing a Dam Failure

Plan that designates evacuation plans, the direction of floodwaters, and provides emergency information.

Regular inspection by DSD and maintenance by the dam owners ensure that the dams are kept in safe operating condition. As such, failure of these dams is considered to have an extremely low probability of occurring and is not considered to be a reasonably foreseeable event. In addition, man-made lakes within the Planning Area are shallow with limited surface areas and would not generate devastating seiches. The City of Jackson is not within a tsunami hazard area and would not be subject to substantial impacts from seiche events. This is a **less than significant** impact.

GENERAL PLAN POLICIES AND IMPLEMENTATION ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

LAND USE ELEMENT POLICIES

LU 2.9: Ensure that the impacts from flooding are adequately analyzed when considering development in flood prone areas.

SAFETY ELEMENT POLICIES

SA 2.1: Support and participate in planning efforts undertaken at the local, regional, state, and federal levels to improve flood management facilities and dam safety.

SA 2.2: Require all new development projects to demonstrate how stormwater runoff will be detained or retained on-site, treated, and/or conveyed to the nearest drainage facility as part of the development review process. Project applicants shall demonstrate that project implementation would not result in increases in the peak flow runoff to adjacent lands or drainage facilities that would exceed the design capacity of the drainage facility or result in an increased potential for off-site flooding.

SA 2.3: Unless otherwise mitigated, require new structures to be located outside of the 100-year floodplain. All new development within an identified Flood Hazard Area shall be built according to Federal Emergency Management Agency standards.

SA 2.4: Encourage and accommodate multipurpose flood control projects that incorporate recreation, resource conservation, preservation of natural riparian habitat, and scenic values of drainages, creeks, and detention ponds.

SA 2.5: Encourage flood control measures that respect natural drainage features, vegetation, and natural waterways, while still providing for adequate flood control and protection.

SA 2.6: Ensure that any development activity that requires a grading permit does not impact adjacent properties, local creeks, and storm drainage systems by designing and building the site to drain properly to minimize drainage issues and erosion.

SA 2.7: Maintain and periodically update City flood safety plans, floodplain management ordinances, zoning ordinance, building codes, and other related sections of the Municipal Code to reflect Safety Element goals, policies, and standards, applicable Federal and State law, and National Flood Insurance Program requirements.

3.9 HYDROLOGY AND WATER QUALITY

SA 2.8: Ensure that the impacts of potential flooding are adequately analyzed when considering areas for future urban expansion.

SA 2.9: Update flood hazard maps as necessary to reflect impacts from climate change in terms of long-term flood safety and long-term flood event probabilities.

CONSERVATION AND OPEN SPACE ELEMENT POLICIES

COS 7.1: Protect floodways and other areas with high groundwater water recharge capability.

COS 7.2: Require discretionary projects, as well as new flood control and stormwater conveyance projects, to integrate best management practices (BMPs) and natural features to the greatest extent feasible, while ensuring that these features adequately convey and control stormwater to protect human health, safety, and welfare.

LAND USE ELEMENT ACTIONS

LU-2c: Maintain and revise, as necessary, a grading ordinance which protects the natural topography and directs that all roads and structures be designed, built, and landscaped to control erosion and other pollutants during and after construction. This shall include the use of Best Management Practices (BMPs) that demonstrate the ability to treat storm water drainage consistent with Regional Water Quality Control Board (RWQCB), state, and federal requirements.

LU-2d: As part of project review, ensure that structures are reviewed for potential flood impacts. In areas that are subject to 100-year flood events, require adequate protection in accordance with Federal Emergency Management Agency (FEMA) flood plain development standards. When updated flood plain maps are prepared by FEMA or the Department of Water Resources (DWR), review the Land Use Map to identify any potential safety impacts associated with residential land uses located within flood zones.

LU-7a: Review all development proposals, planning projects, and infrastructure projects to ensure that potential adverse environmental impacts such as exposure to pollutants, including toxic air contaminants, flood and wildfire risk, and unacceptable levels of noise and vibration are reduced impacts to the greatest extent feasible.

SAFETY ELEMENT ACTIONS

SA-2a: As part of the development review process, require new development projects to prepare hydraulic and storm drainage studies as necessary to define the net increase in stormwater run-off resulting from construction and require mitigation to reduce impacts. Drainage and grading plans shall identify BMP protections and include standards established and recommended by the City that shall be incorporated into development.

SA-2b: Continue to participate in the National Flood Insurance Program (NFIP), and consider future participation in the NFIP Community Rating System (CRS).

SA-2c: Continue to review projects in flood hazard areas to ensure compliance with Municipal Code Chapter 17.34 (Floodplain Management).

SA-2d: Periodically review the condition of bridges, culverts, canals, and other flood control and stormwater conveyance infrastructure, and when feasible include necessary improvements within capital improvement programs to increase safety and the adequate conveyance of stormwater.

SA-2e: Monitor changes in Federal and State laws and regulations related to local flood protection, including the National Flood Insurance Program, and incorporate necessary changes into the Municipal Code and building codes as required, and ensure that the City's regulations continue to require that new development within flood hazard zones is consistent with this Safety Element and is required to meet the flood protection requirements of State law including, but not limited to, Government Code Sections 65007, 65865.5, 65962 and 66474.5.

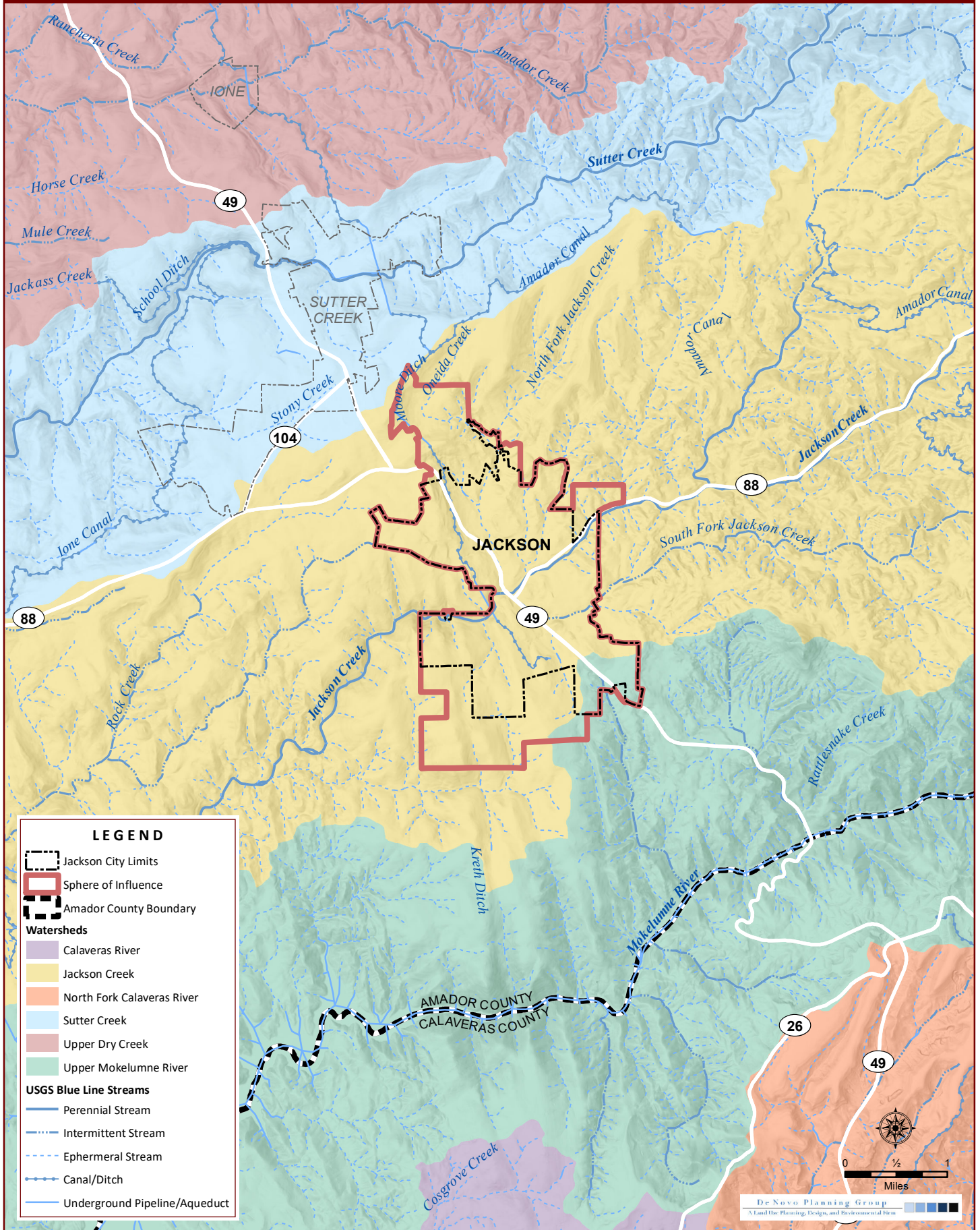
SA-2f: Periodically review Municipal Code Chapter 17.34 (Floodplain Management) and revise as necessary to ensure that development standards are consistent with the requirements of State and Federal law.

CONSERVATION AND OPEN SPACE ELEMENT ACTIONS

COS-7a: Continue to identify stormwater and drainage facilities in need of repair and address these needs through capital improvement planning. As feasible, seek to incorporate BMPs and Low Impact Development (LID) techniques into repairs and upgrades that promote water quality objectives.

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Figure 3.9-1. Watersheds

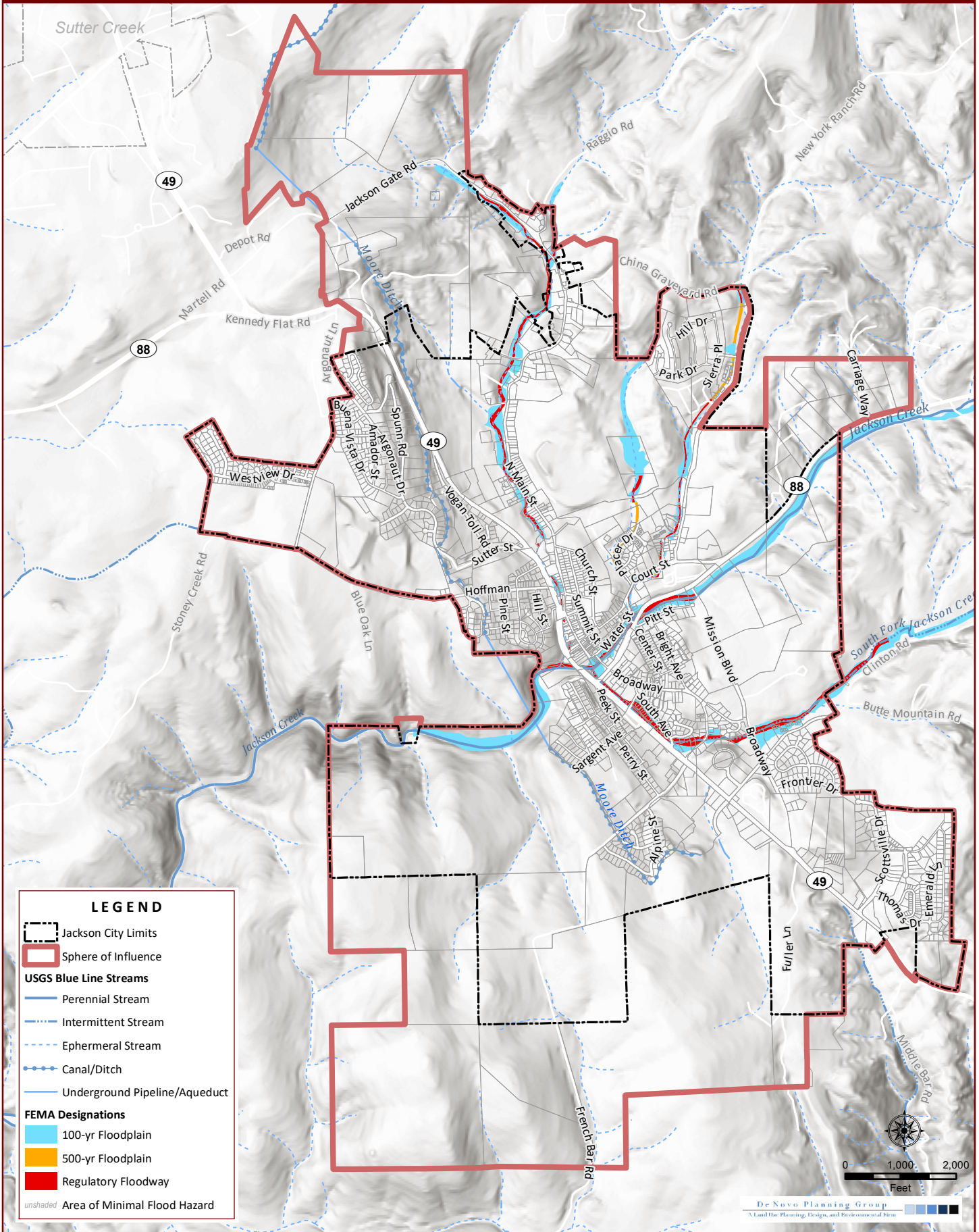


Sources: USGS National Hydrography Dataset; City of Jackson; ACTC; ArcGIS Online World Elevation/Terrain Image Service. Map date: April 13, 2021.

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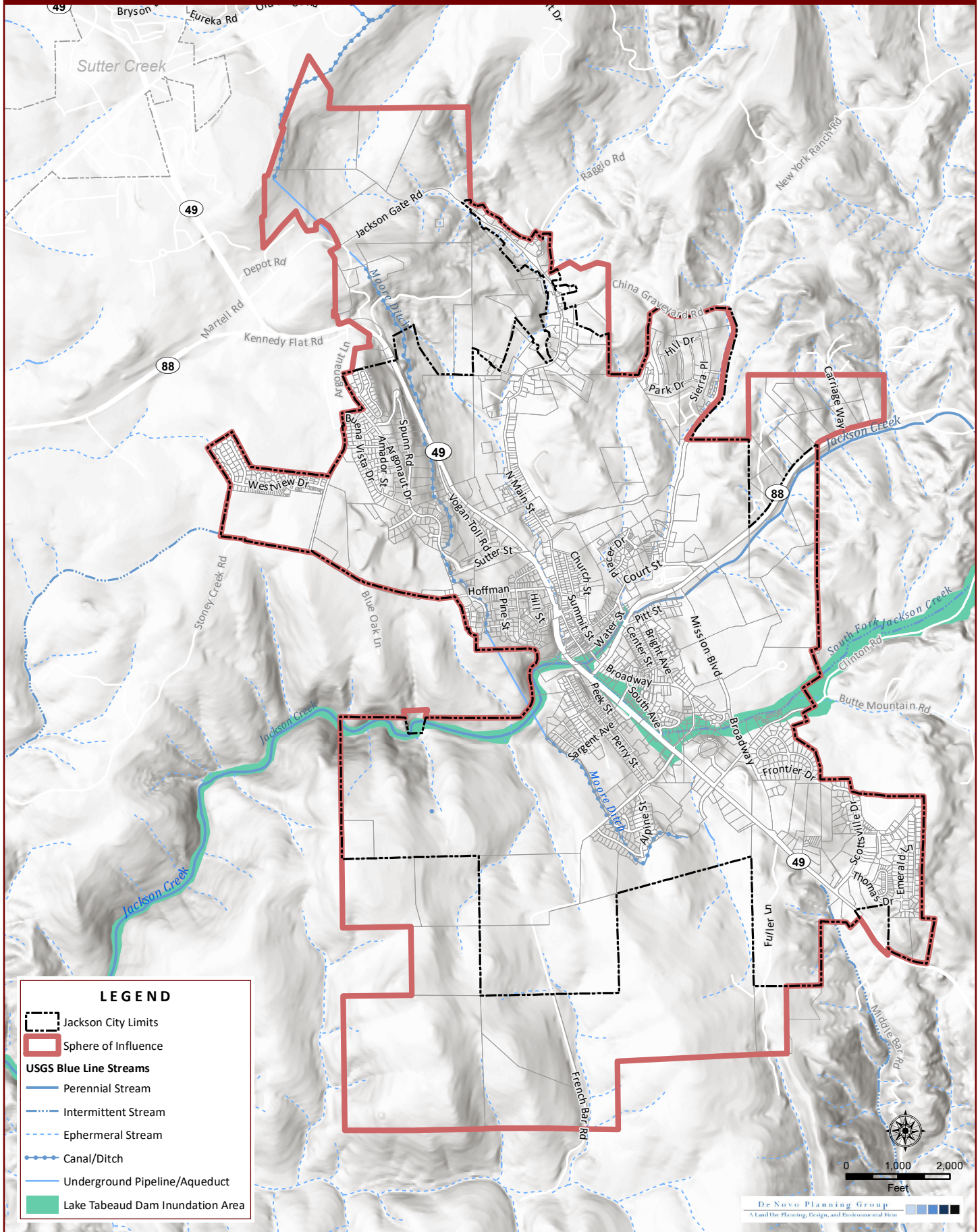
Figure 3.9-2. FEMA Floodplains



Sources: City of Jackson; ACTC; FEMA; USGS NHD; ArcGIS Online World Elevation/Terrain Image Service. Map date: April 9, 2021.

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Figure 3.9-3. Dam Inundation Areas



LEGEND

- Jackson City Limits
- Sphere of Influence
- USGS Blue Line Streams**
- Perennial Stream
- Intermittent Stream
- Ephemeral Stream
- Canal/Ditch
- Underground Pipeline/Aqueduct
- Lake Taboada Dam Inundation Area

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Sources: City of Jackson; ACTC; California DWR, Division of Safety of Dams; ArcGIS Online World Elevation/Terrain Image Service. Map date: April 9, 2021.

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This section identifies the existing land use conditions, discusses population and housing trends and projections, analyzes the project's consistency with relevant planning documents and policies adopted for the purpose of avoiding or mitigating an environmental effect, and recommends mitigation measures to avoid or minimize the significance of potential environmental impacts. General Plan policies associated with other specific environmental topics are discussed in the relevant sections of this EIR.

No comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic.

3.10.1 ENVIRONMENTAL SETTING

EXISTING CONDITIONS

The City Limits includes the area within the City's corporate boundary, over which the City exercises land use authority and provides public services. A City's Sphere of Influence (SOI) is the probable physical boundary and service area of a local agency, as adopted by a Local Agency Formation Commission (LAFCO). An SOI may include both incorporated and unincorporated areas within which a city or special district will have primary responsibility for the provision of public facilities and services. For the purposes of the General Plan, the Planning Area is the geographic area for which the General Plan provides a framework for long-term plans for growth, resource conservation, and continued agricultural activity. State law requires the General Plan to include all territory within Jackson's incorporated area as well as "any land outside its boundaries which in the planning agency's judgment bears relation to its planning" (California Government Code Section 65300). The Planning Area for the Jackson General Plan includes the entire City limits, the City's SOI, and lands beyond the SOI. Figure 2.0-2 in Chapter 2.0, Project Description, shows the Jackson Planning Area boundary.

Land Use Patterns

When discussing land use, it is important to distinguish between planned land uses and existing land uses. The General Plan land use designations identify the long-term planned use of land but do not present a complete picture of existing land uses. The Amador County Assessor's office maintains a database of existing land uses on individual parcels, including the number of dwelling units and related improvements such as non-residential building square footage. This information is used as the basis for property tax assessments and is summarized in Table 3.10-1 and depicted on Figure 3.10-1.

Existing land uses refer to the existing built environment, which may be different from the land use or zoning designations applied to land for planning purposes. As shown in Table 3.10-1, the majority of assessed land acreage (56.8 Percent) within the City of Jackson city limits is vacant. Other major land uses within the city include residential uses (20.4 percent, and commercial uses (8.5 percent). Within the unincorporated portions within the Jackson SOI (72.9 percent) of lands are vacant and approximately 20.4 percent are currently residential uses.

TABLE 3.10-1: ASSESSED LAND USES – CITY OF JACKSON

3.10 LAND USE, POPULATION, AND HOUSING

ASSESSOR LAND USE CODE*	ACRES (GIS)	% OF AREA
<i>JACKSON CITY LIMITS</i>		
Agricultural	92.7	4.0%
Agricultural Preserve	0.0	0.0%
Commercial	194.8	8.5%
Industrial	9.6	0.4%
Miscellaneous	42.6	1.9%
Residential Mobile/Manufactured Homes	0.2	0.0%
Residential	468.7	20.4%
ROW	0.0	0.0%
Vacant	1,302.5	56.8%
Vacant/ROW	183.2	8.0%
City Limits Total	2,294.26	100.0%
<i>JACKSON SOI</i>		
Agricultural	46.0	3.8%
Agricultural Preserve	17.1	1.4%
Commercial	3.4	0.3%
Industrial	0.0	0.0%
Miscellaneous	10.0	0.8%
Residential Mobile/Manufactured Homes	0.0	0.0%
Residential	247.8	20.4%
ROW	5.1	0.4%
Vacant	887.7	72.9%
Vacant/ROW	0.0	0.0%
SOI Total	1,217.07	100.0%
Grand Total	3,511.32	100.0%

SOURCE: AMADOR COUNTY ASSESSOR'S OFFICE, 2021; DE NOVO PLANNING GROUP, 2021.

Population and Households

As shown in Table 3.10-2, the U.S. Census Bureau and the Department of Finance (DOF) both estimate the total population of Jackson at around 4,860 people. The City is currently home to around 2,110 households according to the 2015-2019 ACS. The available data indicate that the City experienced more population and household growth between 2010 and 2020 than the county. The statewide population grew relatively similar, indicating that the City is growing on pace with the State.

TABLE 3.10-2: POPULATION AND HOUSEHOLD

POPULATION	2015-2019 ACS	% CHANGE 2010- 2019	AVG. ANNUAL CHANGE	2020 DOF	% CHANGE 2010- 2020	AVG. ANNUAL CHANGE
Jackson	4,751	2.7%	0.3%	4,860	4.5%	0.5%
Countywide	38,429	0.3%	<0.1%	37,676	-1.1%	-0.1%
State of California	39,283,497	7.2%	0.7%	39,782,870	6.8%	0.7%
HOUSEHOLDS	2015-2019	% CHANGE	AVG.	2020 DOF	% CHANGE	AVG.

	ACS	2010-2019	ANNUAL CHANGE		2010-2020	ANNUAL CHANGE
Jackson	2,110	5.1%	0.5%	n/a	n/a	n/a
Countywide	14,594	-0.8%	-0.1%	33,284	-0.8%	-0.1%
State of California	13,044,266	5.3%	0.5%	38,929,988	6.9%	0.69%

SOURCES: DEPARTMENT OF FINANCE (DOF), TABLE E-5, 2020; U.S. CENSUS BUREAU, ACS 2015-2019 5-YEAR SAMPLING PERIOD, DP05.

Housing Units

As shown in Table 3.10-3, the number of housing units in Jackson has increased at a slightly faster rate than Amador County since 2010. From 2010 to 2015, housing units increased from 2,309 to 2,321, a 0.5% increase. From 2015 to 2020, housing units increased from 2,321 to 2,363, a 1.8% increase.

TABLE 3.10-3: HOUSING UNITS

	2010	2015	2020	2010-2015 CHANGE	2015-2020 CHANGE
Jackson	2,309	2,321	2,363	0.5%	1.8%
Amador County	18,032	18,163	18,346	0.7%	1.0%

SOURCE: CALIFORNIA DEPARTMENT OF FINANCE, 2020.

3.10.2 REGULATORY SETTING

STATE

California General Plan Law

Government Code Section 65300 requires that each county and city adopt a General Plan “for the physical development of the county or city, and any land outside its boundaries which bears relation to its planning.”

The General Plan will include a comprehensive set of goals, policies, and actions (implementation measures), as well as a revised Land Use Map. It is a comprehensive long-term plan for the physical development of the county or city and is considered a "blueprint" for development. The General Plan must contain seven state-mandated elements: Land Use, Open Space, Conservation, Housing, Circulation, Noise, and Safety. It may also contain any other elements that the county or city wishes to include. The land use element designates the general location and intensity of designated land uses to accommodate housing, business, industry, open space, education, public buildings and grounds, recreation areas, and other land uses.

The 2017 General Plan Guidelines, established by the Governor’s Office of Planning and Research (OPR) to assist local agencies in the preparation of their general plans, further describe the mandatory land use element as a guide to planners, the general public, and decision makers prescribing the ultimate pattern of development for the county or city.

Regional Housing Needs Plan

California General Plan law requires each city and county to have land zoned to accommodate a fair share of the regional housing need. The share is known as the Regional Housing Needs Allocation (RHNA) and is based on a Regional Housing Needs Plan (RHNP) developed by councils of government. Pursuant to state housing element law (Gov. Code section 65584, et seq.), the California Department of Housing and Community Development (HCD) is required to provide the determination of Amador County’s existing and projected housing need and a RHNA Plan to countywide regions not represented by council of governments (COGs). Jackson’s fair share of the adopted RHNA for 2018-2029 is summarized in Table 3.10-4

TABLE 3.10-4: REGIONAL HOUSING NEEDS ALLOCATION

<i>EXTREMELY LOW INCOME</i>	<i>VERY LOW INCOME</i>	<i>LOW INCOME</i>	<i>MODERATE INCOME</i>	<i>ABOVE MODERATE INCOME</i>	<i>TOTAL</i>
<i>2014 - 2023</i>					
14	13	23	24	64	138

SOURCE: CALIFORNIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT, 2018-2029 REGIONAL HOUSING NEEDS PLAN (RHNP), SEPTEMBER 2020.

The City is not required to ensure that adequate development to accommodate the RHNA occurs; however, the City must facilitate housing production by ensuring that land is available and that unnecessary development constraints have been removed.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) was developed to protect the quality of the environment and the health and safety of persons from adverse environmental effects. Discretionary projects are required to be reviewed consistent with the requirements of CEQA to determine if there is potential for the project to cause a significant adverse effect on the environment. Depending on the type of project and its potential effects, technical traffic, noise, air quality, biological resources, and geotechnical reports may be needed. If potential adverse effects can be mitigated to less than significant levels, a mitigated negative declaration may be adopted. If potentially adverse effects cannot be mitigated to less than significant levels, an environmental impact report is required. These documents have mandated content requirements and public review times. Preparation of CEQA documents can be costly and time-consuming, potentially extending the processing time of a project by a year or longer.

Subdivision Code

A subdivision is any division of land for the purpose of sale, lease or finance. The State of California Subdivision Map Act (Government Code § 66410) regulates subdivisions throughout the state. The goals of the Subdivision Map Act are as follows:

- To encourage orderly community development by providing for the regulation and control of the design and improvement of a subdivision with proper consideration of its relationship to adjoining areas.

- To ensure that areas within the subdivision that are dedicated for public purposes will be properly improved by the subdivider so that they will not become an undue burden on the community.
- To protect the public and individual transferees from fraud and exploitation.

The Map Act allows some flexibility in the processing of subdivisions. The City of Jackson controls this process through the subdivision regulations in the Municipal Code (Title 17 Subdivisions).

LOCAL

Jackson Zoning Ordinance - Municipal Code

Title 17 of the Municipal Code includes is the City's Zoning Ordinance. The Zoning Ordinance carries out the policies of the General Plan by classifying and regulating the uses of land and structures within the incorporated City, consistent with the General Plan. The Zoning Ordinance is adopted to protect and promote the public health, safety, comfort, convenience, prosperity, and general welfare of residents and businesses.

Local Agency Formation Commission of Amador County

In 1963, the State Legislature created a local agency formation commission (LAFCO) for each county, with the authority to regulate local agency boundary changes. Subsequently, the State has expanded the authority of a LAFCO. The goals of the LAFCO include preserving agricultural and open space land resources and providing for efficient delivery of services. The Amador LAFCO has authority over land use decisions in Amador County affecting local agency boundaries. Its authority extends to the incorporated cities, including annexation of County lands into a city, and special districts within the County. LAFCO has the authority to review and approve or disapprove the following:

- Annexations to or detachments from cities or districts.
- Formation or dissolution of districts.
- Incorporation or disincorporation of cities.
- Consolidation or reorganization of cities or districts.
- Establishment of subsidiary districts.
- Development of, and amendments to, Spheres of Influence. The Sphere of Influence (SOI) is the probable physical boundary and service area of each local government agency. This may extend beyond the current service area of the agency.
- Extensions of service beyond an agency's jurisdictional boundaries.
- Provision of new or different services by districts.
- Proposals that extend service into previously unserved territory in unincorporated areas.

In addition, the Amador County LAFCO conducts Municipal Service Reviews (MSRs) for services within its jurisdiction. An MSR typically includes a review of existing municipal services provided by

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a local agency or district and its infrastructure needs and deficiencies. It also evaluates financing constraints and opportunities, management efficiencies, opportunities for rate restructuring and shared facilities, local accountability and governance, and other issues.

Legislation, including Assembly Bill 1555 and Senate Bill 244, has been enacted to encourage the identification and annexation of islands, which are unincorporated areas substantially surrounded by a city or cities.

Airport Land Use Commission Law (Public Utilities Code §21670 et seq.)

The law, passed in 1967, authorized the creation of Airport Land Use Commissions (ALUC) in California. Per the Public Utilities Code, the purpose of an ALUC is to protect *public health, safety, and welfare by encouraging orderly expansion of airports and the adoption of land use measures that minimizes exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses* (§21670). Furthermore, each ALUC must prepare an Airport Land Use Compatibility Plan (ALUCP). Each ALUCP, which must be based on a twenty-year planning horizon, should focus on broadly defined noise and safety impacts.

The Airport Land Use Plan (ALUP) Master Plan was adopted in October 1987 and Amended October 2017 by the Amador County Airport Land Use Commission (ALUC). Westover Field is a County owned and operated facility located in Martell and in an unincorporated area of Amador County between the cities of Jackson and Sutter Creek. The airport was constructed in 1937. The single 3,400 foot long runway is located on a hill and aligns in a northeast to southwest direction. The runway has a full-length taxiway on the west side.

The ALUC addresses three critical land use-planning concerns:

1. Compatibility of surrounding land uses with respect to airport noise levels;
2. Compatibility of surrounding land uses in terms of exposure of persons on the ground to crash hazards associated with aircraft; and
3. The need for appropriate height restrictions to protect the airspace used by aircraft.

The ALUC Airport Safety Map and Land Use Compatibility Guidelines for Safety, contained within the Airport Master Plan, regulate land uses and structure heights that may constitute a hazard to air navigation. Any proposed object or structure that would penetrate any of these imaginary surfaces as they apply to the Westover Field Airport is considered by the Federal Aviation Administration (FAA) to be an obstruction to air navigation. The northern portion of the project's SOI and a small portion of the City are located within Safety Area 3 (Overflight Zone) of Westover Field.

3.10.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on land use and population if it will:

- Physically divide an established community;
- Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect;
- Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure); or
- Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

IMPACTS AND MITIGATION MEASURES

Impact 3.10-1: General Plan implementation would not physically divide an established community (Less than Significant)

The proposed General Plan establishes the City's vision for future growth and development. The land uses allowed under the proposed General Plan (Figure 2.0-2) provide opportunities for cohesive new growth generally within existing urbanized areas of the city, as well as new growth adjacent to existing urbanized areas, but would not create physical division within the community. New development and redevelopment projects would be designed to complement the character of the existing community and neighborhoods and provide connectivity between existing development and new development. The proposed General Plan Land Use Map designates sites for a range of urban and rural developed uses as well as open space. The proposed General Plan does not include any new areas designated for urbanization or new roadways, infrastructure, or other features that would divide existing communities. The proposed General Plan would have a **less than significant** impact associated with the physical division of an established community. The policies and actions listed below would ensure that future development is compatible with adjacent communities and land issues.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

LAND USE ELEMENT POLICIES

LU 1.2: Encourage a well-balanced mix of housing, workplaces, shopping, recreational opportunities, and institutional uses, including mixed-use structures (combined residential and non-residential uses), that help to reduce vehicular trips.

LU 1.3: Encourage infill development and logical development patterns. The City should discourage leap-frog development and undue conversion of open space and agricultural lands. Jackson should encourage greater density of new development in the center core areas of the City and lesser density in the peripheral areas.

LU 1.7: Participate in adjoining County projects to the greatest extent possible in order to protect and enhance the City's neighborhoods.

LU 2.2: Promote high-quality design and site planning that is compatible with surrounding development, public spaces, and natural and historical resources.

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LU 2.3: Require that development is located and designed to ensure compatibility among land uses, addressing such elements as building orientation and setbacks; buffering; visibility and privacy; automobile and truck access; impacts of noise, lighting, and glare; landscape quality; and aesthetics.

LU 2.11: Encourage new development projects to incorporate public safety measures into project designs. Such measures may include, but are not limited to: crosswalks, exterior lighting, windows oriented towards the street, and other measures to prevent crime and promote safety through Environmental Design approaches.

LU 3.2: Encourage residential development to occur in a balanced and efficient pattern that reduces sprawl, preserves open space, and creates convenient connections to other land uses.

LAND USE ELEMENT ACTIONS

LU-1a: Review the standards and zoning districts provided in the Development Code (Title 17 of the Jackson Municipal Code) and amend as necessary for consistency with General Plan policies and allowed uses, as established within this element.

LU-2a: Through the development review and permit process, screen development proposals for land use compatibility, including conformance with existing and planned development.

LU-2g: Conduct design review of all applicable projects and ensure consistency with the City's Design Standards; balance design considerations with the preservation of surrounding development, public spaces, and natural and historical resources.

LU-3b: Seek funding for neighborhood improvement programs designed to stabilize and enhance the quality of existing neighborhoods. Such improvements may include, but are not limited to, sidewalk upgrade and repair, street tree programs, street lighting, signage, trash collectors, shuttle stop shelters and benches, and similar improvements to the public areas.

LU-5a: Encourage land use decisions and design features for development or redevelopment in the downtown that:

- a. Enhance and restore historical resources;*
- b. Are compatible with and complementary to the historic feel of the downtown;*
- c. Provide thoughtful solutions to the existing lack of parking;*
- d. Provide sidewalks and other pedestrian-oriented amenities;*
- e. Increase landscaping for shading, beautification, and screening; and*
- f. Support efforts to keep the majority of County facilities in the downtown.*

Impact 3.10-2: General Plan implementation would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect (Less than Significant)

STATE PLANS

The proposed General Plan was prepared in conformance with State laws and regulations associated with the preparation of general plans, including requirements for environmental protection. Discussion of the proposed General Plan's consistency with State regulations, plans, and policies associated with specific environmental issues (e.g., air quality, traffic, water quality, etc.) is provided in the relevant chapters of this Draft EIR. The State would continue to have authority over any State-owned lands in the vicinity of the city and the proposed General Plan would not conflict with continued application of State land use plans, policies, and regulations adopted to avoid or mitigate environmental effects.

CITY PLANS

As set forth by State law, the General Plan serves as the primary planning document for the City and subordinate documents and plans would be updated to be consistent with the General Plan. Similar to the existing General Plan, the proposed General Plan focuses on a balanced land use pattern, creating a community where new development blends with existing neighborhoods, and promoting the City as a desirable place to live and work. The proposed General Plan carries forward and enhances policies and measures from the City's existing General Plan that were intended for environmental protection and would not remove or conflict with City plans, policies, or regulations adopted for environmental protection. The proposed General Plan would not require modifications to the City's Zoning Ordinance to provide consistency between the General Plan and zoning; The Development Code will be periodically updated to keep the zoning classifications consistent with the Land Use Element and the Land Use Map.

Environmental impacts associated with potential development under the proposed General Plan are discussed in Sections 3.1 through 3.16 and 4.0 of this Draft EIR.

OTHER LOCAL AND REGIONAL PLANS POLICIES AND REGULATIONS

Additionally, the Jackson General Plan ensures compatibility with other local and regional plans and policies and provides policy direction.

Airport Land Use Compatibility Plan

The General Plan Policy LU 2.8 requires that development within the Westover Field Airport Influence Area is consistent with the Westover Field Airport Land Use Compatibility Plan. The General Plan Action CIRC-7a requires to apply the policies and standards specified in the Airport Land Use Plan to new development projects during the development review process.

City Policies and Ordinances to Protect Visual Features

The General Plan Action COS-1e requires to implement the City's Visual Corridor Overlay, Hillside Development Standards, and Open Space Standards to retain Jackson's significant natural features and preserve and protect open space areas.

LAFCO Consistency Review and Coordination

The General Plan Action LU-6e requires the City to cooperate with Local Agency Formation Commission and the County to direct growth outside the City Limits on lands that are served or are

3.10 LAND USE, POPULATION, AND HOUSING

planned to be served, with a full range of urban services, such as public water and sewer, an extensive road network, public transit, safety and emergency response services, parks, trails, and open space.

SUMMARY

Subsequent development and infrastructure projects would be required to be consistent with all applicable policies, standards, and regulations, including those land use plans, policies, and regulations adopted to mitigate environmental effects by the City as well as those adopted by agencies with jurisdiction over components of future development projects. Any potential environmental impact associated with conflicts with land use requirements would be **less than significant**. The policies listed below would ensure that the General Plan does not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

LAND USE ELEMENT POLICIES

LU 1.1: Ensure consistency between the Land Use Map and implementing plans, ordinances, and regulations.

LU 2.3: Require that development is located and designed to ensure compatibility among land uses, addressing such elements as building orientation and setbacks; buffering; visibility and privacy; automobile and truck access; impacts of noise, lighting, and glare; landscape quality; and aesthetics.

LU 2.8: Ensure that development within the Westover Field Airport Influence Area is consistent with the Westover Field Airport Land Use Compatibility Plan.

SAFETY ELEMENT POLICIES

SA 4.9: Ensure development projects are reviewed for consistency with the Amador County Local Hazard Mitigation Plan.

CIRCULATION ELEMENT POLICIES

CIRC 2.5: All road facilities shall be constructed or upgraded to current design standards where practical and feasible.

CIRC 2.7: New development plans which generate a direct need for new off-site roadways, road widening or upgraded intersection improvements, traffic controls or other similar improvements shall be required to construct the needed improvements to City standards as part of project approval and construction.

CIRC 2.9: New development circulation plans shall be in conformance with the General Plan's goals and policies, the Circulation Element map, City codes and adopted standards.

CONSERVATION AND OPEN SPACE ELEMENT POLICIES

COS 3.4: Utilize locally-sourced native and drought-tolerant plants and trees for landscaping on public projects consistent with the City's landscape standards. Strongly encourage the use of native drought-tolerant trees for landscaping on private projects.

COS 5.1: Require all development projects to comply with the mandatory energy efficiency requirements of the California Green Building Standards Code (CALGreen) and Building and Energy Efficiency Standards.

COS 5.2: Support and encourage the implementation of innovative and green building best management practices (BMPs) including, but not limited to, sustainable site planning, solar opportunities, LEED certification, and exceeding the most current "green" development standards in the California Code of Regulations (CCR), Title 24, as feasible.

LAND USE ELEMENT ACTIONS

LU-1a: Review the standards and zoning districts provided in the Development Code (Title 17 of the Jackson Municipal Code) and amend as necessary for consistency with General Plan policies and allowed uses, as established within this element.

LU-1c: Process development proposals in accordance with the City's Resource Constraints and Priority Allocation Ordinance. Give priority processing to projects proposed within or adjacent to areas served by existing infrastructure, parks, and services. Require developers to prepare a plan for providing and financing parks and services that meet City standards.

LU-2a: Through the development review and permit process, screen development proposals for land use compatibility, including conformance with existing and planned development.

LU-2g: Conduct design review of all applicable projects and ensure consistency with the City's Design Standards; balance design considerations with the preservation of surrounding development, public spaces, and natural and historical resources.

SAFETY ELEMENT ACTIONS

SA-4c: Continue to require all new development to be reviewed for consistency with the relevant State and local Fire Safe Regulations, and the most recently adopted fire code standards.

CIRCULATION ELEMENT ACTIONS

CIRC-2c: Refer all development proposals to City staff to identify needed improvements for each project. Standards included in, but not limited to, the Land Use Element, Zoning Ordinance, Subdivision Ordinance, and Road Design Standards will be used as evaluation criteria.

CIRC-7a: Apply the policies and standards specified in the Airport Land Use Plan to new development projects during the development review process.

CIRC-8d: Consider requiring new development to incorporate electric vehicle charging in accordance with the California Green Building Standards Code and/or commit to using electric vehicles for a certain percentage of its vehicle fleet. Encourage installation of electric vehicle charging stations at existing development.

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CONSERVATION AND OPEN SPACE ELEMENT ACTIONS

COS-1e: Continue to implement the City's Visual Corridor Overlay, Hillside Development Standards, and Open Space Standards to retain Jackson's significant natural features and preserve and protect open space areas.

COS-3a: Continue to maintain and apply the City's Landscape Standards (Municipal Code Chapter 17.40) to conserve trees and other foliage wherever practical.

COS-5a: Continue to review development projects to ensure that all new public and private development complies with the California Code of Regulations (CCR), Title 24 and CalGreen standards as well as the energy efficiency standards established by the General Plan and the Development Code.

SAFETY ELEMENT ACTIONS

SA-4c: Continue to require all new development to be reviewed for consistency with the relevant State and local Fire Safe Regulations, and the most recently adopted fire code standards.

SA-5e: Refer all permits for new projects or major additions to existing uses located on sites identified by the State as having or containing likely hazardous substances or materials to the Amador County Environmental Health Department to ensure compliance with applicable State and local regulations. If warranted, identify and require mitigation measures to ensure the exposure to hazardous materials from historical uses has been mitigated to acceptable levels consistent with EPA and/or California Department of Toxic Substances Control standards.

Impact 3.10-3: General Plan implementation would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure) (Less than Significant)

The proposed General Plan is a long-range planning document that establishes the City's vision for growth patterns, including areas for development and lands for open space and conservation. The General Plan provides the framework for the City's plan for growth and development, including new businesses, expansion of existing businesses, and new residential uses. Infrastructure and services would need to be extended to accommodate future growth. As described in Chapter 2.0 (Project Description) the General Plan by 2040 would be anticipated to result in 681 dwelling units accommodating an additional 1,435 residents, and approximately 300,000 square feet of nonresidential development that would accommodate an additional 457 jobs within Jackson. The General Plan Update did not include substantial map revisions that would result in growth allowed in excess of what is allowed under the Existing General Plan Map. Furthermore, the California Department of Finance (DoF) projects that Amador County will grow from a population of 37,577 persons in 2020 to 39,743 persons by 2040. This represents a 5.7% increase in growth and the addition of 2,166 persons. New growth projected in the City of Jackson and its SOI could result in the addition of 1,435 persons. This represents a 28.3% population growth rate, which far exceeds the overall growth rate projected by the DoF for Amador County.

Given the historical and current population, housing, and employment trends, growth in the city, as well as the entire state, is inevitable. The primary factors that account for population growth are natural increase and net migration. The average annual birth rate for California is expected to be 20 births per 1,000 population. Additionally, California is expected to attract more than one third of the country's immigrants. Other factors that affect growth include the cost of housing, the location of jobs, the economy, the climate, and transportation. While these factors would likely result in growth in Jackson during the planning period of the proposed General Plan, growth will continue to occur based primarily on the demand of the housing market and demand for new commercial, industrial, and other non-residential uses. As future development occurs under the proposed General Plan, new roads, infrastructure, and services would be necessary to serve the development, and this infrastructure would accommodate planned growth. The proposed General Plan is intended to accommodate the City's fair share of statewide housing needs based on regional numbers provided by the California Department of Housing and Community Development on a regular basis (every eight years).

The proposed General Plan includes policies and actions that mitigate environmental impacts associated with growth, such as air quality, noise, traffic, water supply, and water quality effects. Chapters 3.1 through 3.16 and 4.0 provide a discussion of environmental effects associated with development allowed under the proposed General Plan. Each of these EIR chapters include relevant policies and action items that would mitigate potential environmental impacts associated with growth, to the greatest extent feasible.

With implementation of General Plan, policies and actions intended to guide growth to appropriate areas and provide services necessary to accommodate growth, the land uses allowed under the proposed General Plan, the infrastructure anticipated to accommodate proposed land uses, and the goal and policy framework would not induce growth that would exceed adopted thresholds, beyond those disclosed and analyzed throughout this EIR. Therefore, population and housing growth associated with the proposed General Plan would result a **less than significant** impact, as there are no additional potential environmental impacts, beyond those analyzed and disclosed in this EIR, that would result from growth accommodated by the proposed Project.

Impact 3.10-4: General Plan implementation would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere (Less than Significant)

The majority of developed land in the Planning Area is comprised of residential uses, which are not anticipated to undergo significant land use changes under the Proposed Project. The proposed General Plan focuses on providing the framework for logical, orderly growth from the City's historic center extending to well-delineated residential neighborhoods, employment centers, and community amenities.

The General Plan Update did not include substantial map revisions that would result in growth allowed in excess of what is allowed under the Existing General Plan Map. While the proposed General Plan may result in development that could redevelop or remove individual residences, development allowed under the General Plan identifies lands for a variety of housing densities and

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types would result in an increase in the total number of residences and provide housing opportunities for persons that may be displaced as a result of development.

Therefore, impacts of the proposed General Plan on the displacement of people or housing are considered **less than significant** and no mitigation is required. The policies listed below would further ensure that a range of housing types are provided in the City, and that housing conditions are evaluated as the housing supply ages.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

LAND USE ELEMENT POLICIES

LU 3.1: Provide for a variety of residential land uses that meet the needs of individuals and families while ensuring that there is adequate land designated to meet housing goals. (Additional policies specifically related to housing are included in the Housing Element).

LU 3.3: Encourage creativity in the design and construction of residential projects in order to increase affordable housing options throughout the City. Projects that incorporate unique site design, clustered developments, and other tools to increase housing options shall be encouraged.

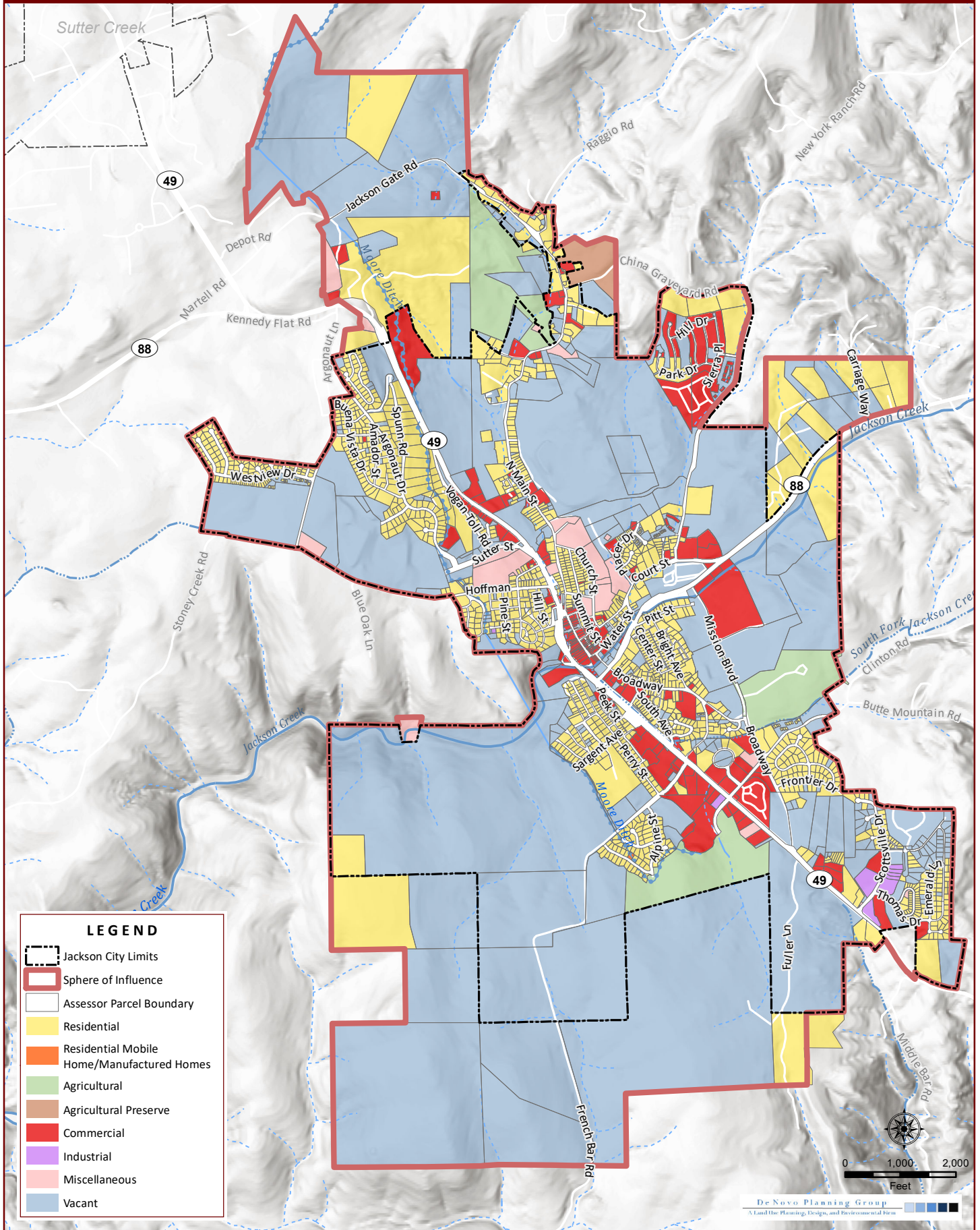
LU 3.4: Encourage growth to contribute to the City's strong, diversified economic base and provide an appropriate balance between employment and housing opportunities for all income levels.

LAND USE ELEMENT ACTIONS

LU-3a: Implement the policies and actions in the Housing Element in order to enhance opportunities to provide affordable housing within the community and to accommodate a range of household types, special needs populations, and income levels.

LU-4e: Work with federal, state, and regional partners to seek funding opportunities for strategic workforce and economic development programs.

Figure 3.10-1. Assessed Land Uses



Sources: City of Jackson; ACTC; ParcelQuest; USGS NHD; ArcGIS Online World Elevation/Terrain Image Service. Map date: April 9, 2021.

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This section provides a background discussion and analysis of mineral and energy resources in Jackson. This section is organized with an environmental setting, regulatory setting, and impact analysis.

No comments were received on this environmental topic during the NOP comment period.

3.11.1 ENVIRONMENTAL SETTING

MINERAL RESOURCE CLASSIFICATION

Pursuant to Surface Mining and Reclamation Act (SMARA), the California State Mining and Geology Board oversees the mineral resource zone (MRZ) classification system. The MRZ system characterizes both the location and known/presumed economic value of underlying mineral resources. The mineral resource classification system uses four main MRZs based on the degree of available geologic information, the likelihood of significant mineral resource occurrence, and the known or inferred quantity of significant mineral resources. The four classifications are described in Table 3.11-1.

TABLE 3.11-1: MINERAL RESOURCE CLASSIFICATION SYSTEM

<i>CLASSIFICATION</i>	<i>DESCRIPTION</i>
MRZ-1	Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
MRZ-2	Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.
MRZ-3	Areas containing mineral deposits, the significance of which cannot be evaluated.
MRZ-4	Areas where available information is inadequate for assignment to any other MRZ classification.

SOURCE: CALIFORNIA DEPARTMENT OF CONSERVATION DIVISION OF MINES AND GEOLOGY, 2002.

MINERAL RESOURCES

Statewide Resources

In 2014, the California Geological Survey identified that approximately 4 billion tons of permitted aggregate reserves lie within the 31 aggregate study areas in California. These permitted aggregate reserves have been determined to be acceptable for commercial use, exist within properties owned or leased by aggregate producing companies, and have permits allowing mining of aggregate material. Sand, gravel, and crushed stones are construction materials that are collectively referred to as construction aggregate. These materials provide the bulk and strength to Portland cement concrete (PCC), asphaltic concrete (AC), plaster, and stucco. Other uses include road base, subbase, railroad ballast, and fill.

From 1981 to 2010, California consumed an average of about 180 million tons of construction aggregate (all grades) per year. (CGS, 2012).

Mineral resources include commercially viable oil and gas deposits, and nonfuel mineral resources deposits. Nonfuel mineral resources include metals such as gold, silver, iron, and copper; industrial metals such as boron compounds, rare-earth elements, clays, limestone, gypsum, salt, and dimension stone; and construction aggregate, including sand, gravel, and crushed stone. California is the largest producer of sand and gravel in the nation.

Regional Setting

Amador County has a rich history based in mining activities initiated in the mid-1800s during the California Gold Rush period. A 20-mile-long belt of gold mineralization runs through western Amador County. On the belt, a portion of the Mother Lode, are the towns of Jackson, Sutter Creek, Amador City, Drytown, and Plymouth (Clark, 1969). Large-scale mining continued in the area until the mid-1900s. A legacy of the areas mining history is a number of abandoned mining sites located throughout the County. Several of these sites are located in or near the City of Jackson.

The largest former mining site is the Kennedy Gold Mine. One of the deepest gold mines in the world (at 5,912 feet), Kennedy Gold Mine was operational until 1942. The City of Jackson now stands on most of the former Kennedy Gold Mine site. Currently, the residual Kennedy Gold Mine site, located approximately 0.25 miles north of the City, offers surface tours for tourism and educational purposes. Southwest of the Kennedy Gold Mine is Argonaut Mine.

The Argonaut Mine was operated from 1850 to 1942 as a below ground hard rock gold mine and mill. Stamp mill, oil flotation, and mercury amalgamation techniques were used to process ore; processing between 1923 and 1938 was performed using cyanide vat leaching techniques. No mining operations are known to have occurred at the site after 1942, but various organized efforts to recover gold from existing tailings occurred in the 1980s and 1990s. In the early 1990s, approximately 60,000 tons of unprocessed ore was reportedly removed from the property for gold processing in Nevada (DTSC, 2006). Additionally there are many other mines present in and around the City.

Local Mineral Extraction Activities

The Open Space and Conservation Element of the City's General Plan states that soils in the Jackson area are relatively shallow (0 to 5 feet), and of limited quality for export and it is unlikely that they would be mined commercially except for local gravel pockets that may be suitable for construction aggregates.

As shown on Figure 3.11-1, the planning area is designated as MRZ-3a "may contain significant aggregate deposit," MRZ-2b which may "contain discovered mineral deposits that are significant inferred resources, " and MRZ-4 "Areas where available information is inadequate for assignment to any other MRZ classification."

3.11.2 REGULATORY SETTING

STATE

Surface Mining and Reclamation Act of 1975

The California Department of Conservation Surface Mining and Reclamation Act of 1975 (§ 2710), also known as SMARA, provides a comprehensive surface mining and reclamation policy that permits the continued mining of minerals, as well as the protection and subsequent beneficial use of the mined and reclaimed land. The purpose of SMARA is to ensure that adverse environmental effects are prevented or minimized and that mined lands are reclaimed to a usable condition and are readily adaptable for alternative land uses. The production and conservation of minerals are encouraged, while also giving consideration to values relating to recreation, wildlife, range, and forage, as well as aesthetic enjoyment. Residual hazards to public health and safety are eliminated. These goals are achieved through land use planning by allowing a jurisdiction to balance the economic benefits of resource reclamation with the need to provide other land uses.

If a use is proposed that might threaten the potential recovery of minerals from an area that has been classified MRZ-2, SMARA would require the jurisdiction to prepare a statement specifying its reasons for permitting the proposed use, provide public notice of these reasons, and forward a copy of the statement to the State Geologist and the State Mining and Geology Board (Cal. Pub. Res. Code Section 2762). Lands classified MRZ-2 are areas that contain identified mineral resources.

Division of Mines and Geology

The California Division of Mines and Geology (DMG) operates within the Department of Conservation. The DMG is responsible for assisting in the utilization of mineral deposits and the identification of geological hazards.

State Geological Survey

Similar to the DMG, the California Geological Survey is responsible for assisting in the identification and proper utilization of mineral deposits, as well as the identification of fault locations and other geological hazards.

Public Resources Code

PRC Section 2762(d) and 2763 requires a lead agency to prepare a statement specifying its reasons for permitting a use that would threaten the potential to extract mineral resources either 1) in an area that has been designated in its general plan as having important minerals to be protected, or 2) if the use is proposed in an area with significant resources pursuant to Section 2761(b)(2) and the lead agency has not yet acted on the State's designation. PRC Section 2763 requires that lead agency land use decisions involving areas designated as being of regional significance shall be in accordance with the lead agency's mineral resource management policies and shall also, in balancing mineral values against alternative land uses, consider the importance of these minerals

to their market region as a whole and not just their importance to the lead agency's area of jurisdiction.

ASSEMBLY BILL 617

Assembly Bill 617 (AB 617) was signed by Governor Jerry Brown on July 26, 2017, amends California Health and Safety Code section 40920.6, and requires Districts to adopt a schedule of BARCT regulation implementation. BARCT rules amend existing District Regulations but in the case that no specific District Regulations exist, new Regulations are adopted. In the Districts circumstance, it does not have a BARCT regulation so new rules would need to be evaluated. This schedule referenced in Item 5 is a timeframe for the District to potentially adopt new Regulation(s) specific to certain facilities in the natural gas industry identified by CARB.

3.11.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project may have a significant impact on the environment associated with mineral resources if it would:

1. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or
2. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

IMPACTS AND MITIGATION MEASURES

Impact 3.11-1: General Plan implementation would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state (Less than Significant)

Within the Planning Area, as shown on Figure 3.11-1, the planning area is designated as MRZ-3a "may contain significant aggregate deposit," MRZ-2b which may "contain discovered mineral deposits that are significant inferred resources," and MRZ-4 "Areas where available information is inadequate for assignment to any other MRZ classification." However, as noted in the environmental setting, mining operations at the Kennedy and Argonaut Mines have ceased and there are no active mining operations within the Planning Area.

The areas designated as MRZ-2b which extends through the center of the Planning Area and MRZ-3a and extend the boundaries of the Planning Area are currently designated with urban uses, developed and no longer available for mining. Therefore, no significant potential for extraction remains from these known MRZs. There are no other known mineral deposits or resources within Jackson that are of significant value to the region or the state. As such, implementation of the proposed General Plan would have a **less than significant** impact on this environmental topic.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

CONSERVATION AND OPEN SPACE ELEMENT POLICIES

COS 8.1: Support new or expanded mineral resource extraction operations only if they are compatible with surrounding land uses. Manage resources to ensure that extraction results in the fewest environmental impacts.

COS 8.2: Ensure that mineral extraction activities within the Planning Area conform to the State Mining and Reclamation Act (SMARA) requirements, including financial assurances and reclamation plans.

CONSERVATION AND OPEN SPACE ELEMENT ACTIONS

COS-8a: Consider updates to the Municipal Code to address production of mineral resources, including oil and gas wells.

COS-8b: Identify and evaluate areas within the Planning Area with potential resource value, including oil, gas, sand, and gravel.

COS-8c: Work with surrounding jurisdictions to ensure establishment of implementation measures for mineral resource and extractive activities management consistent with local and state laws and regulations.

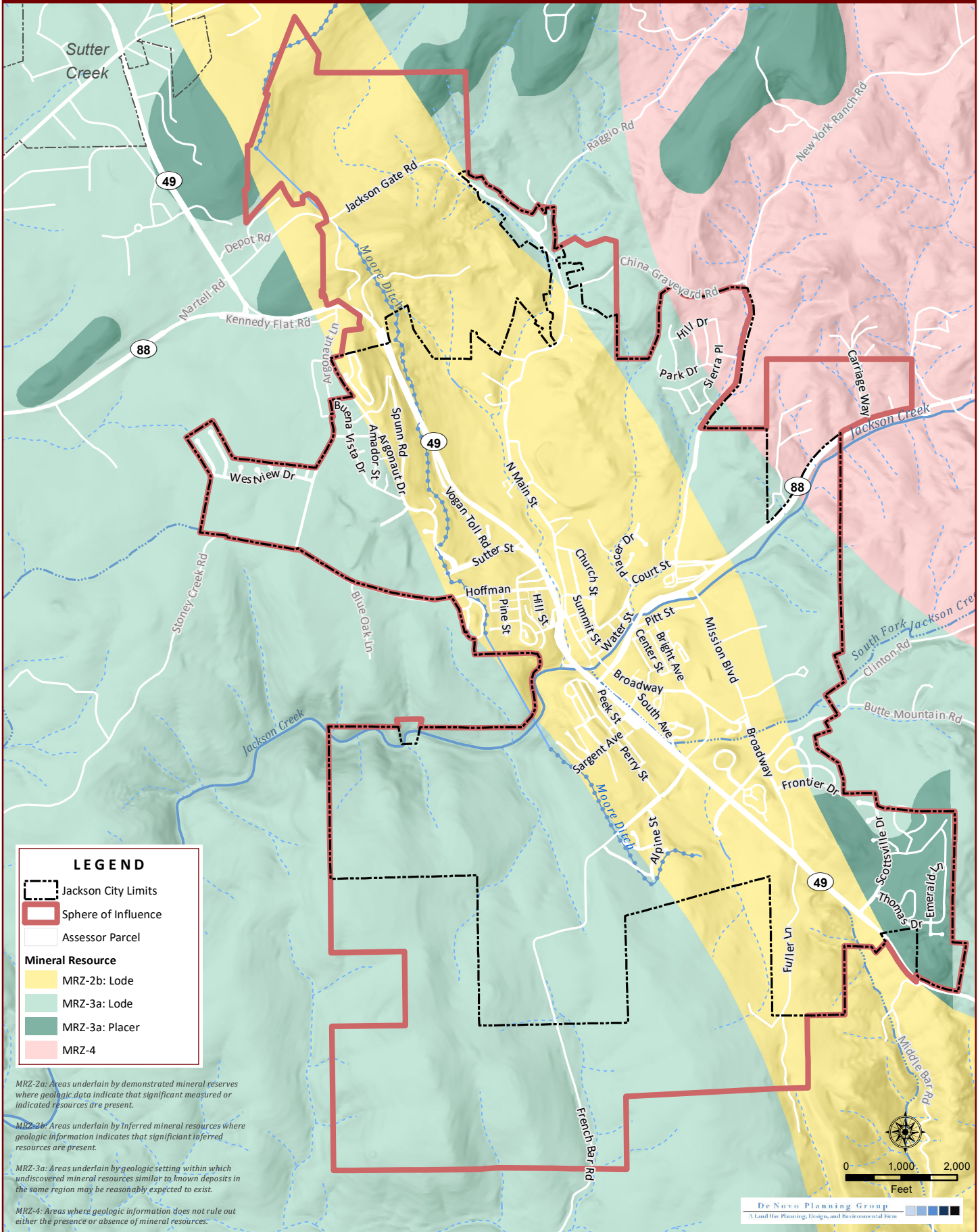
Impact 3.11-2: General Plan implementation would not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan (Less than Significant)

Soils in the Jackson area are relatively shallow (0 to 5 feet), and of limited quality for export and it is unlikely that they would be mined commercially except for local gravel pockets that may be suitable for construction aggregates.

Areas within and around the City of Jackson have historically been the site of gold mining activities, including the Argonaut Mine and Amador De Oro sites within the City. Mineral rights are also designated on several assessor parcel maps within the City. However, no lands within the City are classified for mineral resource extraction nor are there any active mines within the City. The proposed project would not convert any lands from current mineral resources use to other uses. As there are no lands designated as having potential mineral resources within the City, the project would not result in the loss of such resources. Therefore, the regional resource is no longer available for extraction and the proposed project would not result in loss of availability of a designated locally important mineral resource recovery site. Therefore, this impact is considered **less than significant**.

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Figure 3.11-1. Mineral Resource Zones



Sources: Open File Report 83-36, 1983, Plate 7; Open File Report 87-02, 1987, Plate 5b; ACTC; USGS NHD; ArcGIS Online World Elevation/Terrain Image Service. Map date: April 14, 2021.

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This section provides a discussion of the regulatory setting and a general description of existing noise sources in the City of Jackson. The analysis in this section was prepared with assistance from Saxelby Acoustics.

There were no comments received during the NOP comment period related to this environmental topic.

3.12.1 ENVIRONMENTAL SETTING

KEY TERMS

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given area consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of noise.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, defined as ten times the logarithm of the ratio of the sound pressure squared over the reference pressure squared.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic acoustic signal, expressed in cycles per second or Hertz.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.
L(n)	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L50 is the sound level exceeded 50 percent of the time during the one hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.
Noise	Unwanted sound.
SEL	A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy into a one-second event

FUNDAMENTALS OF ACOUSTICS

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected, or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals) as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted.

The decibel scale is logarithmic, not linear. In other words, two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70 dBA sound is half as loud as an 80 dBA sound, and twice as loud as a 60 dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (Leq), which corresponds to a steady-state A-weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The Leq is the foundation of the composite noise descriptor, Ldn, and shows very good correlation with community response to noise.

The day/night average level (Ldn) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because Ldn represents a 24-hour average, it tends to disguise short-term variations in the noise environment. CNEL is similar to Ldn, but includes a +3 dB penalty for evening noise. Table 3.12-1 lists several examples of the noise levels associated with common situations.

TABLE 3.12-1: TYPICAL NOISE LEVELS

<i>COMMON OUTDOOR ACTIVITIES</i>	<i>NOISE LEVEL (dBA)</i>	<i>COMMON INDOOR ACTIVITIES</i>
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft)	--100--	
Gas Lawn Mower at 1 m (3 ft)	--90--	
Diesel Truck at 15 m (50 ft), at 80 km/hr (50 mph)	--80--	Food Blender at 1 m (3 ft) Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft)	--70--	Vacuum Cleaner at 3 m (10 ft)
Commercial Area Heavy Traffic at 90 m (300 ft)	--60--	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

SOURCE: CALTRANS, TECHNICAL NOISE SUPPLEMENT, TRAFFIC NOISE ANALYSIS PROTOCOL. SEPTEMBER 2013.

EFFECTS OF NOISE ON PEOPLE

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction;
- Interference with activities such as speech, sleep, and learning; and
- Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual’s past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it.

With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- Outside of the laboratory, a 3 dBA change is considered a just-perceivable difference;

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- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10 dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6 dB per doubling of distance from the source, depending on environmental conditions (i.e., atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

EXISTING NOISE LEVELS

Traffic Noise Levels

The FHWA Highway Traffic Noise Prediction Model (FHWA-RD 77-108) was used to develop L_{dn} (24-hour average) noise contours for all highways and major roadways in the Planning Area. The model is based upon the CALVENO noise emission factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver and the acoustical characteristics of the site. The FHWA Model predicts hourly L_{eq} values for free-flowing traffic conditions, and is generally considered to be accurate within 1.5 dB. To predict L_{dn} values, it is necessary to determine the hourly distribution of traffic for a typical 24-hour period.

Existing traffic volumes were obtained from the traffic modeling performed for the Planning Area. Day/night traffic distributions were based upon continuous hourly noise measurement data and Saxelby Acoustics file data for similar roadways. Caltrans vehicle truck counts were obtained for SRT-4. Using these data sources and the FHWA traffic noise prediction methodology, traffic noise levels were calculated for existing conditions. Table 3.12.2 shows the results of this analysis.

TABLE 3.12-2: PREDICTED EXISTING TRAFFIC NOISE LEVELS

Roadway	Segment	Noise Level at Closest Receptors (dB, Ldn) ¹	Distances to Traffic Noise Contours, Ldn (feet)		
			70 dB	65 dB	60 dB
Highway 49	Ridge Rd to Jackson Gate Rd	66.5	47	100	216
Highway 49	Jackson Gate Rd to Hoffman St	69.1	48	104	223
Highway 49	Hoffman St to Hwy 88	68.7	49	106	228
Highway 49	Hwy 88 to French Bar Rd	71.1	53	115	248
Highway 49	French Bar Rd to Clinton Rd	66.5	38	82	176
Highway 49	Clinton Rd to Hwy 49 S	65.7	26	56	120
Highway 88	Hwy 88 W to Wicklow Wy	63.7	33	70	151
Highway 88	Wicklow Wy to Hwy 49	67.0	41	88	190
Highway 88	Hwy 49 to Court St	65.8	21	45	97
Highway 88	Court St to Hwy 88 E	61.2	45	97	209

Hoffman St	Argonaut Ln to Hwy 49	62.2	9	19	42
Jackson Gate Rd	Hwy 49 to Raggio Rd	60.1	10	21	46
North Main St	China Graveyard Rd to Hwy 49	57.8	6	13	28
Mission Blvd	Hwy 88 to Clinton Rd	60.4	9	20	43
New York Ranch Rd	China Graveyard Rd to Court St	62.1	12	26	55

NOTES: DISTANCES TO TRAFFIC NOISE CONTOURS ARE MEASURED IN FEET FROM THE CENTERLINES OF THE ROADWAYS.

¹ TRAFFIC NOISE LEVELS ARE PREDICTED AT THE CLOSEST SENSITIVE RECEPTORS OR AT A DISTANCE OF 100 FEET IN COMMERCIAL/RETAIL AREAS.

SOURCE: TJKM, CALTRANS, SAXELBY ACOUSTICS, 2021.

Traffic noise levels are predicted at the sensitive receptors located at the closest typical setback distance along each Planning Area roadway segment. In some locations, sensitive receptors may be located at distances which vary from the assumed calculation distance and may experience shielding from intervening barriers or sound walls. However, the traffic noise analysis is believed to be representative of the majority of sensitive receptors located closest to the Planning Area roadway segments analyzed in this report.

The actual distances to noise level contours may vary from the distances predicted by the FHWA model due to roadway curvature, grade, shielding from local topography or structures, elevated roadways, or elevated receivers. The distances reported in Table 3.12-2 are generally considered to be conservative estimates of noise exposure along roadways in the City of Jackson.

Fixed Noise Sources

The production of noise is a result of many industrial processes, even when the best available noise control technology is applied. Noise exposures within industrial facilities are controlled by Federal and State employee health and safety regulations (OSHA and Cal-OSHA), but exterior noise levels may exceed locally acceptable standards. Commercial, recreational, and public service facility activities can also produce noise which affects adjacent sensitive land uses. These noise sources can be continuous and may contain tonal components which have a potential to annoy individuals who live nearby. In addition, noise generation from fixed noise sources may vary based upon climatic conditions, time of day, and existing ambient noise levels.

Fixed noise sources typically include parking lots, loading docks, parks, schools, and other commercial/retail use noise sources (HVAC, exhaust fans, etc.)

From a land use planning perspective, fixed-source noise control issues focus upon two goals:

1. To prevent the introduction of new noise-producing uses in noise-sensitive areas, and
2. To prevent encroachment of noise sensitive uses upon existing noise-producing facilities.

The first goal can be achieved by applying noise level performance standards to proposed new noise-producing uses. The second goal can be met by requiring that new noise-sensitive uses in near proximity to noise-producing facilities include mitigation measures that would ensure compliance with noise performance standards.

Fixed noise sources which are typically of concern include but are not limited to the following:

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- HVAC Systems
- Pump Stations
- Steam Valves
- Generators
- Air Compressors
- Conveyor Systems
- Pile Drivers
- Drill Rigs
- Welders
- Outdoor Speakers
- Chippers
- Loading Docks
- Cooling Towers/Evaporative Condensers
- Lift Stations
- Steam Turbines
- Fans
- Heavy Equipment
- Transformers
- Grinders
- Gas or Diesel Motors
- Cutting Equipment
- Blowers
- Cutting Equipment
- Amplified Music and Voice

The types of uses which may typically produce the noise sources described above include, but are not limited to: wood processing facilities, pump stations, industrial/agricultural facilities, trucking operations, tire shops, auto maintenance shops, metal fabricating shops, shopping centers, drive-up windows, car washes, loading docks, public works projects, batch plants, bottling and canning plants, recycling centers, electric generating stations, race tracks, landfills, sand and gravel operations, and special events such as concerts and athletic fields. Typical noise levels associated with various types of stationary noise sources are shown in Table 3.12-3.

TABLE 3-12-3: TYPICAL STATIONARY NOISE LEVELS

Use	Noise Level at 100 feet, Leq 1	Distance to Noise Contours, feet			
		50 dB Leq (No Shielding)	45 dB Leq (No Shielding)	50 dB Leq (With 5 dB Shielding)	45 dB Leq (With 5 dB Shielding)
Auto Body Shop	56 dB	200	355	112	200
Auto Repair (Light)	53 dB	141	251	79	141
Busy Parking Lot	54 dB	158	281	89	158
Cabinet Shop	62 dB	398	708	224	398
Car Wash	63 dB	446	792	251	446
Cooling Tower	69 dB	889	1,581	500	889
Loading Dock	66 dB	596	1,059	335	596
Lumber Yard	68 dB	794	1,413	447	794
Maintenance Yard	68 dB	794	1,413	447	794
Outdoor Music Venue	90 dB	10,000	17,783	5,623	10,000
Paint Booth Exhaust	61 dB	355	631	200	355
School Playground / Neighborhood Park	54 dB	158	281	89	158
Skate Park	60 dB	316	562	178	316
Truck Circulation	48 dB	84	149	47	84
Vendor Deliveries	58 dB	251	446	141	251

¹ ANALYSIS ASSUMES A SOURCE-RECEIVER DISTANCE OF APPROXIMATELY 100 FEET, NO SHIELDING, AND FLAT TOPOGRAPHY. ACTUAL NOISE LEVELS WILL VARY DEPENDING ON SITE CONDITIONS AND INTENSITY OF THE USE. THIS INFORMATION IS INTENDED AS A GENERAL RULE ONLY, AND IS NOT SUITABLE FOR FINAL SITE-SPECIFIC NOISE STUDIES.

SOURCE: J.C. BRENNAN & ASSOCIATES, INC. 2017.

Community Noise Survey

A community noise survey was conducted to document ambient noise levels at various locations throughout the town. Short-term noise measurements were conducted at five locations throughout the town on April 21st, 2021. In addition, four continuous 24-hour noise monitoring sites were also conducted to record day-night statistical noise level trends on April 22nd, 2021. The data collected included the hourly average (L_{eq}), median (L₅₀), and the maximum level (L_{max}) during the measurement period. Noise monitoring sites and the measured noise levels at each site are summarized in Table 3.12-4 and Table 3.12-5. Figure 3.12-1 shows the locations of the noise monitoring sites.

TABLE 3.12-4: EXISTING CONTINUOUS 24-HOUR AMBIENT NOISE MONITORING RESULTS

Site	Location	Ldn (dBA)	Measured Hourly Noise Levels, dBA Low-High (Average)					
			Daytime (7:00 am - 10:00 pm)			Nighttime (10:00 pm - 7:00 am)		
			Leq	L50	Lmax	Leq	L50	Lmax
LT-1	Highway 49 at Mel’s Diner	68	66	64	83	61	57	75
LT-2	Highway 49 South	70	69	67	86	62	45	80
LT-3	Highway 88	65	64	60	79	58	43	75
LT-4	Highway 49 North	73	72	68	89	65	45	84

SOURCE: SAXELBY ACOUSTICS, 2021.

TABLE 3.12-5: EXISTING SHORT-TERM COMMUNITY NOISE MONITORING RESULTS

Site	Location	Time ¹	Measured Sound Level, dB			Notes
			Leq	L50	Lmax	
ST-1	Argonaut High School Track	11:58 a.m..	58	35	80	Primary noise sources from wind, birds, very distant traffic, and occasional cars on Stony Creek Road.
ST-2	French Bar Road	12:36 p.m.	40	37	50	No traffic. Primary noise source is from birds. Secondary noise sources from some wind, distant weed eaters, and equipment.

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ST-3	Thomas Drive	12:55 p.m.	68	48	95	Primary noise source is Highway 49 in the distance.
ST-4	Kennedy Tailing Wheels Park	1:51 p.m.	59	48	79	Elevated above the road 4-5 feet. Primary noise sources are North Main Street, some aircraft noises, parkgoers, and bird noise.
ST-5	Detert Park	2:10 p.m.	62	61	72	Primary noise source is Highway 49.

1 - ALL COMMUNITY NOISE MEASUREMENT SITES HAVE TEST DURATIONS OF 10:00 MINUTES.

SOURCE: SAXELBY ACOUSTICS, 2021.

Community noise monitoring equipment included Larson Davis Laboratories (LDL) Model 812, 820, and 831 precision integrating sound level meters equipped with LDL ½" microphones. The measurement systems were calibrated using a LDL Model CAL200 acoustical calibrator before and after testing. The measurement equipment meets all of the pertinent requirements of the American National Standards Institute (ANSI) for Type 1 (precision) sound level meters.

The results of the community noise survey shown in Tables 3.12-4 and 3.12-5 indicate that existing transportation noise sources were the major contributor of noise observed during daytime hours, especially during vehicle pass bys.

3.12.2 REGULATORY FRAMEWORK

FEDERAL

Federal Highway Administration (FHWA)

The FHWA has developed noise abatement criteria that are used for federally funded roadway projects or projects that require federal review. These criteria are discussed in detail in Title 23 Part 772 of the Federal Code of Regulations (23CFR772).

Environmental Protection Agency (EPA)

The EPA has identified the relationship between noise levels and human response. The EPA has determined that over a 24-hour period, an Leq of 70 dBA will result in some hearing loss. Interference with activity and annoyance will not occur if exterior levels are maintained at an Leq of 55 dBA and interior levels at or below 45 dBA. Although these levels are relevant for planning and design and useful for informational purposes, they are not land use planning criteria because they do not consider economic cost, technical feasibility, or the needs of the community.

The EPA has set 55 dBA Ldn as the basic goal for residential environments. However, other federal agencies, in consideration of their own program requirements and goals, as well as difficulty of actually achieving a goal of 55 dBA Ldn, have generally agreed on the 65 dBA Ldn level as being appropriate for

residential uses. At 65 dBA Ldn activity interference is kept to a minimum, and annoyance levels are still low. It is also a level that can realistically be achieved.

The Department of Housing and Urban Development (HUD) was established in response to the Urban Development Act of 1965 (Public Law 90-448). HUD was tasked by the Housing and Urban Development Act of 1965 (Public Law 89-117) “to determine feasible methods of reducing the economic loss and hardships suffered by homeowners as a result of the depreciation in the value of their properties following the construction of airports in the vicinity of their homes.”

HUD first issued formal requirements related specifically to noise in 1971 (HUD Circular 1390.2). These requirements contained standards for exterior noise levels along with policies for approving HUD-supported or assisted housing projects in high noise areas. In general, these requirements established the following three zones:

- 65 dBA Ldn or less - an acceptable zone where all projects could be approved.
- Exceeding 65 dBA Ldn but not exceeding 75 dBA Ldn - a normally unacceptable zone where mitigation measures would be required and each project would have to be individually evaluated for approval or denial. These measures must provide 5 dBA of attenuation above the attenuation provided by standard construction required in a 65 to 70 dBA Ldn area and 10 dBA of attenuation in a 70 to 75 dBA Ldn area.
- Exceeding 75 dBA Ldn - an unacceptable zone in which projects would not, as a rule, be approved.

HUD’s regulations do not include interior noise standards. Rather a goal of 45 dBA Ldn is set forth and attenuation requirements are geared towards achieving that goal. HUD assumes that using standard construction techniques, any building will provide sufficient attenuation so that if the exterior level is 65 dBA Ldn or less, the interior level will be 45 dBA Ldn or less. Thus, structural attenuation is assumed at 20 dBA. However, HUD regulations were promulgated solely for residential development requiring government funding and are not related to the operation of schools or churches.

The federal government regulates occupational noise exposure common in the workplace through the Occupational Health and Safety Administration (OSHA) under the EPA. Noise exposure of this type is dependent on work conditions and is addressed through a facility’s or construction contractor’s health and safety plan. With the exception of construction workers involved in facility construction, occupational noise is irrelevant to this study and is not addressed further in this document.

STATE

California Department of Transportation (Caltrans)

Caltrans has adopted policy and guidelines relating to traffic noise as outlined in the Traffic Noise Analysis Protocol (Caltrans 2011). The noise abatement criteria specified in the protocol are the same as those specified by FHWA.

Governor’s Office of Planning and Research (OPR)

OPR has developed guidelines for the preparation of general plans (Office of Planning and Research, 2003). The guidelines include land use compatibility guidelines for noise exposure.

3.12.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on the environment associated with noise if it will:

- Generate 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;
- Generate excessive groundborne vibration or groundborne noise levels; or
- Expose people residing or working in the project area to excessive 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 two miles of a public airport or public use airport.

Generally, a project may have a significant effect on the environment if it will substantially increase the ambient noise levels for adjoining areas or expose people to severe noise levels. In practice, more specific professional standards have been developed. These standards state that a noise impact may be considered significant if it would generate noise that would conflict with local project criteria or ordinances, or substantially increase noise levels at noise sensitive land uses. The potential increase in traffic noise from the project is a factor in determining significance. Research into the human perception of changes in sound level indicates the following:

- A 3-dB change is barely perceptible,
- A 5-dB change is clearly perceptible, and
- A 10-dB change is perceived as being twice or half as loud.

A limitation of using a single noise level increase value to evaluate noise impacts is that it fails to account for pre-project-noise conditions. Table 3.12-6 is based upon recommendations made by the Federal Interagency Committee on Noise (FICON) to provide guidance in the assessment of changes in ambient noise levels resulting from aircraft operations. The recommendations are based upon studies that relate aircraft noise levels to the percentage of persons highly annoyed by the noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, it has been accepted that they are applicable to all sources of noise described in terms of cumulative noise exposure metrics such as the Ldn.

TABLE 3.12-6: SIGNIFICANCE OF CHANGES IN NOISE EXPOSURE

<i>AMBIENT NOISE LEVEL WITHOUT PROJECT, L_{DN}</i>	<i>INCREASE REQUIRED FOR SIGNIFICANT IMPACT</i>
<60 dB	+5.0 dB or more
60-65 dB	+3.0 dB or more
>65 dB	+1.5 dB or more

SOURCE: FEDERAL INTERAGENCY COMMITTEE ON NOISE (FICON)

Based on the Table 3.12-6 data, an increase in the traffic noise level of 1.5 dB or more would be significant where the pre-project noise level exceeds 65 dB L_{dn}. Extending this concept to higher noise levels, an increase in the traffic noise level of 1.5 dB or more may be significant where the pre-project traffic noise

level exceeds 75 dB L_{dn}. The rationale for the Table 3.12-6 criteria is that, as ambient noise levels increase, a smaller increase in noise resulting from a project is sufficient to cause annoyance.

Vibration Standards

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person’s perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities.

The City does not have specific policies pertaining to vibration levels. However, vibration levels associated with construction activities and railroad operations are addressed as potential noise impacts associated with project implementation.

Human and structural response to different vibration levels is influenced by several factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 3.12-7 indicates that the threshold for damage to structures ranges from 0.2 to 0.6 peak particle velocity in inches per second (in/sec p.p.v).

TABLE 3.12-7: EFFECTS OF VIBRATION

PEAK PARTICLE VELOCITY		HUMAN REACTION	EFFECT ON BUILDINGS
MM/SEC.	IN./SEC.		
0.15-0.30	0.006-0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of “architectural” damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of “architectural” damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize “architectural” damage
10-15	0.4-0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic but would cause “architectural” damage and possibly minor structural damage.

SOURCE: CALTRANS. TRANSPORTATION RELATED EARTHBOEN VIBRATIONS. TAV-02-01-R9601 FEBRUARY 20, 2002.

3.12 NOISE

Construction activities may generate perceptible vibration when heavy equipment or impact tools (e.g., jackhammers, hoe rams, pile drivers) are used. Construction activities often include demolition of existing structures, excavation, site preparation work, foundation work, and new building framing and finishing.

For structural damage, the California Department of Transportation uses a vibration limit of 0.5 inches/second, peak particle velocity (in/sec, PPV) for buildings structurally sound and designed to modern engineering standards.

Table 3.12-8 presents typical vibration levels that could be expected from construction equipment at a distance of 25-100 feet. The highest levels of vibration typically occur from pile driving operations. Pile driving vibrations are typically below 0.5 in/sec, PPV at distances of 50 feet or more.

TABLE 3.12-8: VIBRATION LEVELS FOR VARYING CONSTRUCTION EQUIPMENT

TYPE OF EQUIPMENT	P.P.V. @ 25 FEET (INCHES/SECOND)	P.P.V. @ 50 FEET (INCHES/SECOND)	P.P.V. @ 75 FEET (INCHES/SECOND)	P.P.V. @ 100 FEET (INCHES/SECOND)
Pile Drive (Impact)	0.644	0.226	0.124	0.080
Pile Drive (Sonic)	0.170	0.060	0.033	0.021
Large Bulldozer	0.089	0.031	0.017	0.011
Loaded Trucks	0.076	0.027	0.015	0.010
Small Bulldozer	0.003	0.001	0.000	0.000
Auger/Drill Rigs	0.089	0.031	0.017	0.011
Jackhammer	0.035	0.012	0.006	0.004
Vibratory Hammer	0.070	0.025	0.0135	0.009
Vibratory Compactor/Roller	0.210	0.074	0.040	0.026

SOURCE: FEDERAL TRANSIT ADMINISTRATION, TRANSIT NOISE AND VIBRATION IMPACT ASSESSMENT GUIDELINES, MAY 2006

IMPACTS AND MITIGATION MEASURES

Impact 3.12-1: General Plan implementation may result in exposure to significant traffic noise sources (Less than Significant)

Implementation of the proposed General Plan would result in the introduction of additional development, roadways, and a truck route, as described in Chapter 2.0, which would result in additional traffic and associated traffic noise.

The FHWA Highway Traffic Noise Prediction Model (FHWA-RD 77-108) was used to develop L_{dn} (24-hour average) noise contours for all highways and major roadways in the General Plan study area. The model is based upon the CALVENO noise emission factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA Model predicts hourly L_{eq} values for free-flowing traffic conditions, and is generally considered to be accurate within 1.5 dB. To predict L_{dn} values, it is necessary to determine the hourly distribution of traffic for a typical 24-hour period.

Existing traffic volumes were obtained from the traffic modeling performed for the General Plan study area. Day/night traffic distributions were based upon continuous hourly noise measurement data and Saxelby Acoustics file data for similar roadways. Using these data sources and the FHWA traffic noise prediction methodology, traffic noise levels were calculated for existing conditions.

Traffic noise levels are predicted at the sensitive receptors located at the closest typical setback distance along each project-area roadway segment. In some locations sensitive receptors may be located at distances which vary from the assumed calculation distance and may experience shielding from intervening barriers or sound walls. However, the traffic noise analysis is representative of the majority of sensitive receptors located closest to the project-area roadway segments analyzed in this report.

The actual distances to noise level contours may vary from the distances predicted by the FHWA model due to roadway curvature, grade, shielding from local topography or structures, elevated roadways, or elevated receivers.

Table 3.12-9 shows the future noise levels and the increase in noise levels associated with traffic on the local roadway network under the cumulative (2040) conditions, versus the existing conditions.

3.12 NOISE

Table 3.12-9: Existing Conditions vs. Cumulative (2040) Conditions

Roadway	Segment	Noise Levels (L_{dn} , dB) at Nearest Sensitive Receptors				
		Existing Conditions	Cumulative (2040) Conditions	Change	Criteria ¹	Significant?
Highway 49	Ridge Rd to Jackson Gate Rd	66.5	67.4	0.9	+1.5 dB	No
Highway 49	Jackson Gate Rd to Hoffman St	69.1	69.8	0.7	+1.5 dB	No
Highway 49	Hoffman St to Hwy 88	68.7	69.5	0.8	+1.5 dB	No
Highway 49	Hwy 88 to French Bar Rd	71.1	71.7	0.6	+1.5 dB	No
Highway 49	French Bar Rd to Clinton Rd	66.5	67.2	0.7	+1.5 dB	No
Highway 49	Clinton Rd to Hwy 49 S	65.7	66.5	0.8	+1.5 dB	No
Highway 88	Hwy 88 W to Wicklow Wy	63.7	65.2	1.5	+3.0 dB	No
Highway 88	Wicklow Wy to Hwy 49	67.0	67.0	0.0	+1.5 dB	No
Highway 88	Hwy 49 to Court St	65.8	65.8	0.0	+1.5 dB	No
Highway 88	Court St to Hwy 88 E	61.2	61.2	0.0	+3.0 dB	No
Hoffman St	Argonaut Ln to Hwy 49	62.2	64.1	2.0	+3.0 dB	No
Jackson Gate Rd	Hwy 49 to Raggio Rd	60.1	60.4	0.3	+3.0 dB	No
North Main St	China Graveyard Rd to Hwy 49	57.8	58.0	0.3	+ 5.0 dB	No
Mission Blvd	Hwy 88 to Clinton Rd	60.4	61.7	1.3	+3.0 dB	No
New York Ranch Rd	China Graveyard Rd to Court St	62.1	62.1	0.0	+3.0 dB	No

¹ Where existing noise levels are less than 60 dB an increase of 5 dB would be a significant increase. Where existing noise levels exceed 60 dB but are less than 65 dB, an increase of 3 dB or more would be significant. Additionally, any increase causing noise levels to exceed the City's Normally Acceptable 60 dB L_{dn} noise level standard at an existing outdoor activity area of a residential use would also be significant. Where existing noise levels exceed 65 dB, an increase of 1.5 dB or more would be significant.

Source: FHWA-RD-77-108 with inputs from Saxelby Acoustics. 2022.

Buildout of the General Plan may contribute to an exceedance of the City's transportation noise standards and/or result in significant increases in traffic noise levels at existing sensitive receptors. As indicated by Table 3.12-9, the related traffic noise level increases with a 20-year circulation system buildout of the cumulative (2040) conditions are predicted to increase between 0.3 to 2.0 dB versus the existing conditions.

General Plan Policies N-1.1 through N-1.11, and Actions N-1a through N-1b, identified below, are intended to minimize exposure to excessive noise, including noise associated with traffic. Specifically, Policies N-1.1 through N-1.3 support noise-compatible land uses in the vicinity of traffic noise sources and require that new development and infrastructure projects be reviewed for consistency with the noise standards established in Tables N-1 and N-2. The proposed General Plan standards required under Policy N-1.3, for exposure to traffic noise meet or exceed the noise level standards of the adopted General Plan shown in Table N-1 and Table N-2. Policy N-1.3, Policy N-1.4 and Actions N-1a would ensure that new development mitigates potential noise impacts through incorporating the noise control treatments necessary to achieve acceptable noise levels. Policy N-1.6 sets criteria for evaluating future increases in traffic noise levels. Implementation Action N-1b would ensure that the City of Jackson Municipal Code, including the updated noise ordinance, is consistent with the noise standards established in the General Plan. Implementation Action N-1.7 would encourage working with Caltrans to ensure that adequate noise studies are prepared and that noise mitigation measures are considered in State transportation projects. Implementation of the proposed policies and actions of the General Plan will reduce noise and land use compatibility impacts from vehicular traffic noise sources and would ensure that new development is designed to include noise-attenuating features. As shown in Table 3.12-9, the traffic noise increases associated with the proposed General Plan do not exceed the applicable noise exposure criteria. Therefore, the proposed General Plan would have a **less than significant** impact relative to traffic noise.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

POLICIES

SA 7.1: Ensure that land uses within the vicinity of the Westover Field Airport are compatible with airport operations.

SA 7.2: Ensure that new development proposals do not result in encroachments into future airport expansion areas and do not result in adverse impacts to airport operations.

N 1.1: Consider the noise compatibility of existing and future development when making land use planning decisions.

N 1.2: Require development projects and changes to existing uses to be consistent with the standards indicated in Table N-1 to ensure acceptable noise levels for existing and future development.

N 1.3: Require new development to reduce excessive noise to the standards indicated in Tables N-1 and N-2 through best practices, including building location and orientation, building design features, placement of noise-generating equipment away from sensitive receptors, shielding of noise-generating equipment, placement of noise-tolerant features between noise sources and sensitive receptors, and use of noise-minimizing materials.

N 1.4: Ensure that new development does not result in indoor noise levels exceeding 45 dBA Ldn for residential uses by requiring the implementation of construction techniques and noise reduction measures for all new residential development.

N 1.5: Require acoustical studies for new noise-generating and noise-sensitive developments, and transportation improvements that would increase roadway capacity or move traffic closer to sensitive receptors.

N 1.6: For projects that are required to prepare an acoustical study, the following stationary and transportation noise source criteria shall be used to determine the significance of those impacts:

Stationary and Non-Transportation Noise Sources

- *A significant impact will occur if the project results in an exceedance of the noise level standards contained in this element, or for instances where the ambient noise level is already above the standards contained in this element, the project will result in an increase in ambient noise levels by more than 3 dBA, whichever is greater.*
- *This does not apply to construction activities which are conducted according to the best practices outlined in Action N-1b. Compliance with these requirements shall be sufficient to reduce temporary construction-related noise impacts to a less than significant level.*

Transportation Noise Sources

- *Where existing traffic noise levels are 60 dBA Ldn or less at the outdoor activity areas of noise-sensitive uses, a +5 dBA Ldn increase in roadway noise levels will be considered significant;*
- *Where existing traffic noise levels are greater than 60 dBA Ldn and up to 65 dBA Ldn at the outdoor activity areas of noise-sensitive uses, a +3 dBA Ldn increase in roadway noise levels will be considered significant; and*
- *Where existing traffic noise levels are greater than 65 dBA Ldn at the outdoor activity areas of noise-sensitive uses, a +1.5 dBA Ldn increase in roadway noise levels will be considered significant.*

N 1.7: Work with Caltrans to ensure that adequate noise studies are prepared and alternative noise mitigation measures are considered in State transportation projects.

N 1.8: Support noise-compatible land uses along Highway 49 and Highway 88.

N 1.9: Work cooperatively with the Amador County Airport Land Use Commission to minimize noise impacts from airspace activities in Jackson, such as airplane and helicopter flights.

N 1.10: Temporary special events including, but not limited to, festivals, concerts, parades, and other similar activities may be allowed to exceed the noise standards established in this General Plan through approval and issuance of a temporary use permit.

N 1.11: Temporary emergency operations or emergency equipment usage may be exempt from noise standard criteria set by this element.

Actions in Support of Goal N-1

N-1a: Require new discretionary development projects to be reviewed for compliance with the noise requirements established in this element, including the standards established in Tables N-1 and N-2, and where necessary, require mitigation measures to achieve the noise standards. As applicable the City should:

- *Require acoustical studies for new discretionary development projects which have the potential to generate noise impacts which exceed the standards identified in this element. The studies shall*

include representative noise measurements, estimates of existing and projected noise levels, and mitigation measures necessary to ensure compliance with the noise standards included in this element;

- *Require developers to prepare a construction management/noise mitigation plan that defines best management practices to reduce construction noise, and includes proposed truck routes as part of the entitlement process; and*
- *Provide for additional scrutiny of potential noise impacts when considering approval of new "late-night activities" (land use activities operating from 11:00 p.m. to 6:00 a.m., not including the lawful, reasonable, and customary use of residential uses or professional offices that do not interfere with the reasonable use and enjoyment of other properties).*

N-1b: *Update the Municipal Code to include the following construction noise best practices and requirements:*

- *Establish standards for when a construction staging and phasing plan shall be required for new development projects and significant remodels.*
- *At all times during project grading and construction, stationary noise-generating equipment shall be located as far as practicable from sensitive receptors and placed so that emitted noise is directed away from residences.*
- *Unnecessary idling of internal combustion engines shall be prohibited.*
- *Construction staging areas shall be established at locations that will create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction activities, to the extent feasible.*
- *The construction contractor shall designate a "noise disturbance coordinator" who will be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall be responsible for determining the cause of the noise complaint (e.g., starting too early, poor muffler, etc.) and instituting reasonable measures as warranted to correct the problem. A telephone number for the disturbance coordinator shall be conspicuously posted at the construction site.*

Impact 3.12-2: Implementation of the General Plan could result in the generation of excessive stationary noise sources (Less than Significant)

Implementation of the General Plan could result in the future development of land uses that generate noise levels in excess of applicable City noise standards for non-transportation noise sources. Such land uses may include commercial area loading docks, industrial uses, HVAC equipment, car washes, daycare facilities, auto repair, and recreational uses. While the General Plan does not specifically propose any new noise generating uses, the Land Use Map includes industrial land use designations, which may result in new noise sources. Specific land uses that would be located in the city are not known at this time. Additionally, noise from existing stationary sources, as identified in the background section of this chapter, will continue to impact noise-sensitive land uses in the vicinity. New projects which may include stationary noise sources such as automotive and truck repair facilities, tire installation centers, car washes, loading docks, corporation yards, parks, and play fields may create noise levels in excess of the City's standards.

3.12 NOISE

The General Plan includes policies and actions that are intended to reduce noise associated with stationary sources. Specifically, Policies N-1.1 through N-1.4, Policy N-1.6, Policy N-1.10, and Actions N-1a would reduce noise associated with stationary sources. Implementation of the proposed policies and actions of the General Plan will minimize noise impacts from stationary noise sources and would result in a **less than significant** impact.

Impact 3.12-3: General Plan implementation may result in an increase in construction noise sources (Less than Significant)

New development, maintenance of roadways, and installation of public utilities and infrastructure generally require construction activities. These activities include the use of heavy equipment and impact tools. Table 3.12-10 provides a list of the types of equipment which may be associated with construction activities, and their associated noise levels.

TABLE 3.12-10: CONSTRUCTION EQUIPMENT NOISE

TYPE OF EQUIPMENT	PREDICTED NOISE LEVELS, LMAX DB				DISTANCES TO NOISE CONTOURS (FEET)	
	NOISE LEVEL AT 50'	NOISE LEVEL AT 100'	NOISE LEVEL AT 200'	NOISE LEVEL AT 400'	70 dB LMAX CONTOUR	65 dB LMAX CONTOUR
Backhoe	78	72	66	60	126	223
Compactor	83	77	71	65	223	397
Compressor (air)	78	72	66	60	126	223
Concrete Saw	90	84	78	72	500	889
Dozer	82	76	70	64	199	354
Dump Truck	76	70	64	58	100	177
Excavator	81	75	69	63	177	315
Generator	81	75	69	63	177	315
Jackhammer	89	83	77	71	446	792
Pneumatic Tools	85	79	73	67	281	500

Source: Roadway Construction Noise Model User's Guide. Federal Highway Administration. FHWA-HEP-05-054. January 2006. Saxelby Acoustics, LLC 2019.

Activities involved in construction would typically generate maximum noise levels ranging from 85 to 90 dB at a distance of 50 feet. Construction could result in periods of significant ambient noise level increases and the potential for annoyance. However, the proposed General Plan includes policies and actions that are intended to reduce noise associated with construction noise (listed below). Specifically, Action N-1a and Action N-1b would reduce noise associated with construction noise. Implementation of the proposed policies and actions of the General Plan will result in a **less than significant** impact level.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

N-1a: *Require new discretionary development projects to be reviewed for compliance with the noise requirements established in this element, including the standards established in Tables N-1 and N-2, and where necessary, require mitigation measures to achieve the noise standards. As applicable the City should:*

- *Require acoustical studies for new discretionary development projects which have the potential to generate noise impacts which exceed the standards identified in this element.*

The studies shall include representative noise measurements, estimates of existing and projected noise levels, and mitigation measures necessary to ensure compliance with the noise standards included in this element;

- *Require developers to prepare a construction management/noise mitigation plan that defines best management practices to reduce construction noise, and includes proposed truck routes as part of the entitlement process; and*
- *Provide for additional scrutiny of potential noise impacts when considering approval of new "late-night activities" (land use activities operating from 11:00 p.m. to 6:00 a.m., not including the lawful, reasonable, and customary use of residential uses or professional offices that do not interfere with the reasonable use and enjoyment of other properties).*

N-1b: *Update the Municipal Code to include the following construction noise best practices and requirements:*

- *Establish standards for when a construction staging and phasing plan shall be required for new development projects and significant remodels.*
- *At all times during project grading and construction, stationary noise-generating equipment shall be located as far as practicable from sensitive receptors and placed so that emitted noise is directed away from residences.*
- *Unnecessary idling of internal combustion engines shall be prohibited.*
- *Construction staging areas shall be established at locations that will create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction activities, to the extent feasible.*
- *The construction contractor shall designate a "noise disturbance coordinator" who will be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall be responsible for determining the cause of the noise complaint (e.g., starting too early, poor muffler, etc.) and instituting reasonable measures as warranted to correct the problem. A telephone number for the disturbance coordinator shall be conspicuously posted at the construction site.*

Impact 3.12-4: General Plan implementation may result in construction vibration (Less than Significant)

Construction activities facilitated by the proposed General Plan may include demolition of existing structures, site preparation work, and excavation of below grade levels, foundation work, pile driving, and new building erection. Demolition for an individual site may last several weeks and at times may produce substantial vibration. Excavation for underground levels may also occur on some project sites and vibratory pile driving could be used to stabilize the walls of the excavated area. Piles or drilled caissons may also be used to support building foundations.

While typical construction vibrations are not predicted to cause damage to existing buildings or cause annoyance to sensitive receptors located further than 25-feet, should pile driving be required within 50 feet of an existing structure, projects would be required to ensure that construction vibrations do not

cause damage to any adjacent structures. With implementation of Action N-1c below, the proposed project would result in a **less than significant** impact relative to this environmental topic.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

N-1c: Provide for additional scrutiny if *pile driving is required within 50 feet of an existing structure, pre-construction crack documentation and construction vibration monitoring shall be conducted to ensure that construction vibrations do not cause damage to any adjacent structures. The results of the documentation and monitoring shall be submitted to the City Community Development Department prior to the start of construction activities which would occur within 50 feet of an existing structure.*

Impact 3.12-5: General Plan implementation may result in exposure to excessive aircraft noise sources (Less than Significant)

There is one airport facility, Amador County Airport (also known as Westover Field), located within the Jackson Planning Area as described below.

Westover Field/ Amador County Airport: The Amador County Airport - Westover Field, is located in the Martell area, approximately one mile northwest of the City of Jackson and is adjacent the northwest limits of the City's SOI. Westover Field is considered a general aviation airport with hangars, tie downs, fuel and aircraft maintenance services (City of Jackson, 2002). The airport provides for the general aviation needs of the County including direct-by-air access to other airfields in the region. Westover Field has one 3,400 foot runway which runs in a northeast-to-southwest direction. A twenty-four hour Automated Weather Observation System (AWOS) is available at 121.05 MHz. AWOS systems include a collection of electronic sensors, connected to a computer that provide near realtime observations of weather conditions. The airport is located at an elevation of 1,690 feet above mean sea level (MSL) with a flight pattern altitude of 2,700 MSL. Fuel stored onsite includes 100LL and Jet A. A large percentage of the flights originating at Westover Field take-off toward the southwest due to the prevailing wind patterns.

The Airport Land Use Plan (ALUP) for Westover Field was prepared in October 1987 and amended in July 1990 by the Amador ALUC. The plan provides a basis for determining which land uses which are compatible with airport operations. The Amador ALUC is currently pursuing an update to the Airport Land Use Plan.

Single-event noise associated with aircraft overflights is also of concern when evaluating aircraft noise effects in terms of land use compatibility. Single-event noise is the maximum sound level produced by an individual approach overflight at a specific location, often described in terms of L_{max} , which is the maximum sound level recorded for each event. A different measurement is single-event noise, also commonly used when evaluating aircraft noise, is the SEL. The SEL describes the event's mean energy level over the duration of the noise event. As would be expected, single-event noise levels for aircraft overflights within the Planning Area would be greatest and most frequent near the airport's primary flight paths.

General Plan Policies SA-7.1 SA-7.2, and N 1.9, identified below, are intended to minimize exposure to excessive noise, including noise associated with aircraft noise sources. Specifically, the policies support noise-compatible land uses in the vicinity of aircraft noise sources and require that new development projects be reviewed for consistency with the standards established by the Airport Land Use Commission.

The General Plan includes policies and actions intended to reduce noise impacts throughout the planning area. With the implementation of the General Plan policies and actions, the noise impact relative to airports would be considered **less than significant**.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

POLICIES

SA 7.1: Ensure that land uses within the vicinity of the Westover Field Airport are compatible with airport operations.

SA 7.2: Ensure that new development proposals do not result in encroachments into future airport expansion areas and do not result in adverse impacts to airport operations.

N 1.9: Work cooperatively with the Amador County Airport Land Use Commission to minimize noise impacts from airspace activities in Jackson, such as airplane and helicopter flights.

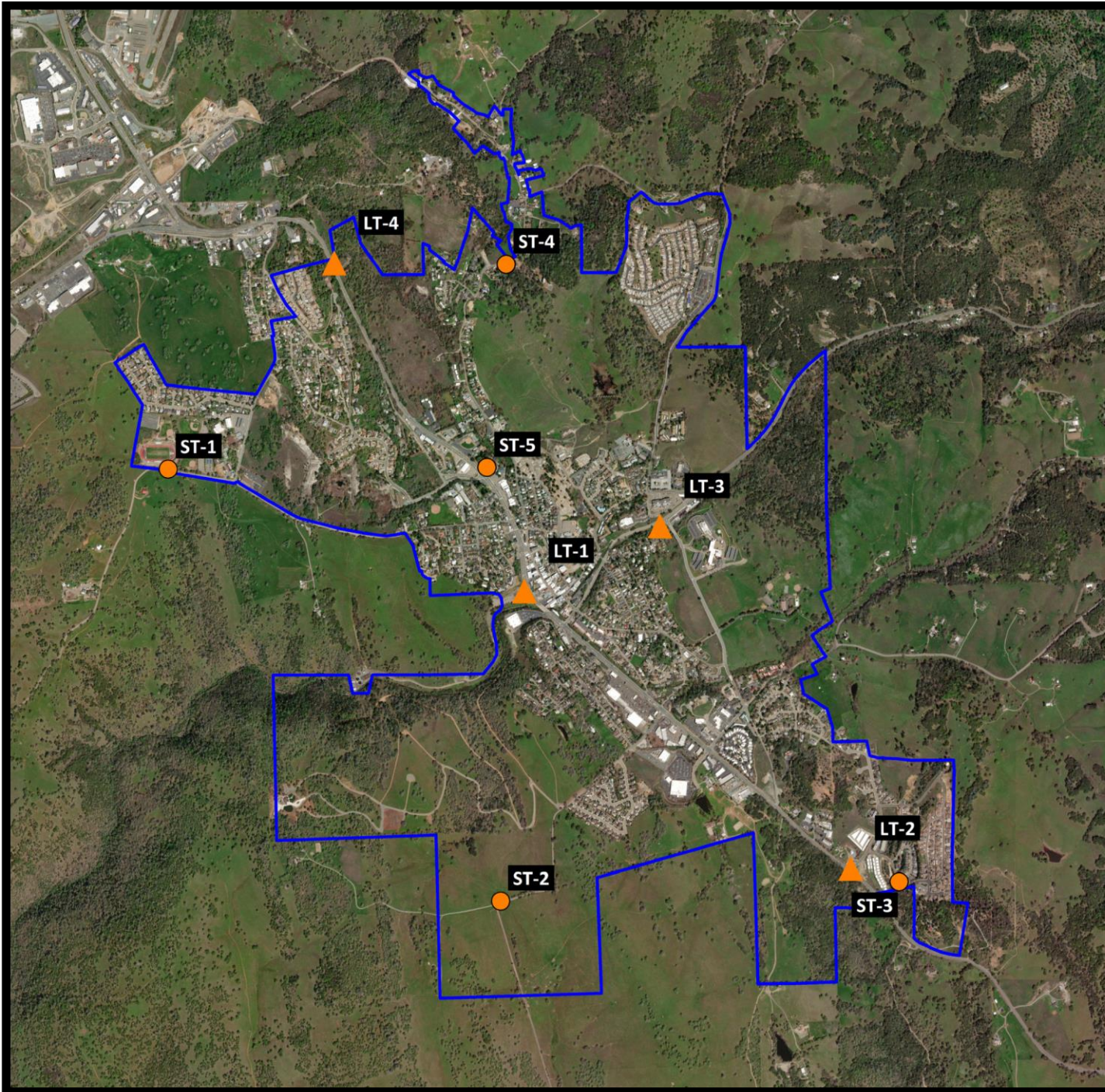
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City of Jackson General Plan Update




City of Jackson, California

Figure 3.12.1

Noise Measurement Sites



Legend

-  City Boundary
-  Noise Measurement - Long Term
-  Noise Measurement - Short Term



Projection: UTM Zone 10 / WGS84 / meters
Rev. Date: 06/01/2021



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Public services such as fire and police protection are vital to maintaining a safe and healthy community. Educational services serve as a foundation for providing citizens with the skills and resources to excel today and in the future. There are many other public services that are important to a community, such as parks and recreational opportunities, libraries, museums, hospitals, and other healthcare facilities.

This section provides a background discussion and analysis of fire protection services, police services, schools, parks and recreational facilities, libraries, and other community facilities and services. This section is organized with an existing setting, regulatory setting, and impact analysis.

Utilities services, including water, sewer, stormwater and drainage, and solid waste disposal, are addressed in Chapter 3.15 (Utilities and Service Systems) of this Draft EIR.

No comments were received during the NOP comment period regarding this environmental topic.

3.13.1 EXISTING CONDITIONS

FIRE PROTECTION SERVICES

Fire protection services within the City of Jackson is provided by the Jackson Fire Department (JFD). The Amador Fire Protection District also provides fire protection services for the surrounding rural area around Jackson (in unincorporated Amador County). The location of the JFD station in Jackson is shown on Figure 3.13-1.

Amador Fire Protection District

The Amador Fire Protection District (AFPD) provides fire suppression and emergency medical services to unincorporated areas of Amador County, including the Sphere of Influence area that currently lies within unincorporated Amador County. AFPD serves approximately 85 percent of the unincorporated area of Amador County. AFPD is comprised entirely by volunteer firefighters, with 60 total volunteer firefighters operating out of a total of seven firehouses. AFPD also contracts with Amador County for one full-time office staff employee.

Jackson Fire Department

The Jackson Fire Department provides fire suppression and emergency medical services to all areas within the city limits. Services provided by the Jackson Fire Department include fire suppression, emergency medical services (EMS), search and rescue (SAR), and extrication. The City has 23 total firefighters - 4 full time and 19 volunteers. The staff's median age is 33 years, and ranges from 19 to 63. Sixteen firefighters (61 percent) are certified by the State at the Firefighter 1 level or higher and 19 (73 percent) are certified at the EMT-1 level or higher. The Department has five EMS first responders.. The JFD has two stations: Station 1 is located at 175 Main Street and Station 2 is located at 10600 Argonaut Drive. The Jackson Fire Department currently has six fire suppression units.

3.13 PUBLIC SERVICES AND RECREATION

The Jackson Fire Department provides fire suppression, hazard materials first responder, rescue and Basic life support services. Jackson Fire Departments goal of safeguarding the community from fire and environmental hazards is achieved through programs adhering to fire regulations as dictated by the California Fire Code and the Jackson Municipal Code. The Department is funded by the General Fund, the Measure M Fund and some grants. The Jackson Fire Department provides the following services:

- Fire suspension
- Emergency medical services
- Checking plans for fire, life safety, and environmental requirements
- Issuing fire permits, including burn permits
- Conducting fire, life safety, and environmental inspections
- Conducting fire investigations
- Providing public education programs

Jackson has an automatic aid agreement with AFD to serve 42 square miles located outside city bounds and within AFD bounds. This area includes portions of the Martell community. The primary response area includes some residential uses on the northern outskirts of the City, a commercial strip mall, and large retail stores on the western SR 88 corridor, and rural-residential uses and vehicle accident responses on SR 49 and SR 88.

ISO RATING

The Insurance Services Office (ISO) rating measures individual fire protection agencies against a national Fire Suppression Rating Schedule which includes such criteria as facilities and support for handling and dispatching fire alarms, first-alarm responses and initial attack, and adequacy of the local water supply for the fire suppression purposes. ISO ratings are on a scale of 1-10 with 1 being the highest rating. In 2013, ISO developed split classifications for some communities, which can represent the risk of loss more precisely. An example of a split classification system is 4/4X or 4/4Y. The first number refers to the classification of properties within 5 road miles of a fire station and within 1,000 feet of a creditable water supply. The second number, with either the X or Y designation, applies to properties within 5 road miles of a fire station but beyond 1,000 feet of a creditable water supply. ISO generally assigned Class 10 to properties beyond 5 road miles.

An Insurance Services Office (ISO) rating is a collection of information on a community's public fire protection, which is determined by using a Fire Suppression Rating Schedule (FSRS). The FSRS is the manual that the ISO uses in reviewing the firefighting capabilities of individual communities. The schedule measures the major elements of a community's fire suppression system and

develops a numerical grading called a Public Protection Classification (PPC). The FSRS determines a Public Protection Classification from 1 to 10. Class 1 represents the best public protection, and Class 10 indicates less than the minimum recognized protection. By classifying a community's ability to suppress fires, ISO helps the communities evaluate their public fire protection services. The JFD current ISO rating is 5. Emergency medical calls make up the JFD's largest percentage of calls, making up approximately 64 percent of the total.

FIRE STATIONS

The Jackson Fire Department currently operates two fire stations within its service area.

- Jackson Fire Department Station 131: 175 Main St, Jackson, CA 95642 (operational)
- Jackson Fire Department Station 132 - 10600 Argonaut Dr, Jackson, CA 95642 (operational)

POLICE PROTECTION SERVICES

City of Jackson Police Department

The City of Jackson Police Department provides law enforcement services within the City limits. The Police Department provides all aspects of law enforcement, including Patrol, Investigations, daytime 911 dispatch, traffic enforcement, and traffic collision investigations. The City of Jackson's Police Department has one main office, which is located at the intersection of Highway 49 and Highway 88. The Police Department currently has 20 employees including 9 sworn officers, 5 Reserve Police Officers, and 4 volunteers. The balance of employees includes administrative staff, and a homeless outreach staff.

The Police Department does not have a formal staffing ratio, but currently provides approximately 2.4 sworn patrol officers per 1,000 people. This calculation does not take into consideration the significant impacts of the transient population from the Jackson Rancheria and Casino and nearby ski resorts and campgrounds. Response times vary greatly in the Police Department's service area based on weather and traffic conditions. The current average response time for the Department is five minutes.

The Police Department is funded through various sources, including the City's General Fund, which provides the Department with approximately 97 percent of its revenues. The remaining 3 percent of Department revenues are funded through miscellaneous grants. The City's police and fire departments currently represent the largest General Fund expenses, with approximately 44 percent of the overall budget going to these two departments. Sales and property taxes comprise the largest sources of income for the General Fund, together contributing roughly 50% to the total General Fund.

Amador County Sheriff's Department

The Amador County Sheriff's Department's (ACSD) service area includes the unincorporated portions of Amador County. ACSD also provides contractual law enforcement services to Plymouth and Amador City. ACSD's mission is to protect life and property and enforce civil and criminal laws

3.13 PUBLIC SERVICES AND RECREATION

while respecting the rights of all, recognizing the diversity of the community served, identifying and maintaining a high level of professionalism, integrity and readiness, and delivering consistent and humane treatment to those under care and custody. The Sheriff's Department provides boating patrol service, dispatch and communications, Search and Rescue (SAR), internal affairs, records and clerical, recruitment, the Amador Narcotics Enforcement Unit (A.N.E.U), the coroner division, Crime Specific Units (CSU), a detective division, the Marijuana Suppression Unit (MSU), patrol operations, a Special Weapons and Tactics Team (S.W.A.T), transportation, and jail operations.

The California Highway Patrol also assists the Amador County Sheriff's Department with mutual law enforcement assistance as well as traffic violations.

CRIMES BY CATEGORY IN JACKSON

Statistics on the number of crimes by category of crime in Jackson during each year from 2017 to 2019, as reported by the Federal Bureau of Investigation (FBI) Criminal Justice Information Services Division, are shown in Table 3.13-1 below.

TABLE 3.13-1: JACKSON POLICE DEPARTMENT CRIME STATISTICS (2017-2019)

<i>CATEGORY/CRIME</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>
Total Violent Crimes	21	29	30
Homicide	0	0	0
Rape	2	2	3
Robbery	2	3	0
Assault	17	23	27
Total Property Crimes	129	128	133
Burglary	37	27	15
Motor Vehicle Theft	16	93	11
Larceny	76	8	107
Arson	3	3	9

SOURCE: FBI CRIME STATISTICS; [HTTPS://UCR.FBI.GOV/](https://ucr.fbi.gov/).

As shown in the table, the majority of crimes committed in Jackson consist of property crimes, primarily larceny. Additionally, in 2019, there were no homicides reported in Jackson.

MISCELLANEOUS PUBLIC SAFETY

Multi-Jurisdictional Local Government Emergency Response

The Amador County Sheriff's Office of Emergency Services (OES) primary responsibility is to coordinate the county government's response to disasters or other large scale emergencies. The office is charged with providing the necessary planning, coordination, response support and communications with all agencies affected by large scale emergencies or disasters. OES works in a cooperative effort with other governmental jurisdictions within the county such as: law enforcement, fire, emergency medical services, state and federal agencies, utilities, private industry and volunteer groups in order to provide a coordinated response to disasters. The

Emergency Services Coordinator also manages the County Emergency Operations Center (EOC) which is located in the Sheriff's Office. The EOC becomes the single focal point for centralized management and coordination of emergency response and recovery operations during a disaster or other emergency affecting the Amador County Operational Area. The EOC will be activated when an emergency situation occurs that exceeds local and/or in field capabilities to adequately respond to and mitigate the incident.

The Amador County Sheriff's Office of Emergency Services (OES) is also responsible for the administration of the county emergency management program on a day to day basis.

PARKS AND RECREATIONAL FACILITIES

This section addresses the provision of parks and recreation amenities in the City of Jackson. Parks and recreational facilities in the City of Jackson are managed and maintained by the Department of Public Works. Figure 3.13-1 identifies the City's parks and trails.

Types of Parks

COMMUNITY PARKS

Community parks are generally 15 to 25 acres in size, and include areas for active sports as well as space for family and group activities, such as picnicking. Community parks are larger in size than neighborhood parks and serve to fulfill the active and passive recreational needs of multiple neighborhoods. The community park serves the needs of local neighborhoods by providing a close to home site for more active recreation that is not typically suitable or physically possible in a neighborhood park (i.e. formal sports fields and courts with night lighting). Community parks and sports parks are where most organized activities provided by the Parks and Recreation Department and various league sports are intended to occur.

NEIGHBORHOOD PARKS

Neighborhood parks serve as the focal point of neighborhood communities, the hub for both physical and social activities in a recreational setting that should be primarily passive. Appropriately designed neighborhood parks act as "pulse points" within the city. They are spaces that develop a sense of place while at the same time evolve to reflect the neighborhood they represent. Neighborhood parks act as critical building blocks of the city's image and assist in developing an overall sense of community and security. They also serve as critical nodes and access points in the city-wide green space network. Neighborhood parks are generally 5 to 7 acres. Amenities at neighborhood parks may include open multi-uses spaces, basketball, volleyball, bocce ball, and tennis courts, small picnic areas, playground equipment, restroom facilities, water play features, and barbeques.

SPECIAL USE PARKS

The Special Use Parks allow for flexibility in providing recreational resources throughout the city-wide park space network. This classification is intended to accommodate special circumstances, unique site characteristics, etc. in park, trail, and recreation resources. These types of resources

add diversity to the park network and accommodate a variety of non-traditional recreation amenities beyond the standard neighborhood, and community, park classifications.

City Parks

The City of Jackson Department of Public Works oversees and manages park and recreation resources within the City limits. The City of Jackson public park and recreational grounds are divided into three distinct categories: community-wide parks, neighborhood parks, and historical sites, monuments, and small landscape areas. The City of Jackson owns and operates four park facilities to enhance recreation opportunities for citizens. These vary from a plaza style gathering place at the south end of the historic downtown Jackson area to an active recreation park that includes the City's municipal pool, a youth baseball diamond and play structure. The City is also working with environmental agencies to open the 155 acre "Oro De Amador" property for public recreational access. The highlights of each facility is noted below.

Existing community-wide park facilities include Detert Park, which is in the central business district of the City and is within walking distance to the more densely populated and commercialized portion of the City. Detert Park is approximately 7.25 acres in size and provides a wide variety of recreational activities at a central location including a swimming pool, a little league baseball field, a tennis / pickleball court, a mini skateboard court, horseshoe pits, picnic tables and barbeques, and the largest assortment of playground equipment (i.e., swings, slides, etc.) available in the area. Petkovich Park which is located near historic downtown Jackson. Petkovich is a gathering place for visitors to the downtown area and has public rest rooms available. It is the location of the original volunteer fire department bell used at one time for emergency call outs. Tailing Wheels Park, which is home to the historic Kennedy Tailing Wheels, these engineering marvels were used to move tons of waste rock from the Kennedy Gold Mine to a tailings area on the other side of a ridge where they were impounded to prevent silting and pollution of waterways and downstream agricultural areas. The park includes a kiosk explaining how the system worked, picnic tables and many viewing points for the tailing wheels and scenic vistas in the area. Gold Ridge Park is a pocket-style park and was built as part of a new subdivision in 2002. It includes picnic tables, a half-court basketball court and a play structure. The park also includes incredible views of the City.

The area standard in the proposed General Plan for neighborhood parks and playgrounds is 5 acres per 1,000 people, which is greater than the existing General Plan's 2 acre standard. The city has approximately 28 acres of parkland. Therefore, with a 2020 population of approximately 4,860 the current distribution of park acreage per 1,000 residents is 4.86, which is above the Statewide Park Program standard of 3.0. According to the General Plan, additional parks and playgrounds will be needed as urbanization continues in the City. To assist in paying for the new facilities, land area or in-lieu fees shall be provided with the original improvements for park areas also being provided by the developers of new residential neighborhoods. The maintenance and operation of the local parks and playgrounds is currently funded through the city's general fund. The City could consider it being provided by a homeowners association or by an assessment district.

On a regional scale, The Amador County Recreation Agency (ACRA) was formed in October 2003 and has a Work Plan for 2004-05 that includes the development of a 10-year Recreation and Park

Master as part of regional parks and recreation planning. The City of Jackson is a member of the Agency. The parks and recreational facilities outside the County's incorporated cities are funded solely through a Park Dedication Fee, which is imposed on all new residential development in the County. The Park Dedication Fee is a single-family residential fee of \$8,670 per dwelling unit that is imposed on all new residences.

SCHOOLS

The Amador County Unified School District (ACUSD), which provides public school services for elementary and high schools (grades K-12) throughout Amador County serves the Planning Area. The District is divided into five separate areas for planning purposes. The City of Jackson and the SOI are located in Area 4. The following schools are located in the ACUSD and would serve the entire planning area: Jackson Elementary serves grades K-6 and is located at 220 Church Street in the City of Jackson; the Jackson Junior High School serves grades 6 through 8 and is located at 333 Rex Avenue, also in the City of Jackson; and Argonaut High School is located at 501 Argonaut Lane in the City of Jackson. Table 3.13-2 lists schools in Jackson and the most recent enrollment for each school.

TABLE 3.13-2: PUBLIC SCHOOLS SERVING JACKSON

<i>SCHOOL</i>	<i>GRADES SERVED</i>	<i>ADDRESS</i>	<i>ENROLLMENT 2019-2020 SCHOOL YEAR</i>
<i>ELEMENTARY AND MIDDLE SCHOOLS</i>			
Jackson Elementary	K-5	220 Church Street	430
Jackson Junior High School	6-8	217 Rex Avenue	375
<i>HIGH SCHOOLS</i>			
Argonaut High School	9-12	501 Argonaut Lane	479

SOURCE: CALIFORNIA DEPARTMENT OF EDUCATION EDUCATIONAL DEMOGRAPHICS UNIT ENROLLMENT FOR 2019-20

As shown in Table 3.13-2, the schools in the City had a total enrollment of approximately 1,284 students, of which 805 were enrolled in elementary and middle school (grades K – 8) and 479 were enrolled in high school (grades 9 – 12).

District-wide, ACUSD Schools had a total enrollment of 3,958 students for the 2019-2020 school year. Table 3.13-3 provides a summary of the public school enrollment by grade within the entirety of the ACUSD.

TABLE 3.13-3: ENROLLMENT BY GRADE ACUSD (2019-2020)

<i>ACUSD</i>	<i>GRADE LEVEL</i>													<i>TOTAL 2019-2020</i>
	<i>K</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>	
Total	372	257	305	293	313	257	297	297	301	313	301	332	321	3,958

SOURCE: CALIFORNIA DEPARTMENT OF EDUCATION EDUCATIONAL DEMOGRAPHICS UNIT ENROLLMENT FOR 2019-2020

OTHER PUBLIC FACILITIES

Library Services

The Amador County Library Main Library is located in Jackson, at 530 Sutter Street. The Library offers computer workstations for Internet and word processing use, a ready reference collection, and a circulating collection of popular materials in English and Spanish. Items include books, magazines, audiobooks, large print books, DVDs, and music CDs. The Amador County Jackson Library is open Monday through Friday, from 9:00 AM to 5:00 PM.

Jackson Hospital and Medical Facilities

Health care facilities within Jackson encompass Sutter Amador Hospital, residential care facilities, as well as private physicians and other medical practitioners.

Sutter Amador Hospital, a hospital operated by Sutter Health, provides acute care service for Jackson and the surrounding community. The hospital is located at 200 Mission Boulevard in the City of Jackson. Sutter Amador Hospital offers 24-hour emergency care, outpatient care, and general surgical care.

The Amador County Public Health Department is organized under the Amador County Health Services Agency and provides maternal and child health care programming, California Children's Services, child health and disability programs, vaccinations and general public health nursing to the community. Alcohol & drug programs are also organized under the County Health Service Agency and provide residential treatment, out-patient counseling, perinatal programs and community education and information. Mental Health programs offered by the same agency provide services to citizens of all ages who have a demonstrated mental disorder or affective disorder. Services include but are not limited to in-patient services, residential services, out-patient counseling, medication monitoring and community education and referral.

3.13.2 REGULATORY SETTING

FEDERAL

There are no Federal regulations applicable to the environmental topics of public services and recreation.

STATE AND LOCAL

Fire Protection and Emergency Response

CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

In accordance with California Code of Regulations Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Equipment" the California Occupational Safety and Health Administration (Cal/OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly

combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all fire fighting and emergency medical equipment.

EMERGENCY RESPONSE/EVACUATION PLANS

The State passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with SEMS could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

FIRE PROTECTION

The California Fire Code contains regulations relating to construction and maintenance of buildings and the use of premises. Topics addressed in the Code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions to protect and assist first responders, industrial processes, and many other general and specialized fire safety requirements for new existing buildings and premises.

CALIFORNIA FIRE CODE

The 2019 California Fire Code contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the California Fire Code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The Fire Code contains specialized technical regulations related to fire and life safety.

CALIFORNIA HEALTH AND SAFETY CODE

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code. This includes regulations for building standards (as also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

NFPA 1710

The National Fire Protection Association (NFPA) 1710 Standards are applicable to urban areas and where staffing is comprised of career Firefighters. According to these guidelines, a career fire department needs to respond within six minutes, 90 percent of the time with a response time measured from the 911 call to the time of arrival of the first responder.

The standards are divided as follows:

- Dispatch time of one minute or less for at least 90 percent of the alarms;

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- Turnout time of one minute or less for EMS calls (80 seconds for fire and special operations response);
- Fire response travel time of four minutes or less for the arrival of the first arriving engine company at a fire incident and eight minutes or less travel time for the deployment of an initial full alarm assignment at a fire incident;
- Eight minutes or less travel time for the arrival of an advanced life support (ALS) (4 minutes or less if provided by the fire department).

CITY OF JACKSON MUNICIPAL CODE

The City of Jackson Municipal Code has ordinances related to fire protection. These include Chapter 2.08 (Fire Department) describes the duties of the municipal fire department and the responsibilities of the fire chief in determining imminent health and safety hazards, and the powers associated with such a determination.

AMADOR COUNTY LOCAL HAZARD MITIGATION PLAN

This LHMP Update serves to update the 2014 Federal Emergency Management Agency (FEMA) approved Amador County LHMP. The purpose of hazard mitigation is to reduce or eliminate long-term risk to people and property from hazards. Amador County, five incorporated communities, and ten special districts prepared this Local Hazard Mitigation Plan (LHMP) Update to the FEMA approved 2014 Amador County LHMP, in order to make the County and its residents less vulnerable to future hazard events. It also outlines certain responsibilities of the Jackson Fire Department.

Parks and Recreation

QUIMBY ACT

The Quimby Act (California Government Code Section 66477) states that “the legislative body of a city or county may, by ordinance, require the dedication of land or impose a requirement of the payment of fees in lieu thereof, or a combination of both, for park or recreational purposes as a condition to the approval of a tentative or parcel map.” Requirements of the Quimby Act apply only to the acquisition of new parkland and do not apply to the physical development of new park facilities or associated operations and maintenance costs. The Quimby Act seeks to preserve open space needed to develop parkland and recreational facilities; however, the actual development of parks and other recreational facilities is subject to discretionary approval and is evaluated on a case-by-case basis with new residential development. The City has adopted park fees as allowed by the Quimby Act, as described in greater detail below.

JACKSON MUNICIPAL CODE

The City of Jackson Municipal Code (Section 16.56.030) establishes the standard for parkland dedication (or in-lieu fee payment).

Schools

CALIFORNIA CODE OF REGULATIONS

The California Code of Regulations, Chapter 4.9, Payment of Fees, Charges, Dedications, or Other Requirements Against a Development Project. *Section 65995-65998 (h)* The payment or satisfaction of a fee, charge, or other requirement levied or imposed pursuant to Section 17620 of the Education Code in the amount specified in Section 65995 and, if applicable, any amounts specified in Section 65995.5 or 65995.7 are hereby deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities.

CALIFORNIA DEPARTMENT OF EDUCATION

The California Department of Education (CDE) School Facilities Planning Division (SFPD) prepared a School Site Selection and Approval Guide that provides criteria for locating appropriate school sites in the State of California. School site and size recommendations were changed by the CDE in 2000 to reflect various changes in educational conditions, such as lowering of class sizes and use of advanced technology. The expanded use of school buildings and grounds for community and agency joint use and concern for the safety of the students and staff members also influenced the modification of the CDE recommendations.

Specific recommendations for school size are provided in the School Site Analysis and Development Guide. This document suggests a ratio of 1:2 between buildings and land. CDE is aware that in a number of cases, primarily in urban settings, smaller sites cannot accommodate this ratio. In such cases, the SFPD may approve an amount of acreage less than the recommended gross site size and building-to-ground ratio.

Certain health and safety requirements for school site selection are governed by state regulations and the policies of the SFPD relating to:

- Proximity to airports, high-voltage power transmission lines, railroads, and major roadways;
- Presence of toxic and hazardous substances;
- Hazardous facilities and hazardous air emissions within one-quarter mile;
- Proximity to high-pressure natural gas lines, propane storage facilities, gasoline lines, pressurized sewer lines, or high-pressure water pipelines;
- Noise;
- Results of geological studies or soil analyses; and
- Traffic and school bus safety issues.

THE KINDERGARTEN-UNIVERSITY PUBLIC EDUCATION FACILITIES BOND ACT OF 2002 (PROP 47)

This act was approved by California voters in November 2002 and provides for a bond issue of \$13.05 billion to fund necessary education facilities to relieve overcrowding and to repair older schools. Funds will be targeted at areas of greatest need and must be spent according to strict

accountability measures. Funds will also be used to upgrade and build new classrooms in the California Community Colleges, the California State University, and the University of California in order to provide adequate higher education facilities to accommodate growing student enrollment.

LEROY F. GREENE SCHOOL FACILITIES ACT OF 1998 (SB 50)

The “Leroy F. Greene School Facilities Act of 1998,” also known as Senate Bill 50 or SB 50 (Chapter 407, Statutes of 1998), governs a school district’s authority to levy school impact fees. This comprehensive legislation, together with the \$9.2 billion education bond act approved by the voters in November 1998 known as “Proposition 1A”, reformed methods of school construction financing in California. SB 50 instituted a new school facility program by which school districts can apply for state construction and modernization funds. It imposed limitations on the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development and provided the authority for school districts to levy fees at three different levels:

- Level I fees are the current statutory fees allowed under Education Code 17620. This code section provides the basic authority for school districts to levy a fee against residential and commercial construction for the purpose of funding school construction or reconstruction of facilities. These fees vary by district for residential construction and commercial construction and are increased biannually.
- Level II fees are outlined in Government Code Section 65995.5, allowing school districts to impose a higher fee on residential construction if certain conditions are met. These conditions include having a substantial percentage of students on multi-track year-round scheduling, having an assumed debt equal to 15–30 percent of the district’s bonding capacity (percentage is based on revenue sources for repayment), having at least 20 percent of the district’s teaching stations housed in relocatable classrooms, and having placed a local bond on the ballot in the past four years which received at least 50 percent plus one of the votes cast. A Facility Needs Assessment must demonstrate the need for new school facilities for unhoused pupils is attributable to projected enrollment growth from the construction of new residential units over the next five years.
- Level III fees are outlined in Government Code Section 655995.7. If State funding becomes unavailable, this code section authorizes a school district that has been approved to collect Level II fees to collect a higher fee on residential construction. This fee is equal to twice the amount of Level II fees. However, if a district eventually receives State funding, this excess fee may be reimbursed to the developers or subtracted from the amount of state funding.

3.13.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on public services and recreation if it would result in:

- Substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
 - Fire Protection;
 - Police Protection;
 - Schools;
 - Parks; and
 - Other public facilities.
- An increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- If it includes recreational facilities or requires the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

IMPACTS AND MITIGATION MEASURES

Impact 3.13-1: General Plan implementation could result in adverse physical impacts on the environment associated with the need for new governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts (Less than Significant)

Development accommodated under the General Plan would result in additional residents and businesses in the City, including new residential, industrial, office, and commercial uses. As described in Chapter 2.0, the General Plan is expected to accommodate up to 681 new residential dwelling units and up to 2,127,500 square feet of non-residential building space within the city limits by 2040.

This new growth within the City limits would increase the City's population by up to 1,435 residents and would include approximately 3,444 new jobs. The full development of the new non-residential uses shown in Chapter 2.0 (Project Description), Table 2.0-2.

Development and growth facilitated by the General Plan would result in increased demand for public services, including fire protection, law enforcement, schools, parks, libraries, and other public and governmental services. The General Plan includes policies and actions to ensure that public services are provided at acceptable levels and that the City will maintain and implement

3.13 PUBLIC SERVICES AND RECREATION

public facility master plans, in collaboration with appropriate outside service providers and other agencies, to ensure compliance with appropriate regional, state, and federal laws and to provide efficient public facilities and services to Jackson.

As the demand for services increases, there will likely be a need to address acceptable service ratios, response times, and other performance standards. New or expanded service structures (e.g., office, maintenance, and administrative buildings and facilities, schools, parks, fire facilities, libraries, etc.) will be needed to provide for adequate staffing, equipment, and appropriate facilities to serve growth in the city. This is considered a potentially significant impact, which would be mitigated to a less than significant level through the implementation of the policies and actions listed below.

Existing facilities may be expanded at their current location. New facilities may also be constructed. The Public, Recreation, and Open Space land use designations would accommodate the majority of new public facilities necessary to provide community services. There would likely be environmental impacts associated with the construction or expansion of the facilities needed to provide public services.

The General Plan does not propose or approve actual development projects, or the physical expansion of public facilities. As future development and infrastructure projects (including new governmental facilities) are considered by the City, each project will be evaluated for conformance with the General Plan, Municipal Code, and other applicable regulations. Such development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA. Any future expansion of public facilities required by growth in the City would be required to be reviewed for site-specific impacts.

As previously stated, new facilities will be needed to serve growth contemplated in the General Plan. The environmental effect of providing the public services is associated with the physical impacts of providing new and expanded facilities. The specific impacts of providing new and expanded facilities cannot be determined at this time, as the General Plan does not propose or authorize development nor does it designate specific projects for new or expanded public facilities. However, new and expanded facilities would be primarily provided on sites with land use designations that allow such uses and the environmental impacts of constructing and operating the governmental facilities would likely be similar to those associated with new development, redevelopment, and infrastructure projects under the General Plan. These impacts are described in the relevant chapters (Chapters 3.1 through 3.12, 3.14 through 3.16 and 4.0) of this Draft EIR. As discussed in Chapters 3.1 through 3.16 and 4.0, the proposed General Plan includes policies and actions that are specifically designed to reduce or avoid environmental impacts of construction and development, which includes public facilities. There are no additional significant impacts related to construction of governmental and public facilities, consistent with the General Plan land use designation and Land Use Map, beyond the impacts that are analyzed throughout this EIR. Any future development, including new and expanded governmental facilities, under the General Plan would be subject to project-level review, would be required to comply with regulations, policies, and standards included in the General Plan, and would be reviewed for

compliance with CEQA, including analysis of project-level impacts and mitigation measures as appropriate.

The General Plan includes a range of policies and actions (listed below) to ensure that public services are provided in a timely fashion, are adequately funded, are coordinated between the City and appropriate service agency, and that new development funds its fair share of services. Therefore, impacts related to the provisions and need for public facilities are ***less than significant***.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

POLICIES

LU 6-1: Provide adequate infrastructure (e.g., streets, sewers, and storm drains) to meet the needs of existing and future development.

LU 6-2: Require development, infrastructure, and long-term planning projects to be consistent with all applicable infrastructure plans, including the Amador Water Agency Urban Water Management Plan and the City's capital improvement programs.

LU 6-3: Require all development projects to mitigate their infrastructure service impacts or demonstrate that the City's infrastructure, public services, and utilities can accommodate the increased demand for services, and that service levels for existing users will not be degraded or impaired.

LU 6-4: Require the payment of impact fees for new development in accordance with the City's Development Code.

LU 6-5: Design services and infrastructure to serve existing and planned land uses. Actions that will induce growth beyond planned levels are prohibited.

LU 6-6: Implement the Resource Constraints and Priority Allocation Ordinance to ensure the availability of public resources and services prior to acceptance of new residential and commercial subdivision applications.

ACTIONS

LU-6a: As part of the development review process, determine the potential impacts of development and infrastructure projects on public infrastructure, and ensure that new development contributes its fair share toward necessary on and off-site infrastructure.

LU-6b: Ensure that infrastructure is adequately sized to accommodate the proposed development and, if applicable, allow for extensions to future developments.

LU-6c: The City shall actively pursue funding for the infill of sidewalks in developed areas, particularly along New York Ranch Road, North Main Street, and Court Street.

LU-6d: When community-desired facilities and services are beyond the City's financial resources to provide, support community-driven efforts to establish special funding and financing districts, such as assessment districts, landscape and lighting maintenance districts, business improvement districts, or community facilities districts, whether citywide or limited to a defined neighborhood, district, or corridor.

LU-6e: Cooperate with Local Agency Formation Commission and the County to direct growth outside the City Limits on lands that are served or are planned to be served, with a full range of urban services, such as public water and sewer, an extensive road network, public transit, safety and emergency response services, parks, trails, and open space.

Impact 3.13-2: General Plan implementation may result in adverse physical impacts associated with the deterioration of existing parks and recreation facilities or the construction of new parks and recreation facilities (Less than Significant)

Growth accommodated under the General Plan would include a range of uses that would increase the population of the City and also attract additional workers and tourists to the City. Such growth would result in increased demand for parks and recreation facilities. It is anticipated that over the life of the General Plan, use of parks, trails, and recreation facilities would increase, due to new residents and businesses. The additional demand on existing parks and recreational facilities would increase the need for maintenance and improvements. These improvements could have environmental impacts, although the exact impacts cannot be determined since the potential improvements are unknown.

The provision of new parks and recreation facilities would reduce the potential for adverse impacts and physical deterioration of existing parks and recreation facilities, by providing additional facilities to accommodate the demand for parks and recreation facilities. These new facilities would be provided at a pace and in locations appropriate to serve new development, the City of Jackson Municipal Code (Section 16.56.030) establishes the standard for parkland dedication (or in-lieu fee payment) of 5 acres of parkland per 1,000 residents. Development under the General Plan would indirectly lead to the construction of new parks and recreation facilities to serve new growth and to meet existing parks and recreation needs. The General Plan supports the creation of new parks and recreation facilities, including new parks and trails, to accommodate a wide range of activities for all age groups. These new parks and recreation facilities would be spread throughout areas proximate to new development in and around existing neighborhoods. Neighborhood and community parks and trails would generally be accommodated in the Public, Recreation and Open Space Land use designations.

General Plan Policy COS-2.3 establishes a citywide ratio of five acres of parkland per 1,000 residents. The City currently provides approximately 28 acres of parkland for every 1,000 people in addition to other nearby regional parks. Therefore, with a 2020 population of approximately 4,860 the current distribution of park acreage per 1,000 residents is 4.86, which is above the Statewide Park Program standard. According to the General Plan, additional parks and playgrounds will be needed as urbanization continues in the City. To assist in paying for the new facilities, land area or in-lieu fees shall be provided with the original improvements for park areas also being provided by the developers of new residential neighborhoods. The maintenance and operation of the local parks and playgrounds should be provided by a homeowners association or by an assessment district.

As shown in Table 2.0-2, the projected total buildout population (which includes existing plus projected population growth) is 6,506. At a ratio of five acres of parkland per 1,000 residents, buildout of the General Plan within the City limits would result in a demand for approximately 32.5 acres of developed parklands, if the City's population levels were to reach the buildout population potential of the proposed General Plan.

The projected additional population (which excludes existing population) as a result of buildout of the General Plan land use map (as detailed in Chapter 2.0) is 1,435 residents. At a ratio of five acres of parkland per 1,000 residents, buildout of the General Plan within the City limits would result in a demand for approximately 7.2 acres of additional developed parkland. It should be noted that new development would be required to fund its fair share for required parkland, but would not make up for any existing system deficiencies.

The General Plan does not specifically propose any development projects, including parks. As a result, site-specific physical impacts of future park development and construction cannot be determined until future projects are brought forward for review. As future parks and recreation projects are considered by the City, each project will be evaluated for conformance with the General Plan, Municipal Code, and other applicable regulations. Parks and recreation projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA.

In addition to ensuring that new and expanded parks and recreation facilities are provided to accommodate new growth, the General Plan includes policies and actions to ensure that parks and recreation facilities are adequately maintained and improved to serve both existing and planned growth.

The General Plan does not propose or approve any development nor does it designate specific projects for new or expanded parks and recreational facilities. The General Plan includes a range of policies and actions (listed below) to ensure that parks and recreational facilities are adequately funded, and that new development funds its fair share of services needed to meet General Plan objectives. New development is required to participate in the provision and expansion of public services, recreational amenities, and facilities, and is also required to demonstrate that the City's public services and facilities can accommodate the increased demand for said services and facilities associated with future projects during the entitlement process.

The General Plan does not propose or approve the construction or expansion of parks or recreational facilities. Any new or expanded parks or recreational facilities that may be constructed in the future would be primarily provided on sites with land use designations that allow such uses and the environmental impacts of constructing and operating the parks and recreational facilities would likely be similar to those associated with new development, redevelopment, and infrastructure projects under the General Plan. These impacts are described in the relevant chapters (Chapters 3.1 through 3.16, and 4.0) of this Draft EIR. As discussed in Chapters 3.1 through 3.16 and 4.0, the proposed General Plan includes policies and actions that are specifically designed to reduce or avoid environmental impacts of construction and development, which includes parks and recreational facilities. There are no additional significant

impacts related to construction of parks and recreational facilities, consistent with the General Plan land use designation and Land Use Map, beyond the impacts that are analyzed throughout this EIR. Any future development under the General Plan would be required to comply with regulations, policies, and standards included in the General Plan, and would be reviewed for compliance with CEQA, including analysis of project-level impacts.

Therefore, impacts related to the provisions and need for park and recreational facilities are ***less than significant***.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

POLICIES

LU-7.9: Consider environmental justice issues as they relate to the equitable distribution of public amenities such as parks, recreational facilities, community gardens, and other beneficial uses that improve the quality of life.

COS-2.1: Ensure the provision of sufficient land that is well distributed and interconnected throughout the community for parks, trails, and recreation facilities.

COS-2.2: Recognize that some of the recreational resources available to City residents may be owned and/or operated by other entities, including the County, while still meeting the recreational needs of Jackson's residents.

COS-2.3: Strive to achieve and maintain an overall citywide ratio of 5 acres of parkland for every 1,000 residents.

COS-2.4: Support recreational activities, events, organized sports leagues, and other programs that serve broad segments of the community.

COS-2.5: Promote the development of a diverse network of parks, trails, and recreation facilities that support traditional and non-traditional recreational uses, and passive recreational opportunities.

COS-2.6: Encourage the provision and dedication of parkland within future development projects in order to ensure that the City maintains an extensive network of neighborhood parks that serve all areas of the community.

COS-2.7: Encourage community and volunteer efforts to assist in the maintenance and beautification of parks, trails, and recreation facilities in Jackson.

COS-2.8: Develop new parks, trails, and recreation facilities through developer fees in areas which are accessible and convenient to the community, prioritizing areas that are lacking these facilities.

COS-2.9: Continue to require new residential development to pay park impact fees to use for the acquisition and development of parkland and recreational facilities, and update the fees periodically to ensure they reflect current costs of land acquisition.

ACTIONS

LU-6e: Cooperate with Local Agency Formation Commission and the County to direct growth outside the City Limits on lands that are served or are planned to be served, with a full range of urban services, such as public water and sewer, an extensive road network, public transit, safety and emergency response services, parks, trails, and open space.

COS-2a: Periodically evaluate open space, park, and recreation facility acquisition opportunities.

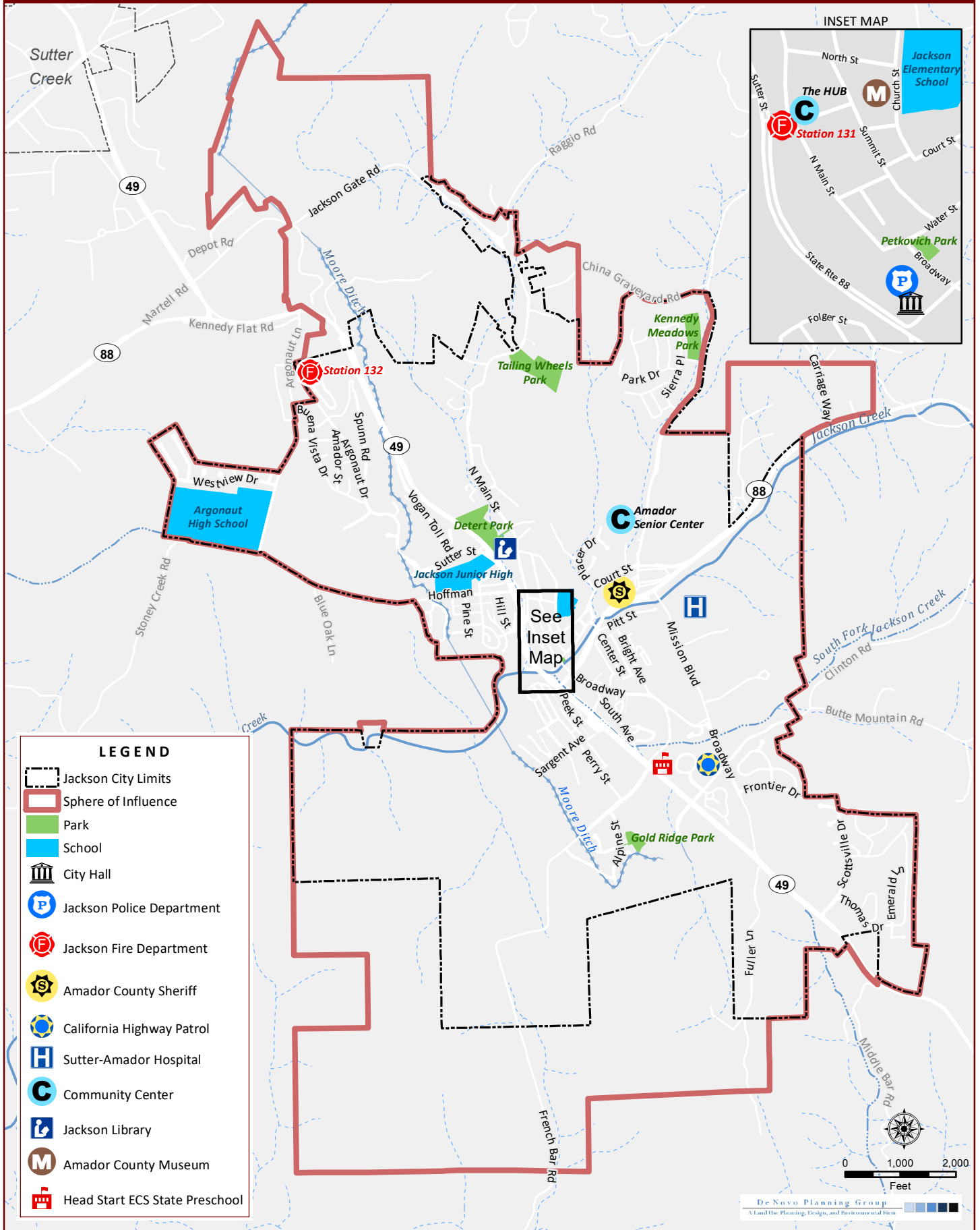
COS-2b: Pursue all forms of possible funding, including federal, state, county, private contributions, gifts and endowments, bond measures, and special districts, to assist in the acquisition, development, and programming of park and recreation facilities.

COS-2c: Utilize park impact fees for the acquisition and development of parks and recreation facilities. Periodically review, and update as necessary, the City's park impact fees in order to ensure that new development continues to provide a fair share contribution towards parks, trails, and recreation facilities.

COS-2d: Partner with school districts and other agencies and organizations for the joint-use, maintenance, and development of parks and recreation facilities and programs.

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Figure 3.13-1. Community Facilities



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This chapter describes the potential impacts to the roadway, transit, bicycle, and pedestrian components of the City's transportation system as well as roadway safety. To provide context for the impact analysis, this chapter begins with a discussion of the environmental setting, which is a description of the existing physical and operational conditions for the transportation system. Following the setting is the regulatory framework influencing the transportation system and providing the basis for impact significance thresholds used in the impact analysis. The chapter concludes with the impact analysis findings and recommended mitigation measures.

In compliance with the CEQA Guidelines, the analysis of each modal component and safety is based on applicable technical guidance and City of Jackson decisions regarding methodology, impact thresholds, and feasible mitigation. Vehicle related impacts are based on the plan's changes to vehicle miles traveled (VMT), a measure of the total distance traveled by vehicles that have a trip starting or ending in Jackson. Separate VMT analyses are presented for residential versus non-residential land uses based on VMT generation rates, which are also called efficiency metrics because they express VMT on per dwelling unit or per worker basis. For transit, bicycle, and pedestrian system components, impacts are based on whether the plan will disrupt existing, or interfere with planned, facilities or services. Finally, for safety impacts, the plan's proposed transportation network changes are evaluated for consistency with applicable design standards. These standards are created to provide users with common expectations when using the transportation system to help minimize potential conflicts between modes that could cause collisions.

The City received a comment from the California Department of Transportation during the public review period for the Notice of Preparation. All issues raised in this letter have been addressed in this chapter of the Draft EIR. The NOP and all comments received during the NOP comment period are included in Appendix A of this Draft EIR.

3.14.1 ENVIRONMENTAL SETTING

This section provides a contextual background to the City of Jackson's existing transportation system, representing conditions prior to the onset of the COVID-19 pandemic. The pandemic caused substantial disruption to travel patterns and behavior, some of which has dissipated with the lifting of activity restrictions. However, some changes are expected to remain longer such as considering health risk when using modes that involve sharing of seats (e.g., transit or carpooling). The General Plan addresses the overall planning and development of the circulation system for moving people and goods in a multi-modal framework. Transportation system components include the roadway network, public transportation system, bicycle and pedestrian system, and goods movement.

According to the 2018 American Community Survey¹, 89% of employed Jackson residents work at jobs located outside the City. Approximately 93% drive alone to work with an average commute

¹ On the Map; <https://onthemap.ces.census.gov/>

time of 22 minutes. Nearly 60% have commutes of 15 minutes or less, which is reasonable given employment opportunities in the Martell area, Jackson Rancheria, Sutter Creek, etc. Notably, nearly 20% have one-way commutes of 45 minutes or longer to employment centers in Sacramento, San Joaquin, and Calaveras Counties, and even more remote destinations such as the Bay Area.

ROADWAY SYSTEM

This section describes the physical characteristics of Jackson’s existing roadway network. **Figure 3.14-1** shows the roadway classification system in Jackson. Roadways within the Jackson Planning area are broadly classified either as state routes or local routes, with local routes being further distinguished as either major or minor collectors.

State Routes

Three state highways operated and maintained by Caltrans pass through the Jackson area, State Routes (SR) 49, 88, and 104. Each facility is described below:

- **State Route 49** - extends from Oakhurst in Madera County to Vinton in Plumas County, connecting many of the historic towns developed during the gold mining days. It is the major north/south highway through Amador County. Within the Jackson area, SR 49 becomes coincidental with SR 88 between Martell and Jackson and is classified as a minor arterial. Within the Jackson city limits, SR 49 bisects the City providing access to much of the commercial uses on both sides of the highway and is primarily a four-lane facility with a two-way left-turn lane (TWLTL), though the southerly, downhill portion heading into downtown Jackson features a single travel lane. The posted speed limit varies from 30 to 50 miles per hour (mph).
- **State Route 88** - is a two-lane, principal arterial that runs west to east through Amador County, connecting San Joaquin County on the west and to Alpine County on the east. SR 88 becomes coincidental with SR 49 in the Martell area and runs south into the City of Jackson. SR 88 serves significant local and recreational traffic traveling through the Jackson area. The intersection of SR 49 and SR 88 is considered among the most heavily used intersections in Amador County. Within the Jackson planning area, SR 88 is a two-lane undivided conventional highway with posted speed limits ranging from 35 to 45 mph.
- **State Route 104** - is a major collector which originates at SR 99 at Galt in Sacramento County, enters Amador County and passes through the City of Lone, intersecting SR 88. Although SR 104 is not within the Jackson planning area, the segment of SR 104 that is coincidental with SR 88 provides access into the Jackson planning area near Martell. This route is also important because it provides an alternate route for trucks and Jackson Rancheria Casino patrons instead of using SR 88 through Jackson. East of SR 49, SR 104 becomes Ridge Road, extending for about 8 miles to the Pine Grove community located on SR 88 east of Jackson.

Local Routes

The major local collector roadways within the City of Jackson include Hoffman Street/Stony Creek Road, Clinton Road, Court Street, New York Ranch Road, North Main Street, and Jackson Gate Road. Descriptions of each facility are provided below:

- **Hoffman Street/Stony Creek Road** - extends in a southwesterly direction from SR 49 in the City of Jackson to Buena Vista Road near the Calaveras County line. In the Jackson planning area, Hoffman Street provides access to Jackson Junior High School, Argonaut High School and the Amador County Superior Court. It has one lane in each direction and a posted speed limit of 25 mph.
- **Clinton Road** - begins at SR 49 and extends east out of the City limits. In the study area, Clinton Road provides access to a variety of commercial uses including the Regal Jackson Cinema, Tractor Supply and Raleys, governmental uses such as the Jackson DMV and California Highway Patrol office, and residential land uses within the City limits. It has one lane in each direction and a posted speed limit of 25 mph.
- **Court Street** – extends from SR 88 to downtown Jackson. Court Street provides access to various County buildings and residential land uses. It has one lane in each direction (occasionally separated by a TWLTL) and a posted speed limit of 25 mph.
- **New York Ranch Road** - begins at Court Street in the City of Jackson and extends northerly out of the City limits, where it connects with Ridge Road. New York Ranch Road provides access to the Jackson Rancheria Casino and residential and professional office land uses within the City limits. It has one lane in each direction and posted speed limits ranging from 25 to 35 mph.
- **North Main Street** - is a historic route that extends from the downtown Jackson area to the north, where it transitions to Jackson Gate Road. North Main Street serves a variety of commercial, office and residential land uses between the downtown area and Jackson Gate Road. It has a posted speed limit of 25 mph. Portions of the roadway permit on-street parallel parking, angled parking, and no parking zones.
- **Jackson Gate Road** - loops around from SR 49 in the Martell area to the southeast, where it connects with North Main Street in the City of Jackson. Jackson Gate Road provides access from the Martell area to the northeast Jackson area, serving some commercial uses and historic sites along its route. It has one lane in each direction and posted speed limits ranging from 25 to 40 mph.

Minor collectors include Argonaut Lane, Mission Boulevard, Sutter Street, and French Bar Road.

Figure 13.4-2 displays the average daily traffic (ADT) volumes for the major roadways within the study area. Existing conditions count data was derived from a variety of sources including the Amador County 2020 Regional Transportation Plan (March 5, 2020) and the City of Jackson Transportation Capital Improvement Program (TCIP) Traffic Mitigation (TIM) Fee Update, and Nexus Report (September 9, 2013). All counts were collected prior to the COVID-19 pandemic.

As shown, traffic volumes on SR 49 range from 8,300 ADT near the south City limits to 21,700 ADT within the City limits (just north of SR 88). Traffic volumes on SR 88 are in the 11,000 to 12,000 ADT range. Local roadways carry substantially less traffic with the busiest streets (e.g., Hoffman Street, Jackson Gate Road, North Main Street, New York Ranch Road, and Mission Boulevard) carrying between 2,500 and 5,000 ADT.

Vehicle Miles Traveled

By definition, one vehicle mile traveled (VMT) occurs when one vehicle (regardless of number of occupants) is driven on a roadway for one mile. For the purposes of this EIR, VMT is estimated for an average weekday. Many factors affect VMT, including the average distance residents commute to work, school, and shopping, as well as the proportion of trips that are made by non-automobile modes. Areas that have a diverse land use mix and ample facilities for non-automobile travel, including transit, tend to generate lower VMT than auto-oriented rural areas where residents travel long distances to/from work, school, and other amenities.

VMT is used to measure performance of the transportation network and to evaluate potential transportation impacts. VMT can be reported and analyzed as an absolute amount using a metric like total weekday VMT or an efficiency metric (also called a generation rate) such as VMT per capita or worker. Efficiency metrics allow the VMT performance of different-sized projects or plans to be compared. Such metrics provide a measure of travel efficiency and help depict whether different planning scenarios require more or less vehicle travel.

To help aid lead agencies with SB 743 implementation, the California Governor's Office of Planning and Research (OPR) OPR produced the [Technical Advisory on Evaluating Transportation Impacts in CEQA](#) (December 2018). The *Technical Advisory* helps lead agencies think about the variety of implementation questions they face with respect to shifting to a VMT metric. The guidance is not a recipe for SB 743 implementation since lead agencies must still make their own specific decisions about methodology, thresholds, and mitigation. The City of Jackson has proactively prepared for SB 743 implementation through the development of the *SB 743 Implementation Guidelines for City of Jackson* (Fehr & Peers, December 2022).

ACTC Travel Demand Model

The Amador County Transportation Commission (ACTC) travel demand model was used to perform VMT analysis for City of Jackson (as the City does not maintain its own model). An overview of the base and future year version of the model is provided below:

- Base Year Model – The base year model is representative of an approximate Year 2014 condition.
- Future Year Model – This model technically has a horizon year of 2030. But based on the amount of land use growth contained within it, it is actually representative of a more distant horizon year. To be consistent with other parts of this EIR, output from this model is deemed to represent a 2040 Cumulative condition.

The ACTC model is a traditional three-step model (trip generation, distribution, assignment) that covers the entirety of Amador County and Alpine County. To provide VMT results consistent with methods described in OPR's *Technical Advisory*, Fehr & Peers made the following updates to the model, focusing mainly within the Jackson City Limits.

1. Traffic Analysis Zone (TAZ) Check – Land uses within the model are represented by TAZ's, which are geographically mapped throughout the model extents (refer to Appendix D for a map showing the 23 TAZs that represent the City of Jackson). TAZs within and adjacent to Jackson were reviewed to ensure that each TAZ's land use is correctly being attributed to either the City or unincorporated County.
2. Land Use Adjustments – The land uses assumed in the base year model for the City of Jackson were compared against Department of Finance (DoF) data. Based on the number of dwelling units in the base year model (2,302), the model appears to match well against the DoF 2014 database, which showed 2,317 units in the City. No changes in base year land uses within the City TAZs were necessary.
3. Roadway Network Review – The base year model's roadway network within City of Jackson and Amador County was reviewed. It was confirmed that the State Route 49 (SR 49) Bypass and Mission Boulevard extension between State Routes (SR) 88 and 49 were appropriately included in the base year model. Additional checks were made of number of lanes, free-flow travel speeds, TAZ centroid connectors, and other model attributes.
4. Gateway Trip Length Adjustment – The ACTC model has 16 external gateways that represent vehicular travel into, out of Amador and Alpine Counties. Consistent with guidance from the *Technical Advisory*, it was necessary to reflect the full length of trips that have one end of the trip within Amador County and have the other trip end at an external gateway. To accomplish this, external gateway trip lengths were appended to the model totals. This was accomplished using Census OnTheMap data based on the likely destinations of these internal-external (IX) or external-internal (XI) trips.
5. Conversion of Non-Residential Square Footage to Employees – The ACTC model uses thousand square feet (KSF) as the input for non-residential land uses. For purposes of calculating average VMT per employee at non-residential uses, it was necessary to translate non-residential KSF into employees using the conversion factors contained in Appendix D.

Table 3.14-1 shows the average VMT generated per dwelling unit (calculated separately for single-family and multi-family) and per employee within the City of Jackson and for all of Amador County (including all five incorporated cities). The VMT per dwelling unit represents all types of home-based travel produced by the residents of that unit including work trips, shopping trips, school trips, recreational trips, and other trips. Conversely, the VMT per employee represents only the travel of the employee, and not trips generated by customers, deliveries, etc. As noted above, the values in this table represent the entire length of all trips including trips that enter/exit the model gateways. Key findings in this table are:

3.14 TRANSPORTATION AND CIRCULATION

- Single-family and multi-family VMT generation rates within Jackson are 9% and 20%, respectively, below the countywide average.
- The average VMT per employee for businesses in Jackson is 7% above the Countywide average.

TABLE 3.14-1: EXISTING VMT

GEOGRAPHY	VMT per Single-Family Dwelling Unit	VMT per Multi-Family Dwelling Unit	VMT Per Employee
City of Jackson	63.8	46.7	24.9
Amador County	69.8	58.4	23.2

Source: ACTC Travel Demand Model and Fehr & Peers, 2022.

The results in this table make sense intuitively for the following reasons:

- The average VMT per single-family unit within Jackson is heavily influenced by the 57% of Jackson employed persons who commute to workplaces outside the City. Many of those are long-distance commutes (i.e., home-based work trips generated by single-family residents are about 13 miles one-way on average), which are contributing to this VMT result. However, Jackson’s single-family average is less than the overall Amador County average likely because commute trips from residences in the unincorporated County require longer travel to external destinations (most of which are located west of Amador County).
- The average VMT per multi-family unit is about 73% of the single-family unit average VMT. This result is reasonable based on the 65% ratio of multi-family to single-family daily trips (i.e., 3.7 versus 5.7 in the ACTC model).

PUBLIC TRANSPORTATION SYSTEM

Amador Transit (AT) provides fixed-route/demand responsive bus and shuttle service throughout the City of Jackson and Amador County, as well as to downtown Sacramento and Calaveras County. AT provides service Monday-Friday, with the exception of Federal holidays, as described below. All routes begin and end at the Sutter Hill Transit Center. Routes with stops in the City of Jackson specifically are described in greater detail and displayed on **Figure 3.14-3** below):

- Route 2 – Service is provided to/from the Amador Station located north of Barton with stops in various communities such as Jackson, Pine Grove, Pioneer, and Buckhorn. A morning, midday, and afternoon round trip is provided between 5:45 AM and 6:30 PM. This service is shown in gold in the map below.
- Route 5/6 – Shuttle service is provided to/from the City of Jackson with stops in Sutter Creek and Martell. Service is provided approximately every one to two hours from 7:00 AM to 5:00 PM. Route 5 is shown in red in the map below, while Route 6 is shown in dark blue.

Additional transit services are provided in Jackson and throughout Amador County via visitor tour buses, Blue Mountain Transit (a private van service), Amador Unified School District, taxicabs, rideshare/vanpool programs, and Calaveras Transit. Calaveras Transit offers deviated fixed-route

service, one of which connects with Amador Transit at Raley's in Jackson. Taxi service in Jackson is provided sporadically by private operators that serve the greater Amador County area. Lyft and Uber provide connections to local and regional destinations. Availability varies depending on driver availability. Service is requested by smartphone apps for each provider.

Figure 3.14-3: Amador Transit Service Map in the City of Jackson



Source: Amador Transit

BICYCLE AND PEDESTRIAN SYSTEM

This section describes the bicycle and pedestrian network in Jackson.

Bicycle Facilities

The *Amador Countywide Pedestrian and Bicycle Plan (2017)* included a robust analysis of the bicycle and pedestrian network in the City of Jackson and Amador County as a whole. The Plan categorizes the following bicycle types:

- **Class I:** Provides completely separated right of way for the exclusive use of bicycles and pedestrians with minimized cross-flow. These include separated bike lanes, bike paths and shared-use, multimodal paths.

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- **Class II:** Provides a striped lane for one-way bike travel on a street or highway. These include paved shoulders with a 6-foot minimum designated bike lane.
- **Class III:** Provides for a signed shared roadway that provides for shared use among pedestrians, bicyclists, and motor vehicle traffic, typically on lower volume roadways. The roadway has signs posted identifying it as a bike route. These include paved shoulders with designated bike route signs or rural roadways with designated bike route signage.

Existing bicycle facilities within the City of Jackson are displayed on **Figure 13.4-4** and described below:

- Class I bike path east of Mission Boulevard adjacent to Sutter Amador Hospital
- Class II bike lane on Argonaut Lane from Mariposa Street to Hoffman Street
- Class II bike lane on Mission Boulevard from Highway 88 to Broadway
- Multiple bicycle racks are located throughout the City, primarily near key shopping and employment destinations

Pedestrian Facilities

The Amador Countywide Pedestrian and Bicycle Plan notes that the City of Jackson is considered a walkable community due to close proximity of residential and commercial land uses. According to the plan, approximately 26% of roads within the City had sidewalks and there were significant gaps in the pedestrian network. The Plan recommended both bicycle and pedestrian improvements, some of which have been implemented.

Figure 13.4-5 displays existing pedestrian facilities within the City of Jackson. As displayed, gaps in the pedestrian network still exist but sidewalks are present adjacent to main commercial areas and throughout some residential neighborhoods. Although not shown on this figure, a variety of crosswalks are present on many roadways throughout the City.

GOODS MOVEMENT

Within Jackson Planning Area, there are two types of truck routes: Surface Transportation Assistance Act (STAA) routes and local routes. STAA routes allow large trucks to operate on the state highway system and certain primary routes. These trucks, referred to as STAA trucks, are longer than California legal trucks. STAA routes are designated either as Terminal or Service Access routes. Terminal routes are approved by the agency with jurisdiction over the roadway to enable the truck to reach its ultimate destination. Service Access routes allow STAA trucks to exit the Terminal Route onto a local road, for one mile only, for food, fuel, lodging, or repair. SR 49, and SR 88 west of SR 49 are STAA Terminal Routes. SR 104 and SR 88 east of SR 49 are California Legal Routes, which permit trucks with a single trailer up to 65 feet in length. Trucks represent 6 to 9 percent of all traffic on SR 49 and SR 88 within the plan area.

Section 10.20.010 of the Jackson Municipal Code prohibits any vehicles that exceed 6 tons from using city streets with the exception of Hoffman Street, Clinton Road, French Bar Road west of SR 49, North Main Street, China Graveyard Road, New York Ranch Road, and Court Street between New York Ranch Road and SR 88.

3.14.2 REGULATORY SETTING

The General Plan, along with a variety of City, regional, State, and Federal plans, legislation, and policy directives provide guidelines for the safe operation of streets and transportation facilities in Willows. While the City has primary responsibility for the maintenance and operation of local transportation facilities in its jurisdiction, Jackson staff works on a continual basis with responsible regional, State, and Federal agencies including County of Amador, ACTC, the California Department of Transportation (Caltrans), the Federal Highway Administration, and others to maintain, improve, and balance the competing transportation needs of the community and the region. Federal, state, regional, and local laws or regulations applicable to analyzing transportation impacts of the general plan are described below.

FEDERAL

Americans With Disabilities Act

The Americans with Disabilities Act (ADA) of 1990 provides comprehensive rights and protections to individuals with disabilities. The goal of the ADA is to assure equality of opportunity, full participation, independent living, and economic self-sufficiency. To implement this goal, the United States Access Board has created accessibility guidelines for public rights-of-way. The guidelines address various issues, including roadway design practices, slope and terrain issues, pedestrian access to streets, sidewalks, curb ramps, street furnishings, pedestrian signals, parking, and other components of public rights-of-way.

STATE

Senate Bill 743

SB 743, passed in 2013, resulted in several statewide CEQA changes. It required the California Governor's Office of Planning and Research (OPR) to establish new metrics for determining the significance of transportation impacts of projects within transit priority areas (TPAs) and allows OPR to extend use of the metrics beyond TPAs. OPR selected VMT as the preferred transportation impact metric and applied their discretion to require its use statewide. This legislation also established that aesthetic and parking effects of a residential, mixed-use residential, or employment center projects on an infill site within a TPA are not significant impacts on the environment. The revised CEQA Guidelines that implement this legislation became effective in December 2018, and state that vehicle LOS and similar measures related to delay shall not be used as the sole basis for determining the significance of transportation impacts for land use projects and have applied statewide since 2020. The OPR *Technical Advisory on Evaluating Transportation Impacts in CEQA* (2018) includes specifications for VMT methodology and recommendations for significance thresholds, screening of project that may be presumed to have less than significant impacts, and mitigation. Other key guidance includes:

- OPR recommends tour- and trip-based travel models to estimate VMT, but ultimately defers to local agencies to determine the appropriate tools.

- Lead agencies ultimately have the discretion to set or apply their own significance thresholds, provided they are based on significant evidence.

Cities and counties can still use measures of delay such as LOS for other plans, studies, or network monitoring. However, according to CEQA section 15064.3, Determining the Significance of Transportation Impacts, “effect on automobile delay shall not constitute a significant environmental impact.”

California Air Resources Board Plans and Progress Reports

2019 SCOPING PLAN-IDENTIFIED VMT REDUCTIONS AND RELATIONSHIP TO STATE CLIMATE GOALS
The California Air Resources Board (ARB) provides specific guidance for VMT thresholds in “Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals” (2019). This document provides recommendations for VMT reduction thresholds that would be necessary to achieve the state’s GHG reduction goals and acknowledges that the SCS targets alone are not sufficient to meet climate goals. ARB concluded that a 14.3% reduction in total VMT per capita and a 16.8% reduction in light-duty VMT per capita (over current conditions; 2015-2018) was needed to meet these goals. Additionally, the *Technical Advisory* cites this document as support for the 15% reduction threshold.

2022 SCOPING PLAN FOR ACHIEVING CARBON NEUTRALITY (CARB, NOVEMBER 2022)

The 2022 Scoping Plan lays out a path to achieve targets for carbon neutrality and reduce anthropogenic greenhouse gas (GHG) emissions by 85% below 1990 levels no later than 2045, as directed by Assembly Bill 1279. The plan includes a number of noteworthy passages including:

- VMT reductions will play an indispensable role in reducing overall transportation energy demand and achieving the state’s climate, air quality, and equity goals.
- Achieve a per capita VMT reduction of at least 25% percent below 2019 levels by 2030 and 30% below 2019 levels by 2045.
- While CARB has included VMT reduction targets and strategies in the Scoping Plan and appendices, these targets are not regulatory requirements, but would inform future planning processes. CARB is not setting regulatory limits on VMT in the 2022 Scoping Plan; the authority to reduce VMT largely lies with state, regional, and local transportation, land use, and housing agencies, along with the Legislature and its budgeting choices.

The CARB Board is expected to vote on the 2022 Scoping Plan at its December meeting.

California Department of Transportation Guides

VEHICLE MILES TRAVELED-FOCUSED TRANSPORTATION IMPACT STUDY GUIDE

The *Vehicle Miles Traveled-Focused Transportation Impact Study Guide* (Caltrans, 2020) was prepared to provide guidance to Caltrans districts, lead agencies, tribal governments, developers, and consultants regarding Caltrans’ review of VMT impact analysis for land use projects and land use plans. Caltrans seeks to reduce single occupancy vehicle trips, provide a safe transportation system, reduce per capita VMT, increase accessibility to destinations via cycling, walking, carpooling, and transit, and reduce greenhouse gas (GHG) emissions. The guide notes that, for land use projects

and plans, automobile delay is no longer considered a significant impact on the environment under CEQA. Caltrans' primary review focus for a land use project's transportation impacts is now VMT. The guide generally endorses the *Technical Advisory* including the thresholds in that document. Caltrans may review VMT thresholds, methodology, and mitigations.

INTERIM LAND DEVELOPMENT AND INTERGOVERNMENTAL REVIEW (LDIGR) SAFETY REVIEW PRACTITIONERS GUIDANCE

The *Interim LDIGR Safety Review Practitioners Guidance* (Caltrans, 2020) was developed to provide immediate direction about the safety review of the state highway system while final guidance is being developed. This interim guidance does not establish thresholds of significance for determining safety impacts under CEQA. The guidance notes that the significance of impacts should be determined with careful judgment on the part of a public agency and based, to the greatest extent possible, on scientific and factual data consistent with Caltrans' CEQA guidance contained in Caltrans' Standard Environmental Reference. The guidance notes that District traffic safety staff will use available data to determine if the proposed project may influence or contribute to locations identified by traffic safety investigations generated by network screening or initiated by the district.

REGIONAL

Amador County Regional Transportation Plan

The Regional Transportation Plan (RTP) produced by the Amador County Transportation Commission (ACTC) was adopted in 2020. The RTP serves as the backbone of transportation fiscal planning by providing capital program planning for all regional, state, and federally funded projects in the County. The RTP states that its purpose is to "identify the region's short-term and long-range transportation needs and to establish policies, programs, and projects designed to meet those needs. Transportation improvement projects that are included in the RTP are prioritized for funding through the Regional Transportation Improvement Program (RTIP)." The RTP also demonstrates compliance with air quality conformity requirements under the federal Clean Air Act.

Amador Countywide Pedestrian and Bicycle Plan

The Amador Countywide Pedestrian and Bicycle Plan (ACTC, 2017) serves two main purposes. First, it serves as the foundation for the pedestrian and bicycle component of the RTP. Second, it organizes high-priority pedestrian and bicycle projects among Amador County's member agencies to successfully complete for funding from federal, state, and regional sources. The plan includes the following goals:

1. Promote an efficient network of bikeways and pedestrian facilities throughout Amador County.
2. Improve bicyclist and pedestrian safety and security.
3. Integrate pedestrian and bicycle needs into transportation planning activities, and support local planning efforts to encourage and increase walking and biking.
4. Maximize capacity for implementation of pedestrian and bicycle projects, programs, and plans.

The plan includes important bicycle facility improvements in Jackson such as bike lanes and sidewalks on various streets, Oro de Amador Recreation Trail Network, ADA ramps, widened shoulders for bicycle travel, and new traffic signals that help facilitate protected pedestrian crossings of wide roadways.

LOCAL

City of Jackson General Plan

The City of Jackson General Plan is a long-range comprehensive planning document required by state law to set policy and guide future growth, development, and conservation of resources. The General Plan's Circulation Element was amended in 2008 and includes a set of goals, objectives, policies, and implementation measures related to circulation. It also includes an existing conditions analysis, future needs assessment, and a preferred circulation plan. This chapter of the DEIR presents an updated set of policies and the environmental review of the updated Circulation Element.

City of Jackson SB 743 Implementation Guidelines

The Draft SB 743 Implementation Guidelines for City of Jackson (2022) provides guidance for implementing SB 743 within the City. It presents detailed VMT calculations, proposed VMT thresholds of significance, and potential mitigation measures. The *Technical Advisory* offers guidance regarding land use projects that are presumed to be less-than-significant. Here, five such project types are presented, though they may or may not be applicable to the City of Jackson. Each project type is followed by an evaluation of its applicability to the City of Jackson.

1. ***Small Projects*** – The *Technical Advisory* concludes that, absent any information to the contrary, projects that generate 110 trips per day or less may be assumed to cause a less-than-significant transportation impact.
Evaluation: For most suburban locations, 110 trips per day equates to about 10,000 square feet of office space, 11 single-family dwelling units, or 17 multi-family dwelling units. However, ACTC's calibrated travel demand model has specific trip generation rates for the City of Jackson that may be considered. Based on those rates, 110 daily trips would equate to about 11,000 square feet of office space, 19 single-family dwelling units, or 29 multi-family dwelling units.
2. ***Projects near Transit Stations*** – projects located within ½ mile of an “existing major transit stop” or an “existing stop along a high quality transit corridor” would have a less-than-significant impact on VMT.
Evaluation: Although fixed-route bus service is provided in some areas of Jackson, the frequency of bus service is not sufficient to qualify as “high-quality” transit, which is defined as 15-minute headways during peak periods. Accordingly, this screening would not currently be applicable to Jackson projects.

3. *Affordable Residential Development* – projects consisting of a high percentage of affordable housing may be assumed to cause a less-than-significant transportation impact on VMT because they may improve jobs-housing balance and/or otherwise generate less VMT than market-based units.
Evaluation: This is a viable screening option that the City of Jackson could consider. It has been applied by many other jurisdictions in the state.
4. *Redevelopment Projects* – If a proposed redevelopment project leads to a net overall decrease in VMT (when compared against the VMT of the existing land uses), the project would lead to a less-than-significant transportation impact.
Evaluation: This is a viable screening option that the City of Jackson could consider. It has been applied by many other jurisdictions in the state.
5. *Local Serving Retail* – Trip lengths may be shortened and VMT reduced by adding “local-serving” retail opportunities that improve retail destination proximity. Page 17 of the *Technical Advisory* generally describes retail development including stores less than 50,000 square feet as locally-serving.
Evaluation: This is a viable screening option that the City of Jackson could consider. This screening is in use by many jurisdictions within California.

The City’s SB 743 Implementation Guidelines also include screening maps for single-family and multi-family units and for employees. Each screening map compares the average VMT per unit in each TAZ to the ACTC average for base year conditions. A similar set of screening maps is provided for 2040 cumulative conditions.

3.14.3 IMPACTS AND MITIGATION MEASURES

METHODS OF ANALYSIS

The transportation impact analysis assesses how implementation of the proposed General Plan would change the baseline conditions for the transportation system and whether those changes would constitute a significant impact under CEQA. The transportation impact analysis methodology includes a combination of quantitative and qualitative evaluations of the roadway, bicycle, pedestrian, and transit components of the transportation system. All analysis presumes that future background travel options and behaviors remain similar to current conditions and do not explicitly account for potential changes associated with disruptive trends, emerging technologies, and changes in travel choices.

THRESHOLDS OF SIGNIFICANCE

For the purposes of this EIR, adoption and/or implementation of the proposed General Plan would result in significant impacts under CEQA, if any of the following would occur:

- Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)
- Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)
- Result in inadequate emergency access

Vehicle Miles Traveled

Based on Appendix G of the CEQA Guidelines, the General Plan would result in a significant transportation impact if it would conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b), relevant portions of which are copied below.

(b) Criteria for Analyzing Transportation Impacts.

(1) Land Use Projects.

Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.

(2) Transportation Projects.

Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.

(3) Qualitative Analysis.

If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles

traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc.

(4) Methodology.

A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure.

The City of Jackson has not formally adopted a quantitative VMT threshold. However, the draft SB 743 Implementation Guidelines identify a target goal of VMT per dwelling unit and employee that is 15% below the Amador County average.

Transit, Bicycles, and Pedestrians

Appendix G of the CEQA Guidelines indicates that impacts may be significant if a project conflicts with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. The proposed general plan would have a significant impact on transit, bicycles, or pedestrians if it disrupts an existing transit, bicycle, or pedestrian facility/service or would interfere with planned improvements to these transportation system components contained in adopted policies, plans, or programs regarding these systems.

Hazards

Appendix G of the CEQA Guidelines indicates that impacts may be significant if a project would substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). The proposed general plan would have a significant impact on hazards if it would cause any inconsistencies with applicable transportation design standards.

Emergency Access

Impacts may also be significant if a project results in inadequate emergency access. The proposed general plan would have a significant impact on emergency access if it would cause any inconsistencies with applicable transportation design standards or emergency response plans.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-1: General Plan implementation may conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) (Significant and Unavoidable).

The City is expected to add 681 dwelling units and 300,000 square feet of non-residential building space by 2040, as described in Chapter 2.0, Project Description. Average VMT per dwelling unit and per employee was estimated using the future year version of the ACTC travel demand model. **Table 3.14-2** compares the existing and 2040 cumulative VMT averages. As shown, the cumulative 2040 average VMT values for the City of Jackson range from 1% to 5% below existing averages but continue to be well below the County-wide averages for residential.

TABLE 3.14-2: EXISTING AND 2040 CUMULATIVE VMT

Geography	VMT per Single-Family Dwelling Unit		VMT per Multi-Family Dwelling Unit		VMT Per Employee	
	Existing	2040 Cumulative	Existing	2040 Cumulative	Existing	2040 Cumulative
City of Jackson	63.8	62.4	46.7	44.5	39.6	39.1
Amador County	69.8	72.6	58.4	51.8	36.4	38.0

Source: ACTC Travel Demand Model and Fehr & Peers, 2022.

Although the City of Jackson plans for improved bicycle and pedestrian facilities in many parts of the City, those facilities are not expected to materially decrease VMT. Residents of Jackson in the future will likely engage in similar travel patterns to existing residents based on planned land use, roadways, and alternative modes of transportation in the City, resulting in the absolute VMT of the City and increasing and the VMT per unit and per employee in Jackson remaining similar to baseline in the planning horizon. The proposed general plan includes the following policies designed to reduce vehicle travel and VMT.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

CIRCULATION ELEMENT POLICIES

CIRC 2.3: *The City shall require that new development’s internal circulation plans include provisions for pedestrians, bicycles, automobiles, parking, and bus facilities as well as Neighborhood Electric Vehicles (NEVs), if deemed feasible and beneficial, consistent with separately adopted alternative transportation plans and/or guidelines.*

CIRC 2.4: *The City shall require that rights-of-way be sufficient to ensure adequate area for future expansion to accommodate long-range planning options shown in the Circulation Diagram (Figure CIRC-1).*

CIRC 2.6: *Shuttle service shall be utilized wherever feasible during special events/activities to effectively minimize circulation conflicts.*

CIRC 2.9: *New development circulation plans shall be in conformance with the General Plan’s goals and policies, the Circulation Element map, City codes and adopted standards.*

CIRC 5.1: *The City shall encourage alternatives to single-occupant vehicle trips and make alternatives available to the extent deemed practical and economical.*

CIRC 5.2: *The City shall require new development to construct or contribute financially for transit facilities, as deemed necessary, for purposes of public convenience and fuel conservation, and to ensure transportation for the elderly and disabled.*

CIRC 5.3: *The City shall promote ridesharing and the use of park-and-ride facilities.*

CIRC 5.4: *The City shall actively promote the use of transit during special community events.*

CIRC 6.1: *The City shall implement best practices to improve the pedestrian and bicycle environment.*

CIRC 6.2: *The City shall construct sidewalks or pedestrian walkways along Highways 49 and 88.*

CIRC 6.3: *The City shall continue to require new development to construct sidewalks or meandering walkways along all street perimeters.*

CIRC 6.4: *The City shall promote use of walking routes, walkways, and hiking trails.*

CIRC 6.7: *The City shall eliminate barriers to bicycle traffic within selected areas.*

CIRC 6.8: *Bicycle lanes shall be constructed along new or reconstructed arterial and collector routes in, or adjacent to, the City, wherever possible.*

CIRC 6.9: *The City shall require new development to construct bicycle routes and/or provide secure facilities (i.e. bike racks), where feasible. To encourage biking and walking, provide amenities including pedestrian-scale lighting, bicycle parking, shade trees, and landscaping.*

CIRC 6.10: *The City shall encourage existing businesses and employers to provide bicycle storage and lockers in order to promote bicycle commuter travel.*

CIRC 6.12: *The City shall continue to encourage the coordination of bicycle use with mass transit by equipping all buses with bicycle racks.*

CIRC 8.1: *Support land use with increased densities and mixed uses, consistent with the Land Use Element, to reduce vehicle miles traveled (VMT) and promote the use of walking, biking, and transit.*

CIRC 8.2: *Encourage employers to provide programs for carpooling/transit/biking/walking subsidies, bicycle facilities, ridesharing, telecommuting, and working at/from home.*

CIRC 8.3: *Monitor the deployment of new transportation technologies and services and develop policies that implement best practices to ensure these technologies and services benefit the public and the multimodal transportation system.*

3.14 TRANSPORTATION AND CIRCULATION

CIRCULATION ELEMENT ACTIONS

CIRC-2a: Utilize the City's planning project referral process and Caltrans Intergovernmental Review (IGR) process to provide Amador County, the ACTC, Caltrans, and other transportation agencies with ample time to review and participate in the City's transportation and land use planning processes and projects as well as all major land use development projects with the potential to generate significant impacts on the transportation system.

CIRC-2j: Work with ACTC and Caltrans to explore funding opportunities, including grants or cost-sharing programs, for all components of the City's transportation system that are required to meet the goals and objectives of the General Plan.

CIRC-2l: Conduct environmental review of proposed development projects to assess the environmental impacts generated by the new development and identify needed mitigation measures.

CIRC-5a: Help to implement the countywide five-year Transit Development Plan which includes fixed route express service between Jackson, Martell, and Sutter Creek as well as Sacramento in addition to a separate schedule of deviated transit routes for seniors, youth, and transportation of disadvantaged individuals. Also, help to implement the Transit Design Guidelines Manual when considering the designs of and locations for transit facilities in the City's plans or new land use development proposals.

CIRC-5b: Continue to expand the use of Amador Transit public transit service including special event shuttle service during significant Main Street activities.

CIRC-5c: Partner with Amador Transit and other regional transit providers to conduct regular service reviews to advance convenient transit service to employment centers, County and City service centers, other government centers, and regional destinations (i.e. Sacramento International Airport), as funding allows.

CIRC-5d: Enhance transit stops through high quality, well-maintained shelters and provide transit timetables.

CIRC-5e: Consider alternatives to conventional bus systems, such as smaller shuttle buses (micro-transit), on-demand transit services, or transportation networking company services that connect residential communities to regional activity centers with greater cost efficiency.

CIRC-6a: Work with ACTC to implement the Amador Countywide Pedestrian and Bicycle Transportation Plan, and Pedestrian and Bicycle Design Guidelines and Recommended Standards. The City should also hold public workshops to update and refine the City's part in the countywide plan to clarify or expand upon the City's specific pedestrian and/or bicycle needs. These may include:

- New roads to accommodate bicyclists and pedestrians;
- A designated bicycle route stop located along SR 49 in downtown Jackson to include such facilities as bike racks and lockers for storage;

- *Pedestrian-actuated signal crossings at key locations such as Busi Municipal Parking Lot, French Bar Road, and Sutter Street;*
- *Parking facilities at trailheads; safe, well-lit, unobstructed walking routes; and quick and convenient services located street-side;*
- *Over- or underpass walkway between the Central Business District and City-owned Busi Parking Lot; and*
- *Bicycle lanes along new or reconstructed arterial and collector routes in, or adjacent to, the City, wherever possible.*

CIRC-6b: Implement and build on recommendations for pedestrian and bicycle improvements included in the Amador Countywide Pedestrian and Bicycle Plan (2017).

CIRC-6c: Work with appropriate agencies to implement a regional bikeway system that connects the City to other communities, recreation destinations, and scenic areas in Amador County.

CIRC-6d: Pursue funding for construction and maintenance of bikeways and sidewalks, including off-road bikeways, where feasible.

CIRC-6e: Add planned bicycle and pedestrian facilities in conjunction with road rehabilitation, reconstruction, or re-striping projects whenever feasible.

CIRC-8a: Adopt VMT thresholds and screening criteria for environmental impact analysis. Review and update those guidelines on a regular basis using updated data.

CIRC-8b: Explore the feasibility of a VMT impact fee program to fund transportation demand management (TDM) strategies that are proven to reduce VMT.

CIRC-8c: Require proposed development projects that could have a potentially significant VMT impact to consider reasonable and feasible project modifications and other measures during the project design and environmental review stage of project development that would reduce VMT effects in a manner consistent with state guidance on VMT reduction.

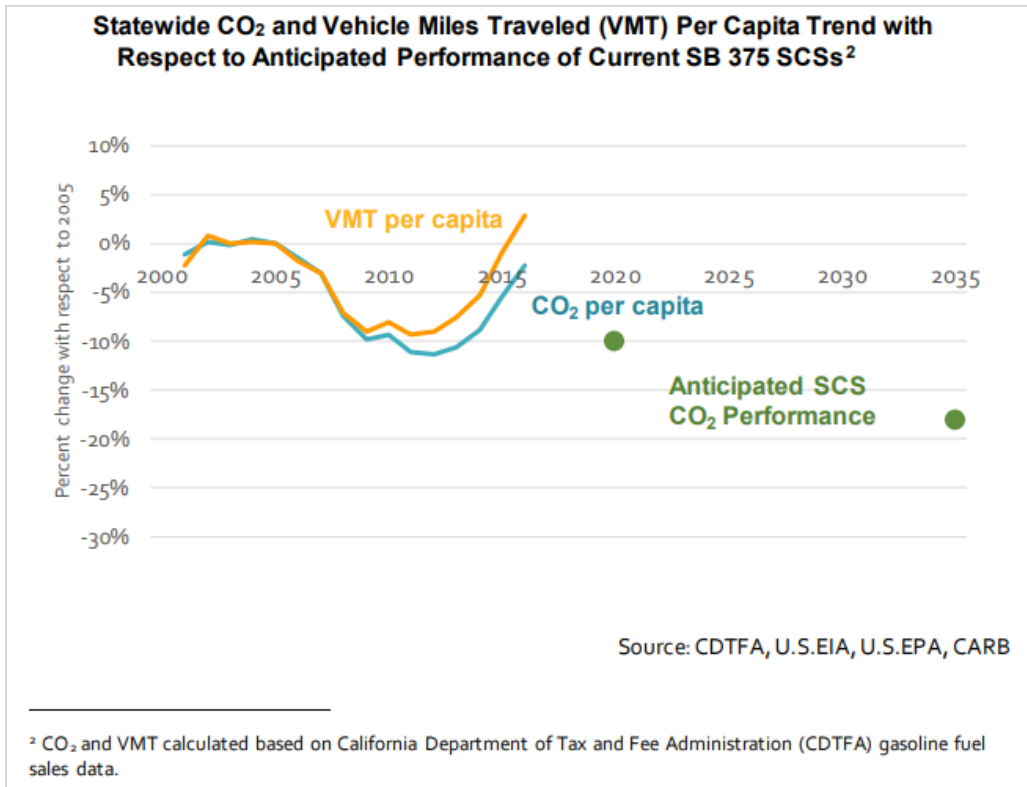
While these policies are supportive of actions that could dampen VMT growth, they do not contain sufficient changes to the built environment, the cost of using vehicles, or the convenience of using vehicles such that VMT per dwelling unit or employee would be reduced below existing levels. When making a final VMT impact determination, other available evidence related to VMT trends should be also be considered. This impact analysis identified the following two relevant studies.

- *2018 Progress Report, California's Sustainable Communities and Climate Protection Act, California Air Resources Board, November 2018 (referred to as the Progress Report in the remainder of this document).*
- *California Air Resources Board Improved Program Measurement Would Help California Work More Strategically to Meet Its Climate Change Goals, Auditor of the State of California, February 2021 (referred to as the Audit Report in the remainder of this document).*

3.14 TRANSPORTATION AND CIRCULATION

The Progress Report measures the effect of SB 375 revealing that VMT and GHG per capita increased in California between 2010 and 2016 and are trending upward (see Chart 3.14-1 below).

CHART 3.14-1: VMT/CAPITA TRENDS



The Audit Report is a more recent assessment of ARB's GHG reduction programs, which also found that VMT and its associated GHG emissions were trending upward through 2018. Per the audit, the state is not on track to achieve 2030 GHG reduction goals, and emissions from transportation have not been declining. This finding is reaffirmed by the 2022 Scoping Plan.

The evidence suggests greater action on the part of the state may be needed to achieve the state's GHG (and VMT) reduction goals. Without further action by the state to discourage vehicle travel (i.e., increasing the cost of driving) while reducing the barriers or constraints that prevent more efficient use of vehicles and greater use of transit, walking, and bicycling, VMT trends are unlikely to reverse.

Therefore, this impact is considered **potentially significant**.

MITIGATION/MINIMIZATION

Potential VMT reduction strategies contained in the *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity* (California Air Pollution Control Officers Association, 2021) were reviewed for potential application to the updated general plan. The effectiveness of many of these strategies in a rural/suburban setting would diminish because of the long trip distances between land uses and limited availability of non-

auto modes. Further, the land use element is reflective of the city's desired land use pattern to accomplish other objectives of the general plan and to reflect the market realities of land use development demand in the city. Nevertheless, some of these strategies will be nonetheless applicable at the project site scale under the general categories of land use changes, trip reduction programs, parking pricing/management, and clean vehicles/fuels improvements. Policy CIRC-8c would require proposed development projects with potentially significant VMT impacts to consider reasonable and feasible project modifications and other measures to reduce their VMT impacts. This would help lessen VMT growth but not to a level sufficient to reduce this impact to less than significant.

CONCLUSION

The implementation of the proposed General Plan would likely contribute to land use development that generates VMT per dwelling unit or employee in excess of the levels necessary to meet State GHG reduction goals. Consistent with Policy CIRC-8c, the city will require new land use development projects to reduce VMT through feasible CAPCOA on-site VMT reduction strategies. Although larger changes in the proposed General Plan land use element could potentially reduce VMT further, those changes would also affect the achievement of other goals the City seeks to achieve with the General Plan. VMT reduction also depends on factors such as demographic change, household preferences for housing types and locations, the cost of fuel, and the competitiveness of regional transit relative to driving, which relates to congestion along vehicular commute routes that are not under the City's jurisdiction. Therefore, this impact is considered ***significant and unavoidable***.

This impact finding will generally govern future development projects consistent with the general plan. As such, the city plans to rely on CEQA Section 15183 to relieve subsequent, consistent land use projects of having to perform new VMT analysis. Instead, the city will require project developers to identify feasible CAPCOA on-site VMT reduction strategies to incorporate into the project design to lessen VMT growth.

Impact 3.14-2: General Plan implementation may conflict with a program, plan, policy, or ordinance addressing the circulation system, including transit, bicycle, and pedestrian facilities (Less than Significant).

Implementation of the proposed general plan will not result in modifications to the transit, bicycle, or pedestrian network that would disrupt existing facilities/services or interfere with the implementation of planned facilities/services contained in adopted programs, plans, policies, or ordinances.

Several policies, including CIRC-6.1 “Implement best practices to improve the pedestrian and bicycle environment” and CIRC-6.9 “To encourage biking and walking, provide amenities including pedestrian-scale lighting, bicycle parking, shade trees, and landscaping” will help facilitate the development of improved facilities for walking and bicycling. Several different policies are geared toward improving the quality of transit service and facilities.

Implementation of the proposed general plan would enable the City to improve bicycle and pedestrian programs and infrastructure consistent with the Amador Countywide Pedestrian and Bicycle Plan. The proposed general plan also contains additional policies and implementing actions that support accessibility and the provision of amenities to bicyclists and pedestrians (applicable policies and implementing actions are listed below).

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS**CIRCULATION ELEMENT POLICIES**

CIRC 1.1: *The City shall strive to alleviate parking and congestion problems in the CBD.*

CIRC 1.3: *The City shall work with business owners and merchants to provide improvements to parking and circulation within the CBD.*

CIRC 2.2: *The City shall require that new development projects having the potential to adversely affect the transportation be required to prepare a multi-modal transportation impact study.*

Traffic impact studies shall include recommended improvements intended to help maintain the City’s adopted LOS standards under near-term and cumulative conditions consistent with State laws concerning “nexus” and “rough proportionality.” Such studies shall also address the project’s impacts and proposed mitigation measures as they directly relate to all other policies in this Circulation Element.

CIRC 2.3: *The City shall require that new development’s internal circulation plans include provisions for pedestrians, bicycles, automobiles, parking, and bus facilities as well as Neighborhood Electric Vehicles (NEVs), if deemed feasible and beneficial, consistent with separately adopted alternative transportation plans and/or guidelines.*

CIRC 2.4: *The City shall require that rights-of-way be sufficient to ensure adequate area for future expansion to accommodate long-range planning options shown in the Circulation Diagram (Figure CIRC-1).*

CIRC 2.6: *Shuttle service shall be utilized wherever feasible during special events/activities to effectively minimize circulation conflicts.*

CIRC 2.9: *New development circulation plans shall be in conformance with the General Plan's goals and policies, the Circulation Element map, City codes and adopted standards.*

CIRC 5.2: *The City shall require new development to construct or contribute financially for transit facilities, as deemed necessary, for purposes of public convenience and fuel conservation, and to ensure transportation for the elderly and disabled.*

CIRC 5.4: *The City shall actively promote the use of transit during special community events.*

CIRC 5.5: *The City shall encourage the design of public and private outdoor seating to double as bus stop seating, where appropriate.*

CIRC 6.1: *The City shall implement best practices to improve the pedestrian and bicycle environment.*

CIRC 6.2: *The City shall construct sidewalks or pedestrian walkways along Highways 49 and 88.*

CIRC 6.3: *The City shall continue to require new development to construct sidewalks or meandering walkways along all street perimeters.*

CIRC 6.4: *The City shall promote use of walking routes, walkways, and hiking trails.*

CIRC 6.5: *The City shall encourage businesses to shelter sidewalks through the use of awnings and increased outdoor seating.*

CIRC 6.6: *The City shall encourage walking tours throughout the City through the use of signage designating points of interest.*

CIRC 6.7: *The City shall eliminate barriers to bicycle traffic within selected areas.*

CIRC 6.8: *Bicycle lanes shall be constructed along new or reconstructed arterial and collector routes in, or adjacent to, the City, wherever possible.*

CIRC 6.9: *The City shall require new development to construct bicycle routes and/or provide secure facilities (i.e. bike racks), where feasible. To encourage biking and walking, provide amenities including pedestrian-scale lighting, bicycle parking, shade trees, and landscaping.*

CIRC 6.10: *The City shall encourage existing businesses and employers to provide bicycle storage and lockers in order to promote bicycle commuter travel.*

CIRC 6.11: *The City shall promote bicycle safety awareness and the responsibilities of cyclists.*

CIRC 6.12: *The City shall continue to encourage the coordination of bicycle use with mass transit by equipping all buses with bicycle racks.*

CIRC 8.2: Encourage employers to provide programs for carpooling/transit/biking/walking subsidies, bicycle facilities, ridesharing, telecommuting, and working at/from home.

CIRCULATION ELEMENT ACTIONS

CIRC-1a: Continue to identify further parking and circulation improvements, including parking areas for CBD workers so as not to impede shopper and visitor parking.

CIRC-1b: Strictly enforce all applicable ordinances contained in the Municipal Code which will assist in implementing the Circulation Element. Review and revise ordinances where needed to facilitate implementation. The Parking Ordinance would implement the Element by facilitating visitor parking and by directing CBD workers to refrain from parking in vital Main Street parking spaces. Specifying restrictions regarding the delivery hours of trucks, etc. would further improve circulation.

CIRC-1c: Continue to expand the use of the Amador Transit to the Central Business District, including special events shuttle service during significant Main Street activities.

CIRC-2b: Review and revise roadway standards for community and rural areas to ensure that the standards are adequate to accommodate complete streets, addressing the following factors as applicable: number of travel lanes, lane width, medians, drainage control, shoulder width, pavement striping and markings, parking lanes, bike lanes, fire and emergency response standards, curb and gutter design, landscaped strip, and sidewalk width. Standards shall serve as evaluation criteria to determine whether development impacts on streets constrained by width, historic value, steepness or other factors exceed acceptable limits.

CIRC-2k: Coordinate with Amador County on the development of a Local Roadway Safety Plan (LRSP) with the goal of reducing traffic fatalities and serious injuries on public roads and to support funding for safety improvements. The plan may consider collision history; vehicle, bicycle, and pedestrian volumes; vehicle speeds; and other improvements.

CIRC-2l: Conduct environmental review of proposed development projects to assess the environmental impacts generated by the new development and identify needed mitigation measures.

CIRC-2n: Review, modify as necessary, and adopt the ACTC recommended Traffic Impact Study guidelines.

CIRC-2o: Develop a specific package of guidelines for consideration by developers when designing projects that will meet Jackson's vision, goals, and objectives. These guidelines should be based on a new development code.

CIRC-4a: The City shall strive to establish a continuous hike-and-bike system linking scenic/historic areas of Jackson.

CIRC-5a: Help to implement the countywide five-year Transit Development Plan which includes fixed route express service between Jackson, Martell, and Sutter Creek as well as Sacramento in addition to a separate schedule of deviated transit routes for seniors, youth, and

transportation of disadvantaged individuals. Also, help to implement the Transit Design Guidelines Manual when considering the designs of and locations for transit facilities in the City's plans or new land use development proposals.

CIRC-5b: Continue to expand the use of Amador Transit public transit service including special event shuttle service during significant Main Street activities.

CIRC-5c: Partner with Amador Transit and other regional transit providers to conduct regular service reviews to advance convenient transit service to employment centers, County and City service centers, other government centers, and regional destinations (i.e. Sacramento International Airport), as funding allows.

CIRC-5d: Enhance transit stops through high quality, well-maintained shelters and provide transit timetables.

CIRC-5e: Consider alternatives to conventional bus systems, such as smaller shuttle buses (micro-transit), on-demand transit services, or transportation networking company services that connect residential communities to regional activity centers with greater cost efficiency.

CIRC-6a: Work with ACTC to implement the Amador Countywide Pedestrian and Bicycle Transportation Plan, and Pedestrian and Bicycle Design Guidelines and Recommended Standards. The City should also hold public workshops to update and refine the City's part in the countywide plan to clarify or expand upon the City's specific pedestrian and/or bicycle needs. These may include:

- New roads to accommodate bicyclists and pedestrians;
- A designated bicycle route stop located along SR 49 in downtown Jackson to include such facilities as bike racks and lockers for storage;
- Pedestrian-actuated signal crossings at key locations such as Busi Municipal Parking Lot, French Bar Road, and Sutter Street;
- Parking facilities at trailheads; safe, well-lit, unobstructed walking routes; and quick and convenient services located street-side;
- Over- or underpass walkway between the Central Business District and City-owned Busi Parking Lot; and
- Bicycle lanes along new or reconstructed arterial and collector routes in, or adjacent to, the City, wherever possible.

CIRC-6b: Implement and build on recommendations for pedestrian and bicycle improvements included in the Amador Countywide Pedestrian and Bicycle Plan (2017).

CIRC-6c: Work with appropriate agencies to implement a regional bikeway system that connects the City to other communities, recreation destinations, and scenic areas in Amador County.

CIRC-6d: Pursue funding for construction and maintenance of bikeways and sidewalks, including off-road bikeways, where feasible.

CIRC-6e: Add planned bicycle and pedestrian facilities in conjunction with road rehabilitation, reconstruction, or re-striping projects whenever feasible.

CONCLUSION

Implementation of the proposed general plan will not disrupt existing transit, bicycle, or pedestrian facilities/services and its policies and actions listed above will help facilitate planned improvements such as those in the Amador Countywide Pedestrian and Bicycle Plan. Therefore, this impact is ***less than significant***.

Impact 3.14-3: General Plan implementation may increase hazards due to a design feature or incompatible uses (Less than Significant).

The proposed general plan would not require any modifications to the existing transportation system to comply with applicable design standards. These design standards are created to provide users common expectations when using the network and to minimize the potential for collisions. Further, the proposed land use map and policies below emphasize land use compatibility and prioritizing road safety, which would serve to reduce potential conflicts between users of the transportation system. Therefore, the proposed general plan would not substantially increase hazards due to a design feature or incompatible uses.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS**CIRCULATION ELEMENT POLICIES**

CIRC 1.1: *The City shall strive to alleviate parking and congestion problems in the CBD.*

CIRC 1.2: *The City shall facilitate visitor access to the CBD to the greatest extent feasible.*

CIRC 1.3: *The City shall work with business owners and merchants to provide improvements to parking and circulation within the CBD.*

CIRC 2.5: *All road facilities shall be constructed or upgraded to current design standards where practical and feasible.*

CIRC 2.7: *New development plans which generate a direct need for new off-site roadways, road widening or upgraded intersection improvements, traffic controls or other similar improvements shall be required to construct the needed improvements to City standards as part of project approval and construction.*

CIRC 2.9: *New development circulation plans shall be in conformance with the General Plan's goals and policies, the Circulation Element map, City codes and adopted standards.*

CIRC 3.1: *The City shall restrict truck delivery activities from taking place during peak hours by encouraging businesses to do the majority of their shipping and receiving before or after normal business hours.*

CIRC 3.2: *The City shall direct through-truck traffic to specific major roads in order to maintain public safety and local quality of life.*

CIRC 3.3: *The City shall direct local truck traffic to specific roads in order to maintain public safety and local quality of life.*

CIRC 3.4: *The City shall minimize potential conflicts between trucks and pedestrian, bicycle, transit, and vehicle access and circulation on streets with truck travel.*

CIRC 6.1: *The City shall implement best practices to improve the pedestrian and bicycle environment.*

CIRC 6.3: *The City shall continue to require new development to construct sidewalks or meandering walkways along all street perimeters.*

CIRC 6.4: *The City shall promote use of walking routes, walkways, and hiking trails.*

CIRC 6.5: *The City shall encourage businesses to shelter sidewalks through the use of awnings and increased outdoor seating.*

CIRC 6.7: *The City shall eliminate barriers to bicycle traffic within selected areas.*

CIRC 6.8: *Bicycle lanes shall be constructed along new or reconstructed arterial and collector routes in, or adjacent to, the City, wherever possible.*

CIRC 6.11: *The City shall promote bicycle safety awareness and the responsibilities of cyclists.*

CIRC 7.1: *All development projects proposed within the Westover Field airport overflight zone or specific safety zones shall be in compliance with the Airport Land Use Plan.*

CIRCULATION ELEMENT ACTIONS

CIRC-1a: *Continue to identify further parking and circulation improvements, including parking areas for CBD workers so as not to impede shopper and visitor parking.*

CIRC-1b: *Strictly enforce all applicable ordinances contained in the Municipal Code which will assist in implementing the Circulation Element. Review and revise ordinances where needed to facilitate implementation. The Parking Ordinance would implement the Element by facilitating visitor parking and by directing CBD workers to refrain from parking in vital Main Street parking spaces. Specifying restrictions regarding the delivery hours of trucks, etc. would further improve circulation.*

CIRC-2c: *Refer all development proposals to City staff to identify needed improvements for each project. Standards included in, but not limited to, the Land Use Element, Zoning Ordinance, Subdivision Ordinance, and Road Design Standards will be used as evaluation criteria.*

CIRC-2e: *Request Caltrans to complete preparation of signal warrant studies for un-signalized intersections on Highways 49 and 88 through the City.*

CIRC-2k: *Coordinate with Amador County on the development of a Local Roadway Safety Plan (LRSP) with the goal of reducing traffic fatalities and serious injuries on public roads and to support funding for safety improvements. The plan may consider collision history; vehicle, bicycle, and pedestrian volumes; vehicle speeds; and other improvements.*

CIRC-2o: *Develop a specific package of guidelines for consideration by developers when designing projects that will meet Jackson's vision, goals, and objectives. These guidelines should be based on a new development code.*

CIRC-2p: *Continue efforts to find a long-range solution to projected future Jackson Highway corridor congestion.*

CIRC-2g: *The City of Jackson shall coordinate with the County and ACTC to ensure that all necessary roadway and intersection improvements within the City and its SOI are addressed in all updates to the Amador County Regional Transportation Plan.*

CIRC-3a: *Truck routing would be aided by Chapter 10.20 of the Municipal Code – Vehicle Weight Restrictions – which includes statutory provisions regarding the authority of the City to prohibit the use of certain streets and bridges by any commercial vehicle or by any vehicle exceeding a maximum specific weight in accordance with California Vehicle Code (CVC) Section 35701 (Note: Section 10.20.010 of this chapter designates a truck route for weight-restricted vehicles.)*

CIRC-3b: *Prominently sign all truck routes and routes that prohibit trucks or have weight restrictions in accordance with the California Manual on Uniform Traffic Control Devices (MUTCD).*

CIRC-7a: *Apply the policies and standards specified in the Airport Land Use Plan to new development projects during the development review process.*

CIRC-7b: *Encourage Amador County to pursue state and federal aeronautics funds to support improvements to airport facilities and service.*

CONCLUSION

Any transportation network modifications associated with the general plan will comply with applicable design standards and the proposed general plan's policies and actions related to land use, circulation, and safety. The combination of these standards, policies, and actions is to reduce the potential for future collisions and to decrease the potential harm to people when traveling. Therefore, this impact is considered ***less than significant***.

Impact 3.14-4: General Plan implementation may cause inadequate emergency access (Less than Significant).

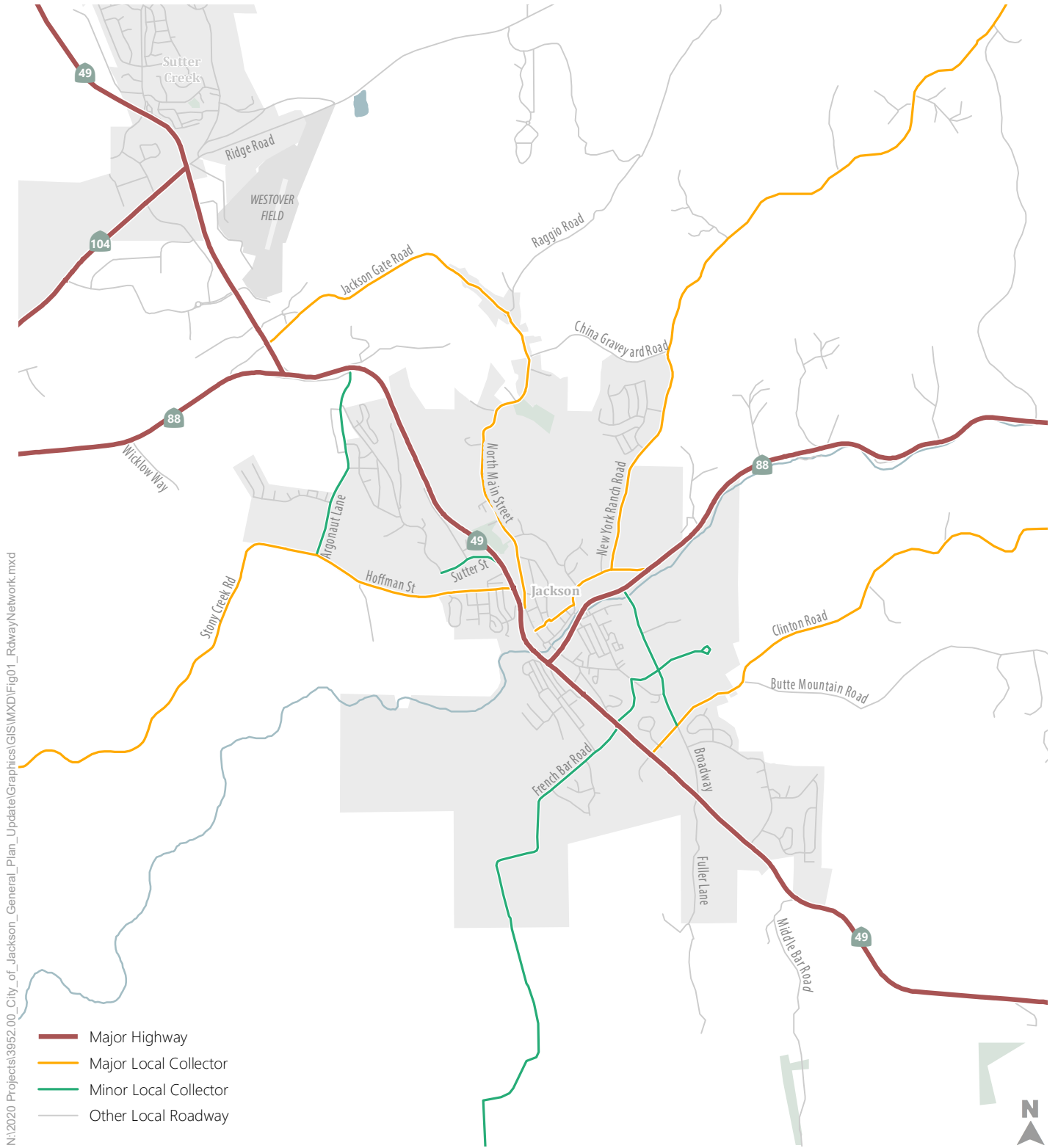
Emergency access to individual land use parcels is typically assessed at the project level and the proposed general plan contains policies and actions (listed below) to address the needs of emergency responders and requires consultation with the fire and police departments during development review. Within Jackson, two fire stations exist, one of the north end of the City and one in downtown. Amador Fire also provides fire protection in area, with Station 116 located off New York Ranch Road adjacent to Jackson Rancheria. Sutter Amador Hospital, which includes urgent care services is located within the City of Jackson on Mission Boulevard. For larger area responses, the proposed general plan relies on close coordination and support with local and regional agencies. Amador County maintains an Emergency Operations Plan (EOP) and it provides the overall emergency response framework for an integrated response within the County and the incorporated cities. The proposed general plan would not interfere or create inconsistencies with this plan, but the plan's population and employment growth could require updates or modifications to this plan over time.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

While it is possible that increased development under the general plan would increase traffic and delays that could affect emergency response and evacuation times, following the plan policies and actions listed above should provide for adequate service. Therefore, this impact is **less than significant**.

CONCLUSION

The proposed general plan policies and actions should not result in a change or deterioration of emergency access and response times given the population and employment growth projected in the City of Jackson. Therefore, this impact is considered **less than significant**.



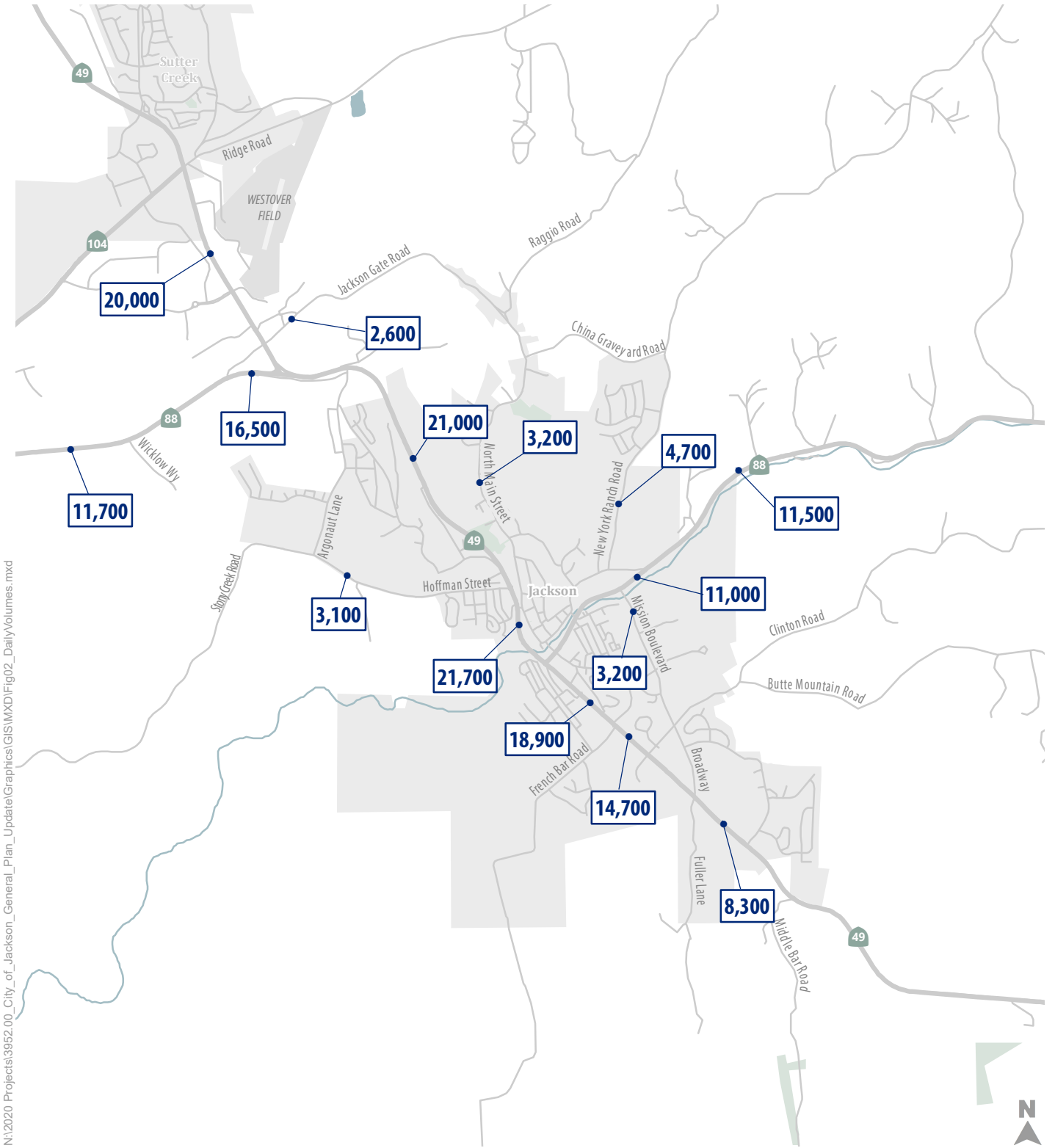
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Figure 3.14-1

Roadway Network



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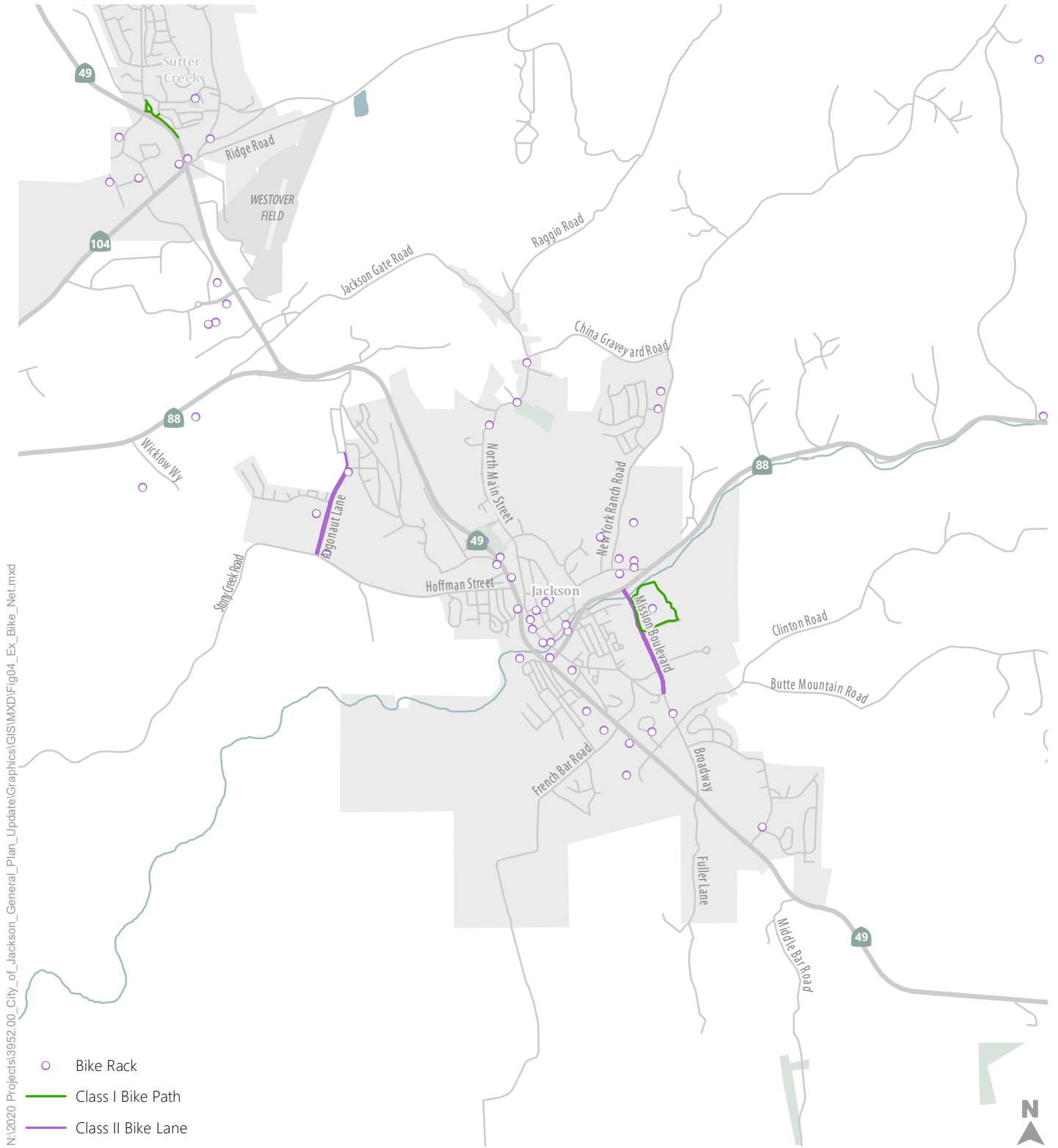
X,XXX Average Daily Traffic Volume



Figure 3.14-2

Average Daily Traffic Volumes

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Figure 3.14-3

Existing Bicycle Network



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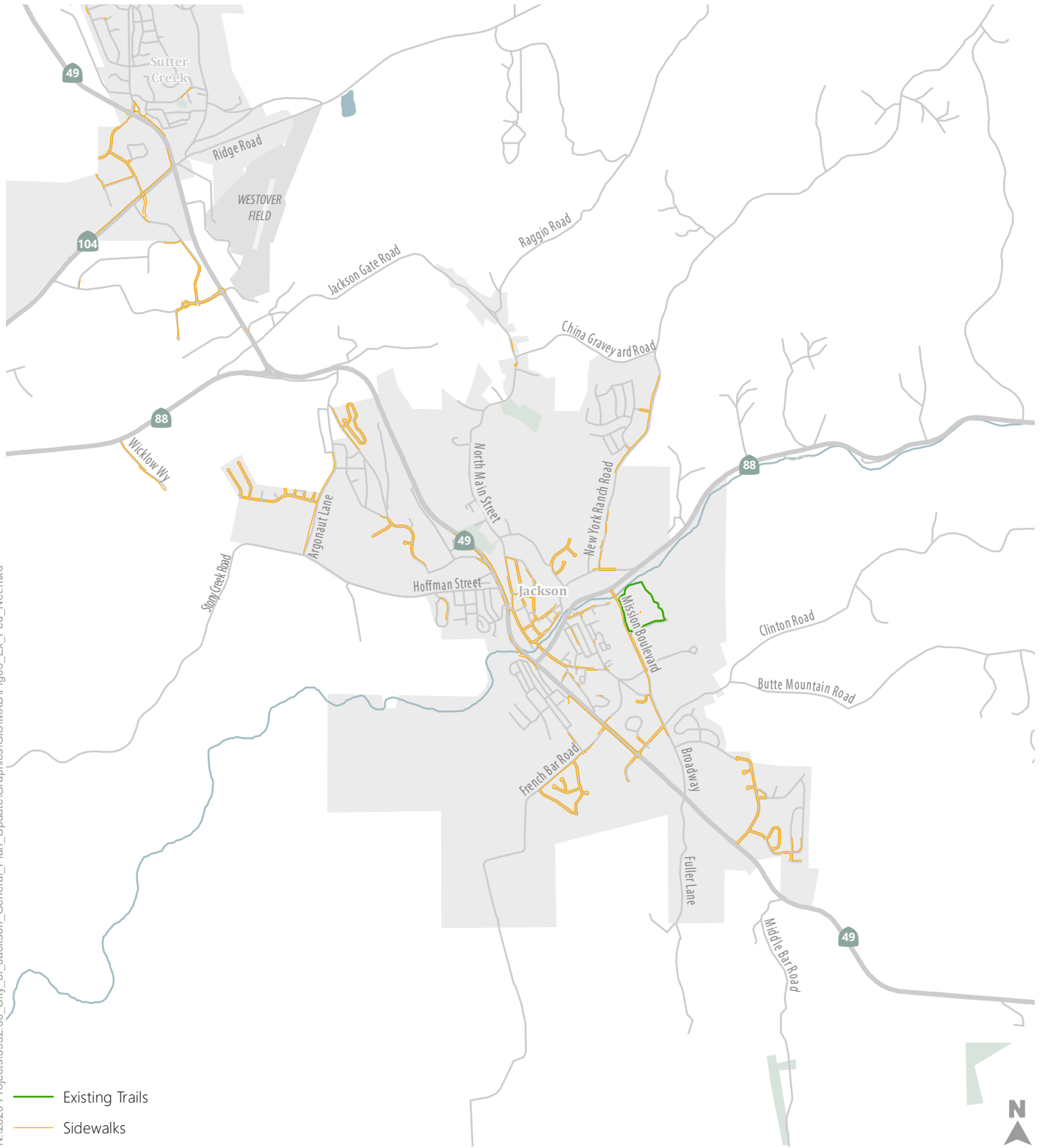


Figure 3.14-4

Existing Pedestrian Network

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Utilities are critical to providing safe drinking water, disposal and treatment of wastewater, stormwater drainage, and solid waste disposal. This section provides a background discussion of the utility systems in Jackson including water supplies, wastewater, storm drainage, and solid waste. This section is organized with an existing setting, regulatory setting, and impact analysis.

No comments were received during the NOP comment period regarding this environmental topic.

3.15.1 WATER SUPPLIES

KEY TERMS

Acre feet: The volume of one acre of water to a depth of one foot. Each acre-foot of water is equal to approximately 325,851.4 gallons.

BGS: Below ground surface.

GPD: Gallons per day.

GPM: Gallons per minute.

Groundwater: Water that is underground and below the water table, as opposed to surface water, which flows across the ground surface. Water beneath the earth's surface fills the spaces in soil, gravel, or rock formations. Pockets of groundwater are often called "aquifers" and are the source of drinking water for a large percentage of the population in the United States. Groundwater is often extracted using wells which pump the water out of the ground and up to the surface. Groundwater is naturally replenished by surface water from precipitation, streams, and rivers when this recharge reaches the water table.

MG: Million gallons

MGD: Million gallons per day

Surface water: Water collected on the ground or from a stream, river, lake, wetland, or ocean. Surface water is replenished naturally through precipitation, but is lost naturally through evaporation and seepage into soil.

POTABLE WATER SYSTEM

The City of Jackson is located in the San Joaquin River Hydrologic Region which is primarily an agricultural area.

The City of Jackson's water service area is greater than the city boundary. It purchases treated water from the Amador Water Agency (AWA), and owns its own distribution system that serves the city and some of the Martell area. Utility service areas are shown on Figure 3.15-1.

AWA was formed in 1959 for the purpose of providing water and wastewater services to the residents of Amador County. The Agency has four general service areas: the AWS (Amador Water

3.15 UTILITIES AND SERVICE SYSTEMS

System), the Central Amador Water Project (CAWP) System, La Mel Heights, and Lake Camanche Village. The City of Jackson is located in the AWS water system. The AWS was formerly owned and operated by Pacific Gas and Electric Company (PG&E) and currently serves all five cities in Amador County, including the areas of Jackson, Martell, Sutter Creek, Sutter Hill, Lone, Amador City, Plymouth and Drytown. The Agency has two water treatment plants at Sutter Hill and Lone, but also serves raw (untreated) water from the Amador Canal to customers between Lake Tabeaud and Sutter Hill, and Sutter Hill and Lone.

Amador County is expected to have a 2040 population of approximately 44,200 people, an increase of 20% from its 2015 population of 37,000 (AWA 2016). The Agency currently provides retail service to a population of approximately 13,868 people through 6,511 retail residential water service connections. The Board of Directors is comprised of five members elected by the citizens within districts that mirror the Amador County Board of Supervisor districts. The Agency is the main water purveyor for residential and commercial use in Amador County and has the legal jurisdiction to serve water throughout Amador County. The Agency's primary source of water is the Mokelumne River watershed which supplies the primary water systems of the AWS and the CAWP. Lake Camanche Village and La Mel Heights are served through groundwater. There are a total of 6,933 water service connections in the Agency's service area, not including wholesale entity customers and their customer connections.

City of Jackson Distribution System

The City of Jackson Water Department (CJWD) provides water distribution services in the City of Jackson. Customers not receiving water from the City generally receive water through private wells. The CJWD purchases its water supply from AWA which provides the CJWD with treated water from the Tanner Water Treatment Plant (TWTP). After leaving the AWA's Tanner Reservoir, the water destined for the City of Jackson is treated at the TWTP and conveyed to one of two storage facilities owned by the City: the Martell Reservoir or the Scottsville Tank. The Martell Reservoir is at the north end of Jackson and is near the entry point for incoming water from the AWA. The Martell Reservoir provides the majority of the City's water and has a capacity of 1.3 million gallons and an overflow elevation of 1,668 ft. The Scottsville tank is near the southern limit of the City system, located east and uphill from the end of Scottsville Boulevard, east of SR-49. The Scottsville Tank has a capacity of 250,000 gallons and an overflow elevation of 1,430 ft. The Scottsville tank serves primarily as a supply for fire suppression as well as a pressure regulating apparatus for the City's water conveyance system. The City's water system is divided into eight pressure zones. Four zones are fed by gravity and four are fed by booster stations.

The City's Department of Water Resources carefully monitors the City's transmission line, reservoirs and maintains the City-wide distribution system. This includes maintaining water mains, fire hydrants, valves, and water services from mains to individual meter boxes; issuing construction water permits; installation of services, and 24 hours-a-day, seven days-a-week standby for emergencies. Staff also maintains and replaces meters for approximately 2,200 water service accounts. The City routinely conducts water quality monitoring including testing and analysis for bacteria, chlorine residual, pH, and other elements. Since 2014, the City has been investing in the efforts to digitalize water distribution system and sewer collection system. As of the end of 2022,

both systems have been integrated into the Geographic Information System (GIS). Field employees can access information remotely. This has been a very useful tool for maintenance, customer service and asset management.

Water fund revenues have been invested in significant improvements to the water system infrastructure over the past few years and a five year Capital Improvement Program is adopted by the City Council with each budget to protect this investment. Major water distribution projects completed in recent years have included replacement of approximately 1800’ of 10” and 12” steel mains which used to feed town from the clear well reservoir with one 16” c905 Main. Smaller CIP projects have consisted of a main replacement on Eva Street and Sutter Street which replaced a smaller steel mains with larger C900 mains and added fire protection to the area, and the replacement of a problematic hydro pneumatic tank at one of the booster stations. The City also implemented a multi-year meter replacement plan which upon completion, all meters will be radio-read. This will greatly improve productivity and the safety of field employees. As of 2023, 50% of the meters have been changed to radio-read.

Water Supplies & Reliability

Supply projections for all multiple-dry year scenarios are the same as for a normal year as the Agency has not experienced a reduction in available supplies, even in multiple-dry year periods. Demand projections are also the same as a normal year for the first two years of a drought. However, demands are expected to decrease by 25 percent in the third year of the drought. This pattern mimics the recent 2013 to 2015 drought, where mandatory restrictions were not enforced until the third year of the drought, in which the Agency declared a Water Warning and required 25 percent water use reductions for its customers in response to state- wide cutback mandates. As shown in Table 3.15-1, the Agency expects to have adequate supplies to fully meet demand for future multiple-dry years.

TABLE 3.15-1 MULTIPLE-DRY YEARS - PROJECTED

USE TYPE	PROJECTED WATER USE (AF)				
	2020	2025	2030	2035	2040
First year	18,343	18,884	18,884	18,884	18,884
Second Year	18,343	18,884	18,884	18,884	18,884
Third Year	18,343	18,884	18,884	18,884	18,884

NOTES: FIRST TWO YEARS OF DROUGHT HAVE NORMAL SUPPLY AND DEMAND, WHILE THE THIRD YEAR OF DROUGHT HAS 25% REDUCTION IN DEMAND (REFLECTING CUTBACKS THAT OCCURRED DURING THE RECENT 2013-2015 DROUGHT).

SOURCE: AMADOR WATER AGENCY 2015 URBAN WATER MANAGEMENT PLAN TABLE 4-5

The Agency’s supply reliability for normal years, single-dry years, and multiple-dry years is shown in Table 3.15-2.

TABLE 3.15-2 WATER RELIABILITY

3.15 UTILITIES AND SERVICE SYSTEMS

YEAR TYPE	BASE YEAR	AVAILABLE SUPPLIES IF YEAR TYPE REPEATS
		% of Average Supply
Average Year	2010	100%
Single-Dry year	1977	100%
Multiple-Dry Years 1st Year	1988	100%
Multiple-Dry Years 2 nd Year	1989	100%
Multiple-Dry Years 3 rd Year	1990	100%

NOTES: FIRST TWO YEARS OF DROUGHT HAVE NORMAL SUPPLY AND DEMAND, WHILE THE THIRD YEAR OF DROUGHT HAS 25% REDUCTION IN DEMAND (REFLECTING CUTBACKS THAT OCCURRED DURING THE RECENT 2013-2015 DROUGHT).

SOURCE: AMADOR WATER AGENCY 2015 URBAN WATER MANAGEMENT PLAN TABLE 4-5

An analysis of reservoir storage data from DWR's California Data Exchange Center (CDEC) for the Mokelumne River Watershed, including data for Camanche, Pardee, Lower Bear, and Salt Springs Reservoirs, was performed to determine the driest single year and consecutive three year periods. The analysis showed that 1977 was the single driest year on record, and the period from 1988 to 1990 was the driest three-year period on record; therefore, these years are used as the base years to determine the amount of water available during single-dry and multiple-dry year scenarios. Because the Agency's AWS full water supply entitlement has never been curtailed and the adequacy of the CAWP storage, 100 percent of supply would be available for each of these years.

Water Demands

It is assumed that average water use per connection will remain the same over time, while population in the Agency service area will continue to grow. Thus, the 2008-2012 average demand per connection by use type was multiplied by the projected number of connections to result in a total projected demand by use type for 2020 through 2040. The resulting projected water use by type is presented in Table 3.15-3.

TABLE 3.15-3 RETAIL: DEMANDS FOR POTABLE AND RAW WATER - PROJECTED

USE TYPE	PROJECTED WATER USE (AF)				
	2020	2025	2030	2035	2040
Single Family	2,576	2,780	2,984	3,148	3,313
Multi-Family	192	207	222	234	247
Commercial	1,268	1,368	1,468	1,549	1,630
Sales/Transfers/Exchanges to other agencies	1,617	1,745	1,873	1,977	2,080
Industrial	401	432	464	490	515
Agricultural irrigation	330	356	382	403	424
Losses	3,494	3,547	3,600	3,643	3,686
Total	9,878	10,435	10,993	11,444	11,895

NOTES: RAW AND DRINKING WATER USE HAS BEEN COMBINED FOR PROJECTIONS, AS SOME RAW WATER CUSTOMERS MAY BE SERVED DRINKING WATER IN THE FUTURE AND THE TIMING OF THIS TRANSITION IS UNCERTAIN.

SOURCE: AMADOR WATER AGENCY 2015 URBAN WATER MANAGEMENT PLAN TABLE 4-5

As described in the UWMP the projected supply and demand totals match. The reasonably available volume of water supply is anticipated to match demands through 2040 in each water

year. Water supply and demand patterns change during normal, single dry, and multi dry years. AWA has relied on the demand modeling described to forecast demands for normal, single dry and multiple dry years. As described in the UWMP, it is assumed that AWA's water supply for the City of Jackson will be able to serve those demands.

WATER SYSTEM SUPPLIES

Amador Water System

The City of Jackson is serviced by the AWS of the AWA. The AWS receives water from the Mokelumne River via Lake Tabeaud. The AWS delivery system consists of approximately 120 miles of water main piping for potable water customers and 24 miles of conveyance canals for untreated water customers. The Agency supplies both raw and treated water to customers in the AWS. Treated water supplied to AWS customers comes from the Lone Water Treatment Plant located in Lone or the Tanner Water Treatment Plant located in Sutter Creek. The service area covers over 450 square miles and serves the communities of Amador City, Lone, Sutter Creek, Sutter Hill, Martell, and their vicinities, and portions of Ridge Road and New York Ranch Road on a retail basis. The Agency also provides wholesale water through the AWS to the communities of Jackson, Plymouth and Drytown. In addition, the system also supplies raw water for agricultural, industrial, commercial and domestic irrigation needs to both public facilities and individual raw water customers. In 2007, the Agency began operating the Amador Transmission Waterline, a gravity pipeline which transports raw water from Lake Tabeaud to the Tanner Water Treatment Plant located in Sutter Hill. Compared to the primarily earthen Amador Canal, this pipeline conserves approximately 25 percent of water diverted from Lake Tabeaud.

Surface Water Supplies

Surface water accounts for approximately 96 percent of the Agency's total water supply. Surface water is the sole supply source for both the AWS and the CAWP and is obtained from the Mokelumne River watershed. The Mokelumne River watershed is located on the Agency's southern boundary with the headwaters in parts of Amador, Alpine, El Dorado and Calaveras counties. The majority of flow is derived from snowmelt. The watershed ranges from peak elevations of approximately 10,000 feet above Mean Sea Level (MSL) at the Pacific Crest, down to 580 feet above MSL at Pardee Reservoir. The Mokelumne watershed upstream from Pardee Reservoir is approximately 578 square miles in extent.

The watershed above Pardee Reservoir is mostly protected and undeveloped, with a large portion located in the Mokelumne Wilderness. Many tributaries flow into the Mokelumne River before it reaches Pardee Reservoir. Reservoirs in the higher portions of the watershed include Lower Bear and Salt Springs, both owned by Pacific Gas & Electric Company (PG&E). Upstream hydropower facilities owned and operated by PG&E include diversion tunnels and regulating reservoirs, with most of the diverted flow released back into the river system. Pardee Reservoir and its downstream companion, Lake Camanche, are owned and operated by the EBMUD. Pardee Reservoir is operated for water supply and in stream requirements and Lake Camanche is operated for water supply, flood control, and in stream requirements.

The Agency is looking to increase Mokelumne River supplies through storage and regional collaboration efforts. The MAC IRWM region joined with the Eastern San Joaquin IRWM Region to create the MokeWISE program to develop and evaluate alternatives to optimize water resources management within the Mokelumne River watershed. This program aims to sustainably manage surface water in the region to provide interregional water supply, water quality and environmental benefits.

As mentioned above, the Agency acquired the AWS from PG&E and the contractual right of up to 15,000 AFY diverted at a rate not to exceed 30 cubic feet per second (cfs). PG&E had been the major owner and operator for the purveyance of water in western Amador County since 1908. AWS receives water from the Mokelumne River via Lake Tabeaud and provides water service on a retail basis to the communities of Sutter Creek, Amador City, Martell, Lone and vicinities. The Agency provides wholesale water through the AWS to the communities of Jackson, Plymouth, and Drytown. In addition, the system supplies raw water via the Amador Canal and Lone pipeline for agricultural, industrial, commercial and domestic irrigation needs to both public facilities and individual raw water customers.

The AWA's 15,000 AFY water supply for the AWS represents a "safe yield" because of the AWA's pre-1914 appropriative water rights, which support water diversions and storage for such systems.

Groundwater Supplies

Groundwater accounts for approximately four percent of the AWA's total supply and is only used in the communities of La Mel Heights and Lake Camanche Village. The majority of available groundwater is transient and found in fractured rock.

Stormwater Supplies

Stormwater is not currently used as a source of water for the Agency and it is not a planned source of water for the horizon of the UWMP.

Wastewater and Recycled Water

Wastewater

While the Agency has several small wastewater collection and treatment systems, the two largest wastewater treatment plants in the Agency's service area are owned and operated by the City of Sutter Creek and the City of Jackson. The City of Sutter Creek's treatment plant collects wastewater from Amador City, the City of Sutter Creek, and Martell. The wastewater treatment plants operated by the cities of Plymouth, Jackson, and Lone collect and treat wastewater from their respective cities. The Amador Regional Sanitation Authority (ARSA) is a joint powers authority comprised of the City of Sutter Creek, Amador City, and Amador County. ARSA provides distribution from the Sutter Creek Waste Water Treatment Plant (WWTP) to either the City of Lone's tertiary treatment plant (Castle Oaks Reclamation Plant), or to the City of Lone's secondary treatment plant (ponds). These service providers were consulted during the preparation of the *Regional Approach for Reuse Study*.

The Reuse Study identifies other potential stakeholders in the service area, including governmental entities, cities, and non-governmental agencies. Potential reuse costumers, including a golf course, parks, schools, and retail outlets located near Jackson, Sutter Creek, and Martell, were also identified.

Although the Agency currently owns, operates and maintains eleven geographically separate wastewater management systems throughout Amador County, none of the systems currently recycle water directly to reduce raw or potable water demands. Eight of the eleven systems are community leach field systems, while two systems treat wastewater to a secondary level that is then applied to land for disposal, and the last system is a collection only system that contracts for treatment and disposal. Most of these systems produce such limited quantities of wastewater or are so removed from reuse opportunities as to make recycling both inefficient and cost prohibitive. The Agency does, however, currently collect (but not treat) a significant quantity of wastewater in the Martell area of Amador County, which is immediately adjacent to the two other wastewater treatment purveyors, the cities of Sutter Creek and Jackson. Wastewater from the Martell system is processed under contract with the City of Sutter Creek and then through the ARSA system to the City of Lone, where the recycled water is further treated and used on the Castle Oaks Golf Course.

Recycled Water

Currently, the Agency does not produce any recycled or reclaimed water at any of its wastewater treatment plants due to economic and technical feasibility issues. However, in the future, the Agency anticipates development of a regional reclaimed water supply to offset raw and potable water demands through uses such as, but not limited to, agricultural irrigation, commercial landscape irrigation, construction water, industrial process water, and recreational impoundments. The Agency initiated a study in 2015 that will consider treating a portion of Lake Camanche Village's wastewater for agricultural and future residential landscape use.

Currently, the only treated wastewater that meets recycled water standards within the Agency's service area is treated by the City of Lone at the Castle Oaks Water Reclamation Facility. This recycled water is applied to the Castle Oaks Golf Course for irrigation.

REGULATORY SETTING – WATER SUPPLIES

State

CALIFORNIA STATE WATER RESOURCE CONTROL BOARD

The State Water Resource Control Board, Division of Drinking Water, oversees the Drinking Water Program. The Drinking Water Program regulates public water systems and certifies drinking water treatment and distribution operators. It provides support for small water systems and for improving their technical, managerial, and financial capacity. It provides subsidized funding for water system improvements under the State Revolving Fund ("SRF") and Proposition 50 programs. The Drinking Water Program also oversees water recycling projects, permits water treatment

devices, supports and promotes water system security, and oversees the Drinking Water Treatment and Research Fund for MTBE and other oxygenates.

CALIFORNIA CODE OF REGULATIONS

California Code of Regulations (CCR) Title 22, Chapter 15, Article 20 requires all public water systems to prepare a Consumer Confidence Report for distribution to its customers and to the Department of Health Services. The Consumer Confidence Report provides information regarding the quality of potable water provided by the water system. It includes information on the sources of the water, any detected contaminants in the water, the maximum contaminants levels set by regulation, violations and actions taken to correct them, and opportunities for public participation in decisions that may affect the quality of the water provided.

CONSUMER CONFIDENCE REPORT REQUIREMENTS

CCR Title 22, Chapter 15, Article 20 requires all public water systems to prepare a Consumer Confidence Report for distribution to its customers and to the Department of Health Services. The Consumer Confidence Report provides information regarding the quality of potable water provided by the water system. It includes information on the sources of the water, any detected contaminants in the water, the maximum contaminant levels set by regulation, violations and actions taken to correct them, and opportunities for public participation in decisions that may affect the quality of the water provided.

URBAN WATER MANAGEMENT PLANNING ACT

The Urban Water Management Planning Act has as its objectives the management of urban water demands and the efficient use of urban water. Under its provisions, every urban water supplier is required to prepare and adopt an urban water management plan. An “urban water supplier” is a public or private water supplier that provides water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. The plan must identify and quantify the existing and planned sources of water available to the supplier, quantify the projected water use for a period of 20 years, and describe the supplier’s water demand management measures. The urban water supplier 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. The Department of Water Resources must receive a copy of an adopted urban water management plan.

SENATE BILL (SB) 610 AND ASSEMBLY BILL (AB) 901

The State Legislature passed SB 610 and AB 901 in 2001. Both measures modified the Urban Water Management Planning Act.

SB 610 requires additional information in an urban water management plan if groundwater is identified as a source of water available to an urban water supplier. It also requires that the plan include a description of all water supply projects and programs that may be undertaken to meet total projected water use. SB 610 requires a city or county that determines a project is subject to CEQA to identify any public water system that may supply water to the project and to request identified public water systems to prepare a specified water supply assessment. The assessment

must include, among other information, an identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and water received in prior years pursuant to these entitlements, rights, and contracts.

AB 901 requires an urban water management plan to include information, to the extent practicable, relating to the quality of existing sources of water available to an urban water supplier over given time periods. AB 901 also requires information on the manner in which water quality affects water management strategies and supply reliability. The bill requires a plan to describe plans to supplement a water source that may not be available at a consistent level of use, to the extent practicable. Additional findings and declarations relating to water quality are required.

SENATE BILL (SB) 221

SB 221 adds Government Code Section 66455.3, requiring that the local water agency be sent a copy of any proposed residential subdivision of more than 500 dwelling units within five days of the subdivision application being accepted as complete for processing by the city or county. It also adds Government Code Section 66473.7, establishing detailed requirements for establishing whether a “sufficient water supply” exists to support any proposed residential subdivisions of more than 500 dwellings, including any such subdivision involving a development agreement. When approving a qualifying subdivision tentative map, the city or county must include a condition requiring availability of a sufficient water supply. The applicable public water system must provide proof of availability. If there is no public water system, the city or county must undertake the analysis described in Government Code Section 66473.7. The analysis must include consideration of effects on other users of water and groundwater.

EXECUTIVE ORDER B-37-16

In May 2016, Governor Edmund G. Brown, Junior, signed Executive Order B-37-16 (Executive Order), Making Water Conservation a California Way of Life. The Executive Order directed DWR to work with the State Water Resources Control Board (State Water Board) to develop new water use targets as part of a permanent conservation framework for urban water agencies. The targets will build upon requirements established in the 2009 Water Conservation Act, but will strengthen standards for indoor residential per capita water use, outdoor irrigation, commercial, industrial and institutional (CII) water use, and water lost through leaks. DWR will be establishing interim water use targets by 2018, with final standards to be published by 2021. Agencies will need to demonstrate progress towards achieving final compliance in 2025 (DWR, 2017).

Local

CITY OF JACKSON ORDINANCE NO. 646

Ordinance No. 646 (An Ordinance of the City of Jackson Establishing a Resource Allocation Program Limiting Development within the City of Jackson) acknowledges limitations in the City’s ability to provide sewer, water, road capacity and other infrastructure and services necessary to support development. The purpose of the Ordinance is to coordinate the timing and amount of development consistent with available resources and provisions of the General Plan. The Ordinance establishes an allocation process for new development based on public facility (e.g., traffic conditions, water supply, wastewater capacity) and resource constraints that exist in the

3.15 UTILITIES AND SERVICE SYSTEMS

City consistent with the requirements of state law and city policy. Specifically, in January of each year the City of Jackson City Council establishes the number of Housing Equivalent Units (HEUs) that will be available that year for development. HEUs are based on the public facility and resource constraints that exist in the City and the status of planned infrastructure improvements as prescribed in the City's Circulation Element of the General Plan and the Amador County Regional Transportation Plan, the AWA's Urban Water Resource Plan, and the City's Waste Water Treatment Plant Facilities Plan.

AMADOR WATER AGENCY URBAN WATER MANAGEMENT PLAN

The Amador Water Agency 2015 Urban Water Management Plan (UWMP) is utilized by the AWA for the management of AWA's water supplies and water demands covering a range of normal and drought conditions. The UWMP provides information and projections regarding water supply availability and future water demands for AWA's four service areas.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the project will have a significant impact on the environment associated with Utilities and Service Systems if it will:

- Require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects; and/or
- Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years;

IMPACTS AND MITIGATION MEASURES

Impact 3.15-1: General Plan implementation would result in sufficient water supplies available to serve the City and reasonably foreseeable future development during normal, dry and multiple dry years (Significant and Unavoidable)

Implementation of the General Plan would result in increased population and employment growth within the Planning Area, and a corresponding increase in the demand for additional water supplies.

It is assumed that average water use per connection will remain the same over time, while population in the Agency service area will continue to grow. Thus, the 2008-2012 average demand per connection by use type was multiplied by the projected number of connections to result in a total projected demand by use type for 2020 through 2040. The resulting projected water use by type is presented in Table 3.15-3.

As described in the UWMP the projected supply and demand totals match. The reasonably available volume of water supply is anticipated to match demands through 2040 in each water year. Water supply and demand patterns change during normal, single dry, and multi dry years. AWA has relied on the demand modeling described to forecast demands for normal, single dry and

multiple dry years. As described in the UWMP, it is assumed that AWA's water supply for the City of Jackson will be able to serve those demands.

While the 2020 UWMP water use projections are the best available currently, water use projections will be re-evaluated in future UWMP updates, based on the new regulations. If the City's growth projections are updated and/or allocation of land use are updated based on the future General Plan amendments, then the ability to serve new growth may need to be re-evaluated.

Additionally, while AWA has adequate supplies, it has identified issues with reliable water treatment and water storage capacity at the Tanner Water Treatment Plants (WTPs). The Water Master Plan Study, accepted January 28, 2021, addressed planned population growth, AWA supply commitments, and projected water demands, as well as capacity to serve growth. The Tanner & Lone Water Treatment Plan Capacity Study, published in April 2022, documents system constraints and identifies improvements necessary to accommodate existing and future demand.

The Tanner WTP, which serves Amador City, Sutter Creek, the unincorporated area of Martell, and the wholesale customers of Jackson, Plymouth, and Drytown, is projected to have a maximum day demand of 5.92 million gallons per day (mgd) in 2040; however, it has several components (one offline clarifier and limitations on daily clarifier operation due to backwash controls, one offline filter and limitations on daily filter operation due to backwash controls, and velocities in the clearwell feed line) that limit the theoretical capacity to 5.0 mgd. Further, the field-tested reliable capacity of the Tanner WTP is 4.4 mgd, primarily due to backwash and process controls and limitations in the filtered water pump station and clearwell feed line. Lastly, AWA has 5.74 MGD of existing supply commitments (this includes properties with "will-serve" commitments) that it must accommodate.

It is noted that a portion of the remaining capacity at AWA's Lone and Lake Tanner WTPs is allocated to areas that AWA has "will serve" contracts with and such projects are anticipated to be accommodated. However, development projects that are not located on sites with a "will serve" commitment from AWA. AWA has not identified how much of the projected 2030 and 2040 demand is anticipated to occur on sites with "will-serve" commitments and how much additional capacity is necessary to serve anticipated development that does not have "will-serve" commitments.

The proposed General Plan includes a range of policies designed to ensure an adequate water supply for development and to minimize the potential adverse effects of increased water use. The policies and actions listed below would assist in ensuring that adequate water supplies are available to serve new growth projected under the proposed General Plan. However, as described above potential issues associated with treatment limitations within the AWA service area and specifically the Tanner WTP treatment requirements may impact the ability to treat and provide water and would require additional improvements to support future capacity needs, the details of which are not all known at this time. As such out of an abundance of caution this is considered a **significant and unavoidable** impact.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

POLICIES

LU 6-1: Provide adequate infrastructure (e.g., streets, sewers, and storm drains) to meet the needs of existing and future development.

LU 6-2: Require development, infrastructure, and long-term planning projects to be consistent with all applicable infrastructure plans, including the Amador Water Agency Urban Water Management Plan and the City's capital improvement programs.

LU 6-3: Require all development projects to mitigate their infrastructure service impacts or demonstrate that the City's infrastructure, public services, and utilities can accommodate the increased demand for services, and that service levels for existing users will not be degraded or impaired.

LU 6-4: Require the payment of impact fees for new development in accordance with the City's Development Code.

LU 6-5: Design services and infrastructure to serve existing and planned land uses. Actions that will induce growth beyond planned levels are prohibited.

LU 6-6: Implement the Resource Constraints and Priority Allocation Ordinance to ensure the availability of public resources and services prior to acceptance of new residential and commercial subdivision applications.

ACTIONS

LU-6a: As part of the development review process, determine the potential impacts of development and infrastructure projects on public infrastructure, and ensure that new development contributes its fair share toward necessary on and off-site infrastructure.

LU-6b: Ensure that infrastructure is adequately sized to accommodate the proposed development and, if applicable, allow for extensions to future developments.

LU-6c: The City shall actively pursue funding for the infill of sidewalks in developed areas, particularly along New York Ranch Road, North Main Street, and Court Street.

LU-6d: When community-desired facilities and services are beyond the City's financial resources to provide, support community-driven efforts to establish special funding and financing districts, such as assessment districts, landscape and lighting maintenance districts, business improvement districts, or community facilities districts, whether citywide or limited to a defined neighborhood, district, or corridor.

LU-6e: Cooperate with Local Agency Formation Commission and the County to direct growth outside the City Limits on lands that are served or are planned to be served, with a full range of urban services, such as public water and sewer, an extensive road network, public transit, safety and emergency response services, parks, trails, and open space.

Impact 3.15-2: General Plan implementation would not require or result in the construction of new water treatment facilities or expansion of

existing facilities, the construction of which could cause significant environmental effects (Significant and Unavoidable)

Development and growth in the City under the proposed General Plan would result in increased demand for water supplies, including water conveyance and treatment infrastructure. The proposed General Plan includes policies and actions to ensure that water supplies are provided at acceptable levels and to ensure that development and growth does not outpace the provision of available water supplies.

As described under Impact 3.15-1, the projected 2040 water supplies are adequate to meet demand that would be generated by buildout of the General Plan. As such, implementation and buildout of the General Plan is not anticipated to result in the need to construct or expand water treatment facilities that have not already been described and accounted for in the AWA UWMP.

It is anticipated that water supply infrastructure will need to be extended to serve future development. Future development in the Planning Area would be required to connect to existing water distribution infrastructure in the vicinity of each site, pay the applicable water system connection fees, and pay the applicable water usage rates. Future projects may be required to implement site specific and limited off-site improvements to the water distribution system in order to connect new project sites to the existing water infrastructure network.

As future development and infrastructure projects are considered by the City, each project will be evaluated for conformance with the General Plan, Municipal Code, and other applicable regulations. Subsequent development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA. The specific impacts of providing new and expanded water distribution infrastructure cannot be determined at this time, as the General Plan does not propose or authorize any specific development projects or include details on any future development projects.

As described above under Impact 3.15-1, potential issues associated with treatment limitations within the AWA service area and specifically the Tanner WTP treatment requirements may impact the ability to treat and provide water and would require additional improvements to support future capacity needs, the full details of which are not all known at this time. System Improvements total \$101.8 million dollars for the Tanner WTP, with improvements planned for 5-year periods from 2021 through 2040. Coordination with AWA is needed to identify specific areas/projects that AWA plans to serve within each jurisdiction and ensuring that improvements to AWA's WTPs include improvements necessary to serve the buildout including future RHNAs may be accommodated on sites where the property owner/developer does not currently have a "will serve" letter with AWA. Additionally, it should be noted that any future improvements to the existing water distribution infrastructure and capacity increases would be primarily provided on sites with land use designations that allow for urbanized land uses, and the environmental impacts of constructing and operating the new water distribution infrastructure are anticipated to be similar to those associated with new development, redevelopment, and infrastructure projects under the proposed General Plan, as discussed in Chapters 3.1 through 3.14, 3.16, and 4.0 of this Draft EIR.

3.15 UTILITIES AND SERVICE SYSTEMS

The General Plan policies and actions described under Impact 3.15-1 are designed to ensure an adequate water supply for development and to minimize the potential adverse effects of increased water use and requiring infrastructure improvements to occur in pace with new development. However, out of an abundance of caution as future improvement are needed but the specific details of each improvement is unknown at this time and will occur over the course of the Buildout of the General Plan, this is considered a **significant and unavoidable** impact.

3.15.2 WASTEWATER

The wastewater generated by the City of Jackson is treated and disposed of at the City of Jackson wastewater treatment plant (WWTP) along Jackson Creek.

KEY TERMS

Effluent: Effluent is an outflowing of water from a natural body of water, or from a man-made structure. Effluent in the man-made sense is generally considered to be water pollution, such as the outflow from a sewage treatment facility or the wastewater discharge from industrial facilities. In the context of waste water treatment plants, effluent that has been treated is sometimes called secondary effluent, or treated effluent.

NPDES: Water pollution degrades surface waters making them unsafe for drinking, fishing, swimming, and other activities. As authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.

WWTP: Wastewater treatment plant. Treatment of wastewater may include the following processes: screening to remove large waste items; grit removal to allow sand, gravel, and sediment to settle out; primary sedimentation where sludge can settle out of the wastewater; secondary treatment to substantially degrade the biological content of the sewage; tertiary treatment to raise the quality of the effluent before it is discharged; and, discharge.

WASTEWATER SYSTEM

The City provides wastewater collection, treatment and disposal services to 2,461 connections. The current City of Jackson Sewer System is a 100 percent separate sanitary system that flows primarily by gravity to the WWTP. The WWTP site, which is owned and operated by the City of Jackson, is approximately four (4) acres in size and is generally surrounded by agricultural land uses. The majority of the treatment system was upgraded in 2017 and some subsequent improvements began in 2022. The treatment plant now consists of a mechanical bar screen and spiral augur with a washer compactor for screenings, two oxidation ditches, two secondary clarifiers, followed by two self-cleaning disc filter units and an energy efficient in-channel UV system for disinfection. Biosolids are digested in an aerated sludge holding tank and dewatered

using a screwpress. The dewatered biosolid is considered Class B biosolid and are hauled off-site to a third-party land application site once per week to be used as top soil for farming and agriculture.. Effluent is discharged into Jackson Creek, then Lake Amador for reuse. The WWTP's tertiary treatment facility provides secondary treatment and filtration prior to discharge effluent. The design daily average flow capacity of the Facility is 0.71 MGD.

The original WWTP was constructed in 1936 and consisted of primary treatment only. In 1963, the facility was converted to a secondary treatment facility (with a packaged activated sludge/clarifier system). In 1968, the sludge treatment process was changed from anaerobic to aerobic digestion, which remained in place until major modifications and improvements were made to the facility in 1984/85. The improvements and modifications included but were not limited to the construction of new headworks, two oxidation ditches, and a four-cell tertiary filter. Other improvements included the construction of new chlorination-dechlorination facilities, construction of a new operations building and the installation of miscellaneous utility systems. Presently, the Wastewater Treatment Plant is operated as an advanced wastewater treatment facility, using nutrient removal principles, tertiary filtration, with UV for disinfection.

The wastewater collection system consists of approximately 21 miles of gravity sewer lines and one mile of pressure sewer. The collection system consists of three areas, with the westernmost portion of the City reliant on lift stations in the vicinity of Argonaut High School, and the remainder of the system gravity-fed. Flows from the northwest portion of the City are conveyed through an eight-inch line. A 16-inch trunk carries flows from the remainder of the City to the WWTP. The City described the majority of the system as in good to excellent condition; however, about 35 percent of the sewers are over 30 years old and were described as in fair to poor condition. On the whole, the system is subject to infiltration and inflow, with a peaking factor as high as 4. The City has made significant efforts to improve the collection system, including smoking testing, implementing the Sanitary Sewer Management Plan, digitalizing the collection system using the GIS technology, a formal 5-year plan to clean and CCTV the entire collection systems. The 5-year CCTV plan was implemented initially in 2017. The project consists of cleaning and assessing all city sewer mains, manholes, and appurtenances. This project is expected to reduce SSOs, locate points of inflow or infiltration, increase the lifespan of the collection system, prioritize capital improvement projects, as well as, update our existing asset record system. The project provided CCTV footage, photos of defects or notable features, written assessment for each segment and manhole. They were also required to provide a final report which grades each segment of pipe and manhole for its condition and ranks them. This project was completed early 2022. The City is currently analyzing the results and compiling a master plan project list to prioritize improvement projects based on the assessment of the entire collections system. This Master plan will be added to the SSMP once it is completed. It is believed that the project has met its intended purposes by the end of the first five year cycle. The City plans to continue the next 5-year CCTV project in 2023. The City also plans to continue to update the SSMP as required. By the end of 2022, the sewer collection system has been digitized. The integrated portal even includes information from the CCTV reports.

The City of Jackson's Wastewater Treatment Facility is regulated by the California Regional Water Quality Control Board, Central Valley Region. The Waste Discharge Requirements Order and NPDES

3.15 UTILITIES AND SERVICE SYSTEMS

Permits must be renewed every five years. The current discharge order and NPDES is set to be renewed by July 2023.

Historically, the WWTP struggled to handle the peak flows during the wet season, often causing a bypass of filters which allowed partially treated effluent to be discharged into Jackson Creek. The Regional Water Quality Control Board (RWQCB) in 2016 adopted permit standards that requires the WWTP to implement complete filtering of secondary effluent at all times, even during peak flows. The permit also establishes stricter standards for ammonia, nitrogen and nitrate and more stringent discharge limits for chlorine residual and total coliform.

City were unable to meet those new standards and was out of compliance with the state orders in the previous NPDES cycle. In 2016, the City acquired a \$12 million State Revolving Fund loan to improve the treatment plant infrastructure aiming at meeting stricter discharge limits. In 2019 the improvement project was completed. It replaced the use of chlorine with UV for disinfection, replaced the sand filters with two disc-filter units, and updated the aeration and control system in the oxidation ditches. These improvements improved total filtration capacity, enabled simultaneous removal of nitrification/denitrification(Ammonia/Nitrogen), which ultimately addressed compliance issues, improved the efficiency of treatment process, increased the quality of the discharge, and better protected the environment, public health and safety.

The City's wastewater discharge permit (National Pollutant Discharge Elimination System – NPDES) with the California Regional Water Quality Control Board (Regional Board) was renewed in May/June 2018. This permit includes several significant requirements that are impacting the cost of operating the wastewater plant as well as costly studies to determine whether the City may continue discharging its treated effluent into Jackson Creek. The current permit is due to be renewed by July 2023.

One continued NPDES permitting issue facing the City is whether concerns raised by the State Department of Public Health regarding the use of Jackson Creek/Lake Amador as a potable water supply warrants the reduction or elimination of the City's treated effluent from the creek. Additional studies were required in the NPDES permit to address the State Department of Fish and Game concerns that removal of the City's effluent from the creek could negatively impact fish and wildlife. The City is working with these two State agencies and the Regional Water Quality Control Board to protect ratepayers and meet the environmental concerns of these agencies.

The City has identified three technically feasible general alternatives for discharge of its wastewater effluent in order to meet water quality standards as well as address limitations to further use of Jackson Creek for effluent discharge as a result of California Department of Health Services guidance to protect downstream users:

- Discharge to surface waters with adequate dilution capacity such as the Mokelumne River or Jackson Creek (during winter and spring months);
- Reclamation of wastewater effluent for land disposal, such as irrigation of area golf courses and other sites; or

- Participation in a regional wastewater treatment system with other dischargers in the region.

While none of the identified alternatives satisfies all critical issues, the best apparent alternative would provide a combination of discharge to surface waters and reclamation of effluent. As part of this alternative the City would maximize contaminant source control within the City and from the potable water supply, in cooperation with AWA.

Additionally, the SWRCB is implementing a new General Waste Discharge Order in the 2023 renewal cycle. It will enforce lower maximum concentrations of toxicity and priority pollutants. The entire impact is yet to be determined.

The Public Works Department has developed and constantly updating a Sewer System Management Plan (SSMP) to reduce the number of sanitary sewer overflows in the wastewater collection system. The SSMP mission statement reads, "Our environment will be best preserved by responsibly maintaining, studying, and planning our wastewater collection system." The City is continuing to develop programs to improve the maintenance of the collection system and reduce the likelihood of overflows in the future.

Other Community Systems

On-site systems, commonly referred to as septic systems, are useful for handling the wastewater disposal needs of individual dwellings or commercial establishments for which connection to community facilities is not feasible. An on-site system consists of a septic tank that receives wastewater, allows the heavier solids to settle in the tank, and releases the remainder to an attached leach field. The leach field consists of underground perforated parallel lines through which water can seep into the surrounding soil. The solids which settled out of the wastewater in the septic tank must be periodically removed.

Septic tanks work well in areas of low density development where there is sufficient room to separate leach lines from potable water wells and lines. On-site systems are relatively inexpensive, easy to maintain, and contribute to water recharge in the area. However, on-site systems require certain soil conditions, topography, and water table conditions in order to work. If the proper conditions are not present, the leach field can become saturated and groundwater may become contaminated.

REGULATORY SETTING - WASTEWATER

Federal

CLEAN WATER ACT (CWA) / NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMITS

The CWA is the cornerstone of water quality protection in the United States. The statute employs a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical,

physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water."

The CWA regulates discharges from "non-point source" and traditional "point source" facilities, such as municipal sewage plants and industrial facilities. Section 402 of the Act creates the NPDES regulatory program which makes it illegal to discharge pollutants from a point source to the waters of the United States without a permit. Point sources must obtain a discharge permit from the proper authority (usually a state, sometimes EPA, a tribe, or a territory). NPDES permits cover industrial and municipal discharges, discharges from storm sewer systems in larger cities, storm water associated with numerous kinds of industrial activity, runoff from construction sites disturbing more than one acre, mining operations, and animal feedlots and aquaculture facilities above certain thresholds.

Permit requirements for treatment are expressed as end-of-pipe conditions. This set of numbers reflects levels of three key parameters: (1) biochemical oxygen demand (BOD), (2) total suspended solids (TSS), and (3) pH acid/base balance. These levels can be achieved by well-operated sewage plants employing "secondary" treatment. Primary treatment involves screening and settling, while secondary treatment uses biological treatment in the form of "activated sludge."

All so-called "indirect" dischargers are not required to obtain NPDES permits. An indirect discharger is one that sends its wastewater into a city sewer system, so it eventually goes to a sewage treatment plant. Although not regulated under NPDES, "indirect" discharges are covered by another CWA program called pretreatment. "Indirect" dischargers send their wastewater into a city sewer system, which carries it to the municipal sewage treatment plant, through which it passes before entering surface water.

State

STATE WATER RESOURCES CONTROL BOARD/REGIONAL WATER QUALITY CONTROL BOARD

In California, all wastewater treatment and disposal systems fall under the overall regulatory authority of the State Water Resources Control Board (SWRCB) and the nine California Regional Water Quality Control Boards (RWQCBs), who are charged with the responsibility of protecting beneficial uses of State waters (ground and surface) from a variety of waste discharges, including wastewater from individual and municipal systems. The City of Jackson falls within the jurisdiction of the Central Valley Regional Water Quality Control Board.

The RWQCB's regulatory role often involves the formation and implementation of basic water protection policies. These are reflected in the individual RWQCB's Basin Plan, generally in the form of guidelines, criteria and/or prohibitions related to the siting, design, construction, and maintenance of on-site sewage disposal systems. The RWQCB's role has historically been one of providing overall direction, organizational and technical assistance, and a communications link to the State legislature.

The RWQCBs may waive or delegate regulatory authority for on-site sewage disposal systems to counties, cities or special districts. Although not mandatory, it is commonly done and has proven

to be administratively efficient. In some cases, this is accomplished through a Memorandum of Understanding (MOU), whereby the local agency commits to enforcing the Basin Plan requirements or other specified standards that may be more restrictive. The RWQCBs generally elect to retain permitting authority over large and/or commercial or industrial on-site sewage disposal systems, depending on the volume and character of the wastewater.

PORTER-COLOGNE WATER QUALITY CONTROL ACT

The Porter-Cologne Water Quality Control Act is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State is required to adopt policies, plans, and objectives that will protect the State's waters for the use by and enjoyment of Californians. In California, the State Water Resources Control Board (SWRCB) has the authority and responsibility for establishing policy related to the State's water quality. Regional authority is delegated by the SWRCB to a Regional Water Quality Control Board (RWQCB). The Porter-Cologne Act authorizes the SWRCB and RWQCB to issue NPDES permits.

Under the Central Valley Regional Water Quality Control Board (CVRWQCB) NPDES permit system, all existing and future municipal and industrial discharges to surface water within the city would be subject to regulation. NPDES permits are required for operators of municipal separate storm sewer systems, construction projects, and industrial facilities. These permits contain limits on the amount of pollutants that can be contained in each facility's discharge.

Local

SEWER REGULATIONS, CONNECTIONS AND CONNECTION FEES, JACKSON MUNICIPAL CODE TITLE 13 ARTICLE II CHAPTER 13.20

Title 13 Article II Chapter 13.20 of the Jackson Municipal Code requires sewer extension and connection to sewer facilities directly within and outside of the city for each person, firm, individual business, or corporation using the city sewer system. It also includes standards for discharge, services fees, permitting requirements, and technical specifications for sewage connections.

CITY OF JACKSON ORDINANCE NO. 646

Ordinance No. 646 (An Ordinance of the City of Jackson Establishing a Resource Allocation Program Limiting Development within the City of Jackson) acknowledges limitations in the City's ability to provide sewer, water, road capacity and other infrastructure and services necessary to support development. The purpose of the Ordinance is to coordinate the timing and amount of development consistent with available resources and provisions of the General Plan. The Ordinance establishes an allocation process for new development based on public facility (e.g., traffic conditions, water supply, wastewater capacity) and resource constraints that exist in the City consistent with the requirements of state law and city policy. Specifically, in January of each year the City of Jackson City Council establishes the number of Housing Equivalent Units (HEUs) that will be available that year for development. HEUs are based on the public facility and resource constraints that exist in the City and the status of planned infrastructure improvements as prescribed in the City's Circulation Element of the General Plan and the Amador County Regional

3.15 UTILITIES AND SERVICE SYSTEMS

Transportation Plan, the AWA's Urban Water Resource Plan, and the City's Waste Water Treatment Plant Facilities Plan.

CITY OF JACKSON SANITARY SEWER MANAGEMENT PLAN

The goal of the Sanitary Sewer Management Plan (SSMP) is to provide a plan and schedule to properly manage, operate and maintain all parts of the sanitary sewer system. The plan helps the city to determine where maintenance is needed in the collection system to prevent and mitigate future sewer overflows. In addition, the SSMP shall include elements that will help the city develop a routine preventive operation and maintenance program, a rehabilitation and replacement plan, a regular training program for staff and an inventory of replacement parts.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on the environment associated with Utilities and Service Systems if it would:

- Require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects; and/or
- Result in a determination by the wastewater treatment provider which serves or may serve the Project that it does not have adequate capacity to serve the project’s projected demand in addition to the providers existing commitments.

IMPACTS AND MITIGATION MEASURES

Impact 3.15-3: General Plan implementation would not have the potential to result in a determination by the wastewater treatment provider which serves or may serve the Project that it does not have adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments (Significant and Unavoidable)

As Jackson continues to develop in the future, there will be an increased need for water and wastewater services, including a reliable source of recycled water. These needs have been addressed in the Sanitary Sewer Management Plan and will require that the city continue to implement phased improvements to some pump stations, sewer mains, and the various wastewater treatment plants when triggered by growth.

It is anticipated that buildout of the General Plan would result in a total demand increase wastewater effluent treatment.

As shown in Table 3.15-4, it is anticipated residential development anticipated under the General Plan (as described in detail in Chapter 2.0) would result in an additional demand for approximately 0.20mgd or a cumulative total of approximately 0.926 mgd. This anticipates buildout within the City limits with the land uses identified on the proposed Land Use Map. Additional generation from non-residential uses would also occur and would result in approximately 0.025mgd in additional demand.

TABLE 3.15-4. PROJECTED INCREASED WASTEWATER GENERATION UNITS/EDUS

LAND USE	EDU RATE	UNITS/ACRES	TOTAL EDUS	TOTAL GPD (300 GPD/EDU)	MGD
Additional Demand					
Residential	1 edu/unit	681	681	204,300	0.2043
Non-Residential	6 edu/acre	13.77	82.62	24,786	0.025

SOURCE: BASED ON RESIDENTIAL EQUIVALENT DWELLING UNIT (EDU) RATES AND GPD FLOW RATES CITY OF JACKSON, 2005. A 0.5 FAR WAS ASSUMED FOR NON-RESIDENTIAL DEVELOPMENT ACREAGE. NON-RESIDENTIAL EDU RATES AND GPD FLOW RATES FROM CSD-1 MASTER PLAN, 2006.

As discussed above, the City's WWTP current treatment capacity is 0.71 mgd. Buildout of the proposed General Plan could generate additional demands which could exceed the current 0.71 mgd treatment capacity of the facility. The City is currently operating with a permit extension. The City has requested additional permitted capacity, which would increase the WWTP's permitted capacity to approximately 0.82 mgd. Physical improvements would also be required to accommodate this requested increase in treatment capacity of the WWTP. The expansion of the City's WWTP is separate from the Jackson General Plan project which does not propose any development at this time. In order for the City to provide adequate wastewater service to the project at buildout, the City would need additional capacity at the WWTP approved by the RWQCB. It is anticipated that requests for additional capacity would be made in phases, as buildout of the Land Use Map is anticipated to occur over a 20- year or longer timeframe. Increases in capacity would require additional physical improvements, such as expansion and modifications, to the WWTP. Potential environmental effects associated with the expansion of the City's WWTP include, but are not limited to, construction and operational air quality and noise effects, biological resource impacts to protected trees, habitat and aquatic resources, geologic and hydrologic impacts from both construction and operation, hazards and growth inducement. These environmental effects would likely occur at the existing WWTP site as well as for potential off-site facilities, such as a reclamation facility. However, no specific facility expansion designs have been developed to date that would further specify the potential environmental effects.

As mentioned earlier, the City can potentially utilize the TWTP as a location for wastewater service, to make up for its shortfall. The TWTP currently treats approximately 4.0 mgd of water to supply its current customers, including the City of Jackson Water Department. This leaves approximately 1.0 mgd of permitted water treatment capacity that is not yet being utilized. It should be noted that the filters installed in the TWTP are capable of treating up to 7.2 mgd of water, but the TWTP is not currently permitted by the DHS to treat more than 5.0 mgd. Between the 1.0 mgd of underutilized capacity at the TWTP and additional capacity of resulting in 0.82 mgd capacity at the WWTP, the City could meet the daily average sewage generation.

Full buildout of the development contemplated in the proposed General Plan would increase the existing treatment demand at the districts' treatment plants, the proposed General Plan includes a range of policies designed to ensure an adequate wastewater treatment capacity for development. As described above, the City must also periodically review and update their applicable master plans, and as growth continues to occur within the Planning Area, the City will identify necessary system upgrades and capacity enhancements to meet growth, prior to the approval of new development.

As described in the Regulatory Setting, Ordinance No. 646 acknowledges limitations in the City's ability to provide sewer, water, road capacity and other infrastructure and services necessary to support development. The purpose of the Ordinance is to coordinate the timing and amount of development consistent with available resources and provisions of the General Plan. The Ordinance establishes an allocation process for new development based on public facility (e.g., traffic conditions, water supply, wastewater capacity) and resource constraints that exist in the

City consistent with the requirements of state law and city policy. Specifically, in January of each year the City of Jackson City Council establishes the number of Housing Equivalent Units (HEUs) that will be available that year for development. HEUs are based on the public facility and resource constraints that exist in the City and the status of planned infrastructure improvements as prescribed in the City's Circulation Element of the General Plan and the Amador County Regional Transportation Plan, the AWA's Urban Water Resource Plan, and the City's Waste Water Treatment Plant Facilities Plan.

As described previously, historically, the WWTP has not filtered secondary effluent during wet weather conditions, but instead bypassed the additional flows through Jackson Creek. However, the Regional Water Quality Control Board (RWQCB) recently adopted permit standards that requires the WWTP to implement complete filtering of secondary effluent at all times, even during peak flows. The permit also establishes new standards for ammonia and nitrate and more stringent standards for chlorine residual and total coliform. Improvements and modifications are required at the WWTP to comply with the newly adopted permit standards. The modifications would ensure compliance with these standards; however, these modifications would not increase the capacity of the plant. The estimated cost of the improvements needed to comply with the adopted RWQCB water quality standards for effluent is approximately \$1.7 million. Current average dry weather flow (over the past three years) for the WWTP has been 0.531 mgd.

The City's wastewater discharge permit (National Pollutant Discharge Elimination System – NPDES) with the California Regional Water Quality Control Board (Regional Board) was renewed in May/June 2018. This permit includes several significant requirements that are impacting the cost of operating the wastewater plant as well as costly studies to determine whether the City may continue discharging its treated effluent into Jackson Creek.

The key issue facing the City is whether concerns raised by the State Department of Public Health regarding the use of Jackson Creek/Lake Amador as a potable water supply warrants the reduction or elimination of the City's treated effluent from the creek. Additional studies were required in the NPDES permit to address the State Department of Fish and Game concerns that removal of the City's effluent from the creek could negatively impact fish and wildlife. The City is working with these two State agencies and the Regional Water Quality Control Board to protect ratepayers and meet the environmental concerns of these agencies.

The City has identified three technically feasible general alternatives for discharge of its wastewater effluent in order to meet water quality standards as well as address limitations to further use of Jackson Creek for effluent discharge as a result of California Department of Health Services guidance to protect downstream users:

- Discharge to surface waters with adequate dilution capacity such as the Mokelumne River or Jackson Creek (during winter and spring months);
- Reclamation of wastewater effluent for land disposal, such as irrigation of area golf courses and other sites; or

3.15 UTILITIES AND SERVICE SYSTEMS

- Participation in a regional wastewater treatment system with other dischargers in the region.

While none of the identified alternatives satisfies all critical issues, the best apparent alternative would provide a combination of discharge to surface waters and reclamation of effluent. As part of this alternative the City would maximize contaminant source control within the City and from the potable water supply, in cooperation with AWA.

The Public Works Department has developed and constantly updating a Sewer System Management Plan (SSMP) to reduce the number of sanitary sewer overflows in the wastewater collection system. The SSMP mission statement reads, "Our environment will be best preserved by responsibly maintaining, studying, and planning our wastewater collection system." The City is continuing to develop programs to improve the maintenance of the collection system and reduce the likelihood of overflows in the future.

The proposed General Plan includes a comprehensive set of goals, policies, and actions to ensure an adequate and reliable wastewater collection and treatment system. The policies and actions listed below would further assist in ensuring that adequate wastewater treatment and conveyance infrastructure is available to serve new growth projected under the proposed General Plan. Additionally, as specifically described in Policy LU 6-3: the City requires all development projects to mitigate their infrastructure service impacts or demonstrate that the City's infrastructure, public services, and utilities can accommodate the increased demand for services, and that service levels for existing users will not be degraded or impaired. However as described above potential issues associated with compliance with new discharge permits and treatment requirements may impact the ability to treat and discharge wastewater and would require additional improvements and regulations that could impact discharge capacity, the details of which are not all known at this time. Additionally, buildout of the proposed General Plan could generate additional demands which could exceed the current treatment capacity of the facility. As such out of an abundance of caution this is considered a **significant and unavoidable** impact.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

POLICIES

LU 6-1: Provide adequate infrastructure (e.g., streets, sewers, and storm drains) to meet the needs of existing and future development.

LU 6-2: Require development, infrastructure, and long-term planning projects to be consistent with all applicable infrastructure plans, including the Amador Water Agency Urban Water Management Plan and the City's capital improvement programs.

LU 6-3: Require all development projects to mitigate their infrastructure service impacts or demonstrate that the City's infrastructure, public services, and utilities can accommodate the increased demand for services, and that service levels for existing users will not be degraded or impaired.

LU 6-4: Require the payment of impact fees for new development in accordance with the City's Development Code.

LU 6-5: Design services and infrastructure to serve existing and planned land uses. Actions that will induce growth beyond planned levels are prohibited.

LU 6-6: Implement the Resource Constraints and Priority Allocation Ordinance to ensure the availability of public resources and services prior to acceptance of new residential and commercial subdivision applications.

ACTIONS

LU-6a: As part of the development review process, determine the potential impacts of development and infrastructure projects on public infrastructure, and ensure that new development contributes its fair share toward necessary on and off-site infrastructure.

LU-6b: Ensure that infrastructure is adequately sized to accommodate the proposed development and, if applicable, allow for extensions to future developments.

LU-6c: The City shall actively pursue funding for the infill of sidewalks in developed areas, particularly along New York Ranch Road, North Main Street, and Court Street.

LU-6d: When community-desired facilities and services are beyond the City's financial resources to provide, support community-driven efforts to establish special funding and financing districts, such as assessment districts, landscape and lighting maintenance districts, business improvement districts, or community facilities districts, whether citywide or limited to a defined neighborhood, district, or corridor.

LU-6e: Cooperate with Local Agency Formation Commission and the County to direct growth outside the City Limits on lands that are served or are planned to be served, with a full range of urban services, such as public water and sewer, an extensive road network, public transit, safety and emergency response services, parks, trails, and open space.

Impact 3.15-4: General Plan implementation may require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects (Significant and Unavoidable)

Development contemplated under the proposed General Plan would result in increased wastewater flows, resulting in the need for additional or expanded wastewater treatment facilities and conveyance infrastructure.

As mentioned above, implementation of the proposed General Plan and future development would require additional g treatment capacity. The City is currently operating with a permit extension. The City has requested additional permitted capacity, which would increase the WWTP's permitted capacity. Physical improvements would be required to accommodate this increase in treatment capacity of the WWTP. The expansion of the City's WWTP is currently ongoing and is separate from the Jackson General Plan Update project which does not propose any development at this time, and is consistent with the growth identified by the City's existing Land Use Map.

3.15 UTILITIES AND SERVICE SYSTEMS

It is anticipated that requests for additional capacity would be made in phases, as buildout of the Land Use Map is anticipated to occur over a 20+ year or longer timeframe. Increases in capacity would require additional physical improvements, such as expansion and modifications, to the WWTP. Potential environmental effects associated with the expansion of the City's WWTP include, but are not limited to, construction and operational air quality and noise effects, biological resource impacts to protected trees, habitat and aquatic resources, geologic and hydrologic impacts from both construction and operation. These environmental effects would likely occur at the existing WWTP site as well as for potential off-site facilities, such as a reclamation facility. However, no specific facility expansion designs have been developed to date that would further specify any potential environmental effects.

As described under impact 3.15-3, the City has identified three technically feasible general alternatives for discharge of its wastewater effluent in order to meet water quality standards as well as address limitations to further use of Jackson Creek for effluent discharge as a result of California Department of Health Services guidance to protect downstream users

While none of the identified alternatives satisfies all critical issues, the best apparent alternative would provide a combination of discharge to surface waters and reclamation of effluent. As part of this alternative the City would maximize contaminant source control within the City and from the potable water supply, in cooperation with AWA.

The proposed General Plan includes a comprehensive set of goals, policies, and actions to ensure an adequate and reliable wastewater collection and treatment system. The policies and actions listed below would further assist in ensuring that adequate wastewater treatment and conveyance infrastructure is available to serve new growth projected under the proposed General Plan. Additionally, as specifically described in Policy LU 6-3: the City requires all development projects to mitigate their infrastructure service impacts or demonstrate that the City's infrastructure, public services, and utilities can accommodate the increased demand for services, and that service levels for existing users will not be degraded or impaired.

It should be noted that wastewater treatment and conveyance facilities would be evaluated at the project-level in association with subsequent development projects. However, the facilities would be primarily provided on sites with land use designations that allow such uses and the environmental impacts of constructing and operating the facilities would likely be similar to those associated with new development, redevelopment, and infrastructure projects under the General Plan. As future development and infrastructure projects are considered by the City, each project will be evaluated for conformance with the General Plan, Municipal Code, and other applicable regulations. Subsequent development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA.

The proposed General Plan includes policies and actions designed to ensure adequate wastewater treatment capacity is available to serve development and to minimize the potential adverse effects of wastewater treatment. These policies and actions are listed below. However as described above, buildout of the proposed General Plan could generate additional demands which could exceed the current treatment capacity, and needed future improvement to meet discharge

requirements would require improvements, the details of which are not all known at this time. As such out of an abundance of caution this is considered a **significant and unavoidable** impact.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

POLICIES

LU 6-1: Provide adequate infrastructure (e.g., streets, sewers, and storm drains) to meet the needs of existing and future development.

LU 6-2: Require development, infrastructure, and long-term planning projects to be consistent with all applicable infrastructure plans, including the Amador Water Agency Urban Water Management Plan and the City's capital improvement programs.

LU 6-3: Require all development projects to mitigate their infrastructure service impacts or demonstrate that the City's infrastructure, public services, and utilities can accommodate the increased demand for services, and that service levels for existing users will not be degraded or impaired.

LU 6-4: Require the payment of impact fees for new development in accordance with the City's Development Code.

LU 6-5: Design services and infrastructure to serve existing and planned land uses. Actions that will induce growth beyond planned levels are prohibited.

LU 6-6: Implement the Resource Constraints and Priority Allocation Ordinance to ensure the availability of public resources and services prior to acceptance of new residential and commercial subdivision applications.

ACTIONS

LU-6a: As part of the development review process, determine the potential impacts of development and infrastructure projects on public infrastructure, and ensure that new development contributes its fair share toward necessary on and off-site infrastructure.

LU-6b: Ensure that infrastructure is adequately sized to accommodate the proposed development and, if applicable, allow for extensions to future developments.

LU-6e: Cooperate with Local Agency Formation Commission and the County to direct growth outside the City Limits on lands that are served or are planned to be served, with a full range of urban services, such as public water and sewer, an extensive road network, public transit, safety and emergency response services, parks, trails, and open space.

3.15.3 STORMWATER DRAINAGE

The City of Jackson Public Works Department is responsible for operating, maintaining, and improving the City's drainage and stormwater infrastructure, and facilities. Key areas of responsibility include the maintaining and improvements to streets, sewer, and storm drains. Section 3.10 (Hydrology) includes an expanded analysis of water quality, flooding, and other stormwater related issues.

STORMWATER AND FLOOD CONTROL

The City of Jackson Public Works Department is responsible for operating, maintaining, and improving the City's drainage and stormwater infrastructure, and facilities. Key areas of responsibility include the maintaining and improvements to streets, sewer, and storm drains. The City currently does not have an adopted storm drain master plan.

Stormwater Drainage

Jackson is located at the junction of three branches of Jackson Creek. Major drainages in the City include Jackson Creek, North Fork Jackson Creek, South Fork Jackson Creek, New York Ranch Creek, Oneida Creek and Middle Fork Jackson Creek. In the central business district, portions of the natural banks of Jackson Creek have been replaced with masonry walls and in a few places the North Fork has been covered with buildings.

A portion of the City is within the 100-year flood plain. The floodplain centers on the most developed portion of the City and stretches out in most directions from there, including along Jackson Creek, the South Fork of Jackson Creek, and Oneida Creek. Nearly 550 parcels are located in the plain. The Fire Department, Civic Center, County Sheriff Department and Sutter-Amador Hospital are located near the floodplain.

Flooding is generally confined to narrow areas along the streams, typically less than 150 feet wide. Flood waters seldom rise above the natural banks of the streams. However, there have been two flood events in the last 20 years. In 1997, heavy rains caused Jackson Creek to flood. Water went over the Pitt Street and Broadway Street bridges and evacuations of homes and businesses along the creek were ordered. The parking garage in downtown Jackson was under water. More recently, there was a wet spring in 2006, but damages in the City were indirect, cutting off the water supply to the City and road damages throughout the County. Then in the winters in 2016/17 and in 2022/23, heavy rains caused creek to flood.

The City of Jackson provides stormwater maintenance services and flood control services, as needed. Preventive maintenance services include the maintenance of drainage pipes, inlets, and flood control ditches. The City oversees the annual cleaning of the Jackson creeks.

The City has a Creek/Floodplain Overlay for their Draft (2004) Land Use Element to encourage open space along the City's numerous creeks, to encourage public use of the creeks, and to discourage development in areas designated as floodplains.

Stormwater Infrastructure

The drainage system consists of approximately 15 miles of open storm drains and 10 miles of covered storm drains, with approximately 250 inlets. All inlets are inspected at least once per year. Newer subdivisions have open ditches, which drain into Jackson Creek or other small streams or drainage basins. Sixty percent of the total creek flow during critical flow to Jackson Creek is made up of treated Jackson wastewater treatment plant effluent.

In 2008, infrastructure deficiencies reported by the City included four miles of open ditch that need to be piped, and a variety of existing culverts (approximately two to three miles) that needed to be replaced and were budgeted with paving projects as they occur. City gradually improves drainage infrastructure in recent years. In 2016, Marcucci Lane bridge replacement was completed, which replaced the original culvert bridge with a concrete slab bridge. The construction has eliminated a bottleneck of Jackson Creek during high flow conditions. Also the culvert bridges at French Bar, South Ave., and Pitt St. are slated to be replaced in the coming years. The replacement is anticipated to improve creek channels, eliminate structure deficiency and improve adjacent utility infrastructure. The annual capital improvement budget sets aside funds to replace culverts as necessary. The City has also been digitally mapping the storm drain system in a GIS platform, similar to the work being undertaken for water and wastewater infrastructure. As of 2023, 75% of the City's storm drain information including drain inlets, culverts, open ditches has been mapped in the GIS system. Since 2017, the City has been working with the state to upgrade the drainage system at the Argonaut Dr. /Sutter St. area. This system connects the original Argonaut Mine Dam, running through Sutter St., across Hwy 49, then drains to the Jackson Creek by Detert Park. The project is a partnership between the city and the state and slated for summer 2023. It will improve the underground culvert, enlarge its capacity, and enhance its durability whereby ensure the safety of a Hwy 49.

Drainage infrastructure and maintenance are financed through the City's general fund. The City reports it has submitted grant applications for funding to correct additional flood areas, such as the FEMA/OES Hazard Mitigation grant program.

REGULATORY SETTING - STORMWATER DRAINAGE

Federal

CLEAN WATER ACT (CWA)

The Clean Water Act (CWA) regulates the water quality of all discharges into waters of the United States including wetlands, perennial and intermittent stream channels. Section 401, Title 33, Section 1341 of the CWA sets forth water quality certification requirements for "any applicant applying for a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters." Section 404, Title 33, Section 1344 of the CWA in part authorizes the U.S. Army Corps of Engineers to:

3.15 UTILITIES AND SERVICE SYSTEMS

- Set requirements and standards pertaining to such discharges: subparagraph (e); Issue permits “for the discharge of dredged or fill material into the navigable waters at specified disposal sites”: subparagraph (a);
- Specify the disposal sites for such permits: subparagraph (b);
- Deny or restrict the use of specified disposal sites if “the discharge of such materials into such area will have an unacceptable adverse effect on municipal water supplies and fishery areas”: subparagraph (c);
- Specify type of and conditions for non-prohibited discharges: subparagraph (f);
- Provide for individual State or interstate compact administration of general permit programs: subparagraphs (g), (h), and (j);
- Withdraw approval of such State or interstate permit programs: subparagraph (i);
- Ensure public availability of permits and permit applications: subparagraph (o);
- Exempt certain Federal or State projects from regulation under this Section: subparagraph (r); and,
- Determine conditions and penalties for violation of permit conditions or limitations: subparagraph (s).
- Section 401 certification is required prior to final issuance of Section 404 permits from the U.S. Army Corps of Engineers.

The California State Water Resources Control Board and RWQCBs enforce State of California statutes that are equivalent to or more stringent than the Federal statutes. RWQCBs are responsible for establishing water quality standards and objectives that protect the beneficial uses of various waters including the Sacramento River, and other waters in the Planning Area. In the Planning Area, the RWQCB is responsible for protecting surface and groundwater from both point and non-point sources of pollution. Water quality objectives for all of the water bodies within the Planning Area were established by the RWQCB and are listed in its Basin Plan.

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

Jackson is a participant in the National Flood Insurance Program (NFIP), a Federal program administered by FEMA. Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years, although such a flood may occur in any given year. Communities are occasionally audited by the Department of Water Resources to insure the proper implementation of FEMA floodplain management regulations.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

National Pollutant Discharge Elimination System (NPDES) permits are required for discharges to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, oceans, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal Clean Water Act, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.).

The RWQCB issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the EPA Regional Administrator (EPA Region 9). The terms of these NPDES permits implement pertinent provisions of the Federal Clean Water Act and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti-degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the Clean Water Act's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the CWA.

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and groundwater cleanup discharges. NPDES permits are issued for five years or less, and therefore must be updated regularly. To expedite the permit issuance process, the RWQCB has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes. The SWRCB has issued general permits for stormwater runoff from construction sites statewide. Stormwater discharges from industrial and construction activities can be covered under these general permits, which are administered jointly by the SWRCB and RWQCB.

State

DEPARTMENT OF WATER RESOURCES

The Department of Water Resources' (DWR) major responsibilities include preparing and updating the California Water Plan to guide development and management of the State's water resources, planning, designing, constructing, operating, and maintaining the State Water Resources Development System, protecting and restoring the Sacramento-San Joaquin Delta, regulating dams, providing flood protection, assisting in emergency management to safeguard life and property, educating the public, and serving local water needs by providing technical assistance. In addition, the DWR cooperates with local agencies on water resources investigations; supports watershed and river restoration programs; encourages water conservation; explores conjunctive use of ground and surface water; facilitates voluntary water transfers; and, when needed, operates a State drought water bank.

CALIFORNIA WATER CODE

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the State Water Resource Control Board (SWRCB) and each of the RWQCBs power to protect water quality, and is the primary vehicle for implementation of California's responsibilities under the Federal Clean Water Act. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a water quality control plan (Basin Plan) for its region the regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by

the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

The Water Code Section 13260 requires all dischargers of waste that may affect water quality in waters of the state to prepare and provide a water quality discharge report to the RWQCB. Section 13260a-c is as follows:

(a) Each of the following persons shall file with the appropriate regional board a report of the discharge, containing the information that may be required by the regional board:

(1) A person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state, other than into a community sewer system.

(2) A person who is a citizen, domiciliary, or political agency or entity of this state discharging waste, or proposing to discharge waste, outside the boundaries of the state in a manner that could affect the quality of the waters of the state within any region.

(3) A person operating, or proposing to construct, an injection well.

(b) No report of waste discharge need be filed pursuant to subdivision (a) if the requirement is waived pursuant to Section 13269.

(c) Each person subject to subdivision (a) shall file with the appropriate regional board a report of waste discharge relative to any material change or proposed change in the character, location, or volume of the discharge.

WATER QUALITY CONTROL PLAN (BASIN PLAN) FOR THE CENTRAL VALLEY REGION

The Water Quality Control Plan for the Central Valley Region (Basin Plan) includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The term “water quality standards,” as used in the Federal Clean Water Act, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards.

The RWQCB regulates waste discharges to minimize and control their effects on the quality of the region’s ground and surface water. Permits are issued under a number of programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. Water quality problems in the region are listed in the Basin Plan, along with the causes, where they are known. For water bodies with quality below the levels necessary to allow all the beneficial uses of the water to be met, plans for improving water quality are included. The Basin Plan reflects, incorporates, and implements applicable portions of a number of national and statewide water quality plans and policies, including the California Water Code and the Clean Water Act.

STATE WATER RESOURCE CONTROL BOARD (STATE WATER BOARD) STORM WATER STRATEGY

The Storm Water Strategy is founded on the results of the Storm Water Strategic Initiative, which served to direct the State Water Board's role in storm water resources management and evolve the Storm Water Program by a) developing guiding principles to serve as the foundation of the storm water program, b) identifying issues that support or inhibit the program from aligning with the guiding principles, and c) proposing and prioritizing projects that the Water Boards could implement to address those issues. The State Water Board staff created a strategy-based document called the Strategy to Optimize Management of Storm Water (STORMS). STORMS includes a program vision, missions, goals, objectives, projects, timelines, and consideration of the most effective integration of project outcomes into the Water Board's Storm Water Program.

Local

City of Jackson Ordinance No. 646

Ordinance No. 646 (An Ordinance of the City of Jackson Establishing a Resource Allocation Program Limiting Development within the City of Jackson) acknowledges limitations in the City's ability to provide sewer, water, road capacity and other infrastructure and services necessary to support development. The purpose of the Ordinance is to coordinate the timing and amount of development consistent with available resources and provisions of the General Plan. The Ordinance establishes an allocation process for new development based on public facility (e.g., traffic conditions, water supply, wastewater capacity) and resource constraints that exist in the City consistent with the requirements of state law and city policy. Specifically, in January of each year the City of Jackson City Council establishes the number of Housing Equivalent Units (HEUs) that will be available that year for development. HEUs are based on the public facility and resource constraints that exist in the City and the status of planned infrastructure improvements as prescribed in the City's Circulation Element of the General Plan and the Amador County Regional Transportation Plan, the AWA's Urban Water Resource Plan, and the City's Waste Water Treatment Plant Facilities Plan.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on the environment associated with Utilities if it would:

- Require or result in the relocation or construction of new or expanded storm water drainage facilities, the construction or relocation of which could cause significant environmental effects.

IMPACTS AND MITIGATION MEASURES

Impact 3.15-5: General Plan implementation would not require or result in the relocation or construction of new or expanded storm water drainage facilities, the construction or relocation of which could cause significant environmental effects (Less than Significant)

Development under the proposed General Plan would result in increased areas of impervious surfaces throughout the Planning Area, resulting in the need for additional or expanded stormwater drainage, conveyance, and retention infrastructure. The infrastructure and facilities necessary to serve new growth would involve development of some facilities on-site within new development projects, some facilities off-site on appropriately designated land, and may also involve improvements to existing facilities and disturbance of existing rights-of-way. The specific impacts of providing new and expanded drainage facilities cannot be determined at this time, as the General Plan does not propose or approve any specific development project nor does it designate specific sites for new or expanded public facilities.

Stormwater drainage and conveyance facilities would be evaluated at the project-level in association with subsequent development projects. However, the facilities would be primarily provided on sites with land use designations that allow such uses and the environmental impacts of constructing and operating the facilities would likely be similar to those associated with new development, redevelopment, and infrastructure projects under the General Plan as discussed throughout this Draft EIR, including in Chapters 3.1 through 3.16 through 4.0.

As future development and infrastructure projects are considered by the City, each project will be evaluated for conformance with the General Plan, Municipal Code, and other applicable regulations. Subsequent development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA. As such, this is a **less than significant** impact and no additional mitigation is required.

The policies and actions listed below would further ensure that there is adequate stormwater drainage and flood control infrastructure to serve future development under the General Plan, and would ensure that future drainage and flood control infrastructure projects do not result in adverse environmental impacts.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

CONSERVATION ELEMENT POLICIES

COS 7.2: Require discretionary projects, as well as new flood control and stormwater conveyance projects, to integrate best management practices (BMPs) and natural features to the greatest extent feasible, while ensuring that these features adequately convey and control stormwater to protect human health, safety, and welfare.

COS 7.6: Where feasible, encourage and support multipurpose detention basins that provide water quality protection, storm water detention, open space amenities, and recreational amenities.

ACTIONS

COS-7a: Continue to identify stormwater and drainage facilities in need of repair and address these needs through capital improvement planning. As feasible, seek to incorporate BMPs and Low Impact Development (LID) techniques into repairs and upgrades that promote water quality objectives.

LAND USE ELEMENT POLICIES

LU 6-1: Provide adequate infrastructure (e.g., streets, sewers, and storm drains) to meet the needs of existing and future development.

LU 6-2: Require development, infrastructure, and long-term planning projects to be consistent with all applicable infrastructure plans, including the Amador Water Agency Urban Water Management Plan and the City's capital improvement programs.

LU 6-3: Require all development projects to mitigate their infrastructure service impacts or demonstrate that the City's infrastructure, public services, and utilities can accommodate the increased demand for services, and that service levels for existing users will not be degraded or impaired.

LU 6-4: Require the payment of impact fees for new development in accordance with the City's Development Code.

LU 6-5: Design services and infrastructure to serve existing and planned land uses. Actions that will induce growth beyond planned levels are prohibited.

LU 6-6: Implement the Resource Constraints and Priority Allocation Ordinance to ensure the availability of public resources and services prior to acceptance of new residential and commercial subdivision applications.

LAND USE ELEMENT ACTIONS

LU-6a: As part of the development review process, determine the potential impacts of development and infrastructure projects on public infrastructure, and ensure that new development contributes its fair share toward necessary on and off-site infrastructure.

LU-6b: Ensure that infrastructure is adequately sized to accommodate the proposed development and, if applicable, allow for extensions to future developments.

LU-6d: When community-desired facilities and services are beyond the City's financial resources to provide, support community-driven efforts to establish special funding and financing districts, such as assessment districts, landscape and lighting maintenance districts, business improvement districts, or community facilities districts, whether citywide or limited to a defined neighborhood, district, or corridor.

3.15.4 SOLID WASTE

Amador County Environmental Services (ACES) provides waste removal services for the City of Jackson and the unincorporated portions of Amador County located south of the City of Jackson.

KEY TERMS

Class I landfill: A landfill that accepts for disposal 20 tons or more of municipal solid waste daily (based on an annual average); or one that does not qualify as a Class II or Class III municipal solid waste landfill.

Class II landfill: A landfill that (1) accepts less than 20 tons daily of municipal solid waste (based on an annual average); (2) is located on a site where there is no evidence of groundwater pollution caused or contributed by the landfill; (3) is not connected by road to a Class I municipal solid waste landfill, or, if connected by road, is located more than 50 miles from a Class I municipal solid waste landfill; and (4) serves a community that experiences (for at least three months each year) an interruption in access to surface transportation, preventing access to a Class I landfill, or a community with no practicable waste management alternative.

Class III landfill: A landfill that is not connected by road to a Class I landfill or a landfill that is located at least 50 miles from a Class I landfill. Class III landfills can accept no more than an average of one ton daily of ash from incinerated municipal solid waste or less than five tons daily of municipal solid waste.

Transfer station: A facility for the temporary deposition of some wastes. Transfer stations are often used as places where local waste collection vehicles will deposit their waste cargo prior to loading into larger vehicles. These larger vehicles will transport the waste to the end point of disposal or treatment.

Waste Management Plan: A Waste Management Plan (WMP) is a completed WMP form, approved by the City for the purpose of compliance with Amador County Integrated Solid Waste management Agency A completed WMP contains actual weight or volume of the material disposed recycled receipts.

WASTE COLLECTION SERVICES

ACES Waste Services Inc. provides commercial and residential customers with plastic bins and carts for the collection of solid waste and recyclable materials. ACES uses a combination of pickup trucks equipped with large rear-mounted bins and regular front loader garbage trucks to collect waste within the service area. The pickup trucks are used mostly for single-family residences and low-density areas, while the front loaders are used in commercial and multi-family areas.

Funding for ACES solid waste collection services are generated from collection fees imposed on all residential, commercial, and industrial customers. Collection occurs on a weekly basis. The rates are based on ACES's contract with the City of Jackson and are increased according to the Consumer Price Index.

WASTE DISPOSAL FACILITIES

All solid waste generated by the city would be collected and transported to the Kiefer Landfill, located in eastern Sacramento County. At present, the Kiefer Road Landfill is the only landfill within the jurisdiction of Sacramento County that is permitted to accept solid waste for disposal. The maximum tons per day (tpd) allowed at the Kiefer Road Landfill is 10,815, with an average intake of 6,362 tpd. The landfill has a total capacity of 117 million cubic yards (58 million tons). The Kiefer Road Landfill is classified as a Class III landfill (a facility at which protection is provided to water quality from municipal, industrial and agricultural wastes) with a maximum permitted capacity of 117,400,000 cubic yards. This site receives agricultural waste, construction and demolition waste, dead animal, industrial, inert, mixed municipal waste, and tires.

TABLE 3.15-5: LANDFILLS EXISTING DAILY CAPACITY AND ESTIMATES CLOSURE DATE

Landfill	Location	Maximum Daily Throughput (Tons/Day)	Remaining Capacity (Cubic Yards)	Anticipated Closure Date
Kiefer Landfill	Sacramento County	10,815	112,900,000	2064

SOURCE: CAL RECYCLE. ACCESSED OCTOBER 2020.

After pick-up by ACES, recyclables collected from the City of Jackson would be transported to the Central Valley Waste Management Material Recovery Facility (CVWM) in Lodi in San Joaquin County. The CVWM is located at 1333 East Turner Road in Lodi and handles all types of recyclable materials including yard waste, garden waste, leaves, and brush. The CVWM is currently permitted to accept up to 300 tons per day (TPD) of recyclable waste.

SOLID WASTE GENERATION RATES AND VOLUMES

The California Department of Resources Recycling and Recovery (CalRecycle) tracks and monitors solid waste generation rates on a per capita basis. Per capita solid waste generation rates and total annual solid waste disposal volumes for the Amador County between 2014 and 2018 are shown in Table 3.15-6 below.

TABLE 3.15-6: SOLID WASTE GENERATION RATES IN AMADOR COUNTY

YEAR	WASTE GENERATION RATES (POUNDS/PERSON/DAY)		TOTAL DISPOSAL TONNAGE (TONS/YEAR)
	PER RESIDENT	PER EMPLOYEE	
2014	4.2	13.6	27,628
2015	4.7	14.9	31,245
2016	4.7	15.2	32,171
2017	3.4	17.3	37,526
2018	5.6	17.3	38,511

SOURCE: [HTTPS://WWW2.CALRECYCLE.CA.GOV/LGCENTRAL/ANNUALREPORTING/DIVERSIONDISPOSAL](https://www2.calrecycle.ca.gov/LGCENTRAL/ANNUALREPORTING/DIVERSIONDISPOSAL) ACCESSED OCTOBER 2020.

As shown in the Table 3.15-6 above, the per capita per resident waste generation rate increased from 4.2 to 5.6lbs/person/day over the 5 year (2014-2018) period, however, the total annual disposal tonnage in Amador County increased by 10,883 tons over the 2014 to 2018 time span. With the passage of SB 1016, per capita disposal rate is used to determine the diversion progress of a county and not the jurisdictional diversion rates. Therefore, a population increase resulting in the generation of more overall county waste does not affect the jurisdiction's ability to meet its waste goals. The County's waste disposal rate targets are shown in Table 3.15-6.

As shown in the above table, for the years 2014 through 2018 (the latest year of data available), the per capita waste generation rate in Amador County was at the lowest level in 2014; and the total annual disposal tonnage in Amador County was at their lowest level (during this period) in 2014. Amador County Integrated Waste Management Agency, partnered by the City of Jackson, complied with State requirements to reduce the volume of solid waste through recycling and reuse of solid waste. Amador County achieved the County's per capita disposal target rates for 2018 of 7.7 and 24.1 pounds per person per day for residents and employees, respectively, as established by CalRecycle.

REGULATORY SETTING – SOLID WASTE

Federal

RESOURCE CONSERVATION AND RECOVERY ACT

The Resource Conservation and Recovery Act (RCRA) was enacted in 1976 to address the huge volumes of municipal and industrial solid waste generated nationwide. After several amendments, the current Act governs the management of solid and hazardous waste and underground storage tanks (USTs). RCRA was an amendment to the Solid Waste Disposal Act of 1965. RCRA has been amended several times, most significantly by the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA is a combination of the first solid waste statutes and all subsequent amendments. RCRA authorizes the Environmental Protection Agency (EPA) to regulate waste management activities. RCRA authorizes states to develop and enforce their own waste management programs, in lieu of the Federal program, if a state's waste management program is substantially equivalent to, consistent with, and no less stringent than the Federal program.

State

CALIFORNIA INTEGRATED WASTE MANAGEMENT ACT (AB 939 AND SB 1322)

The California Integrated Waste Management Act of 1989 (AB 939 and SB 1322) requires every city and county in the state to prepare a Source Reduction and Recycling Element to its Solid Waste Management Plan that identifies how each jurisdiction will meet the mandatory state waste diversion goals of 25% by 1995 and 50% by 2000. The purpose of AB 939 and SB 1322 is to "reduce, recycle, and re-use solid waste generated in the state to the maximum extent feasible." The term "integrated waste management" refers to the use of a variety of waste management practices to safely and effectively handle the municipal solid waste stream with the least adverse impact on human health and the environment. The Act has established a waste management hierarchy, as follows: Source Reduction; Recycling; Composting; Transformation; and Disposal.

CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD MODEL ORDINANCE

Subsequent to the Integrated Waste Management Act, additional legislation was passed to assist local jurisdictions in accomplishing the goals of AB 939. The California Solid Waste Re-use and Recycling Access Act of 1991 (§42900-42911 of the Public Resources Code) directs the California Integrated Waste Management Board (CIWMB) to draft a “model ordinance” relating to adequate areas for collecting and loading recyclable materials in development projects. The model ordinance requires that any new development project, for which an application is submitted on or after September 1, 1994, include “adequate, accessible, and convenient areas for collecting and loading recyclable materials.” For subdivisions of single family detached homes, recycling areas are required to serve only the needs of the homes within that subdivision.

CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN)

CALGreen requires the diversion of at least 50 percent of the construction waste generated during most new construction projects (CALGreen Sections 4.408 and 5.408) and some additions and alterations to nonresidential building projects.

CALIFORNIA MANDATORY COMMERCIAL RECYCLING LAW (AB 341)

Assembly Bill (AB) 341 directed CalRecycle to develop and adopt regulations for mandatory commercial recycling. CalRecycle initiated formal rulemaking with a 45-day comment period beginning Oct. 28, 2011. The final regulation was approved by the Office of Administrative Law on May 7, 2012. The purpose of AB 341 is to reduce GHG emissions by diverting commercial solid waste to recycling efforts and to expand the opportunity for additional recycling services and recycling manufacturing facilities in California.

Beginning on July 1, 2012, businesses have been required to recycle, and each jurisdiction has implemented programs that include education, outreach, and monitoring. Jurisdictions were required to start reporting on their 2012 Electronic Annual Report (due August 1, 2013) on their initial education, outreach, and monitoring efforts, and, if applicable, on any enforcement activities or exemptions implemented by the jurisdiction.

In addition to Mandatory Commercial Recycling, AB 341 sets a statewide goal for 75 percent disposal reduction by the year 2020. This is not written as a 75 percent diversion mandate for each jurisdiction. The 50 percent disposal reduction mandate still stands for cities, counties, and State agencies (including community colleges) under AB 939. CalRecycle continues to evaluate program implementation as it has in the past through the Annual Report review process for entities subject to either AB 939.

ASSEMBLY BILL 1826 MANDATORY COMMERCIAL ORGANICS RECYCLING

In October 2014 Governor Brown signed AB 1826, requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units (please note, however, that multi-family dwellings are not required to have a food waste diversion program). Organic waste

3.15 UTILITIES AND SERVICE SYSTEMS

(also referred to as organics) means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste. This law phases in the mandatory recycling of commercial organics over time, while also offering an exemption process for rural counties. In particular, the minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to comply.

Since January 1, 2019, businesses that generate 4 cubic yards or more of commercial solid waste per week shall arrange for organic waste recycling services. If CalRecycle determines that the statewide disposal of organic waste has not been reduced by 50 percent of the level of disposal during 2014, the organic recycling requirements on businesses will expand to cover businesses that generate 2 cubic yards or more of commercial solid waste per week. Additionally, certain exemptions may no longer be available if this target is not met.

AB 2176 (MONTANEZ, CHAPTER 879, STATUTES OF 2004)

This law requires the largest venue facilities and events (as defined) in each city and county to plan and implement solid waste diversion programs, and annually report the progress of those upon the request of their local government. In turn, local jurisdictions must report to the CIWMB waste diversion information for the top 10 percent of venues and events by waste generation.

A large event is defined as:

1. Serves an average of more than 2,000 individuals per day of operation (both people attending the event and those working at it—including volunteers—are included in this number); and
2. Charges an admission price or is run by a local agency.

The bill specifically includes public, nonprofit, or privately owned parks, parking lots, golf courses, street systems, or other open space when being used for an event, including, but not limited to, a sporting event or a flea market in addition to events that meet both of the above.

A large venue is defined as:

- A permanent facility that annually seats or serves an average of more than 2,000 individuals within the grounds of the facility per day of operation (both people attending the event and those working at it—including volunteers too—are included in this number).

Venues include, but are not limited to airports, amphitheaters, amusement parks, aquariums, arenas, conference or civic centers, fairgrounds, museums, halls, horse tracks, performing arts centers, racetracks, stadiums, theaters, zoos, and other public attraction facilities.

SENATE BILL 1383 SHORT-LIVED CLIMATE POLLUTANTS: ORGANIC WASTE METHANE EMISSIONS REDUCTIONS

In September 2016, Governor Brown signed SB 1383, establishing methane emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants (SLCP) in various

sectors of California's economy. The bill codifies the California Air Resources Board's Short-Lived Climate Pollutant Reduction Strategy, established pursuant to SB 605, in order to achieve reductions in the statewide emissions of short-lived climate pollutants. Actions to reduce short-lived climate pollutants are essential to address the many impacts of climate change on human health, especially in California's most at-risk communities, and on the environment.

As it pertains to solid waste, SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. The law grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20 percent of currently disposed edible food is recovered for human consumption by 2025.

Local

AMADOR COUNTY INTEGRATED SOLID WASTE MANAGEMENT AGENCY

The Amador County Integrated Solid Waste management Agency is responsible for implementing and monitoring the Amador County Solid Waste Management Plan (SWMP). The SWMP monitors the operation of Recycling Centers, a Household Hazardous Materials Collection Program, and other waste management services, educational programs, licensing, and regulatory activities required by the Plan. Additionally, the SWMP ensures Amador County's compliance with federal and state environmental regulations.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on the environment associated with Utilities if it would:

- 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; and/or
- Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

IMPACTS AND MITIGATION MEASURES

Impact 3.15-6: General Plan implementation would comply with federal, state, and local management and reduction statutes and regulations related to solid waste, would not generate solid waste in excess of State or local standards or otherwise impair the attainment of solid waste reduction goals, and would not exceed of the capacity of local infrastructure (Less than Significant)

The development of future land uses under the proposed General Plan would increase solid waste disposal needs and could have the potential to require the construction of new landfill facilities, or expansion of existing facilities.

Future development of projects as contemplated under the proposed General Plan may increase the population within the Planning Area by an additional 1,435 persons. The City of Jackson has achieved a disposal rate of 5.6 PPD per resident in 2018. Assuming these disposal rates remain constant throughout the life of the General Plan, the new growth under General Plan buildout would result in an increase of approximately 8,036 (5.6lbs x 1,435 persons) pounds per day of solid waste. New potential growth plus existing residents could expect to generate a total of 36,433 pounds per day (5.6 lbs x 6,506 persons), or 6,649 tons of solid waste per year.

The permitted maximum tons per day (tpd) allowed at the Kiefer Road Landfill is 10,815, with an average intake of 6,362 tpd. The landfill has a total capacity of 117 million cubic yards (58 million tons). The Kiefer Road Landfill is classified as a Class III landfill (a facility at which protection is provided to water quality from municipal, industrial and agricultural wastes) with a maximum permitted capacity of 117,400,000 cubic yards.

The remaining capacity of these landfills include 112,900,000 cubic yards of solid waste at the Kiefer Landfill, with an estimated cease operation date of 2064. The addition of solid waste associated with the proposed project to the Kiefer Landfill would not exceed the landfills' remaining capacity. While there are no plans for landfill construction or expansion associated with the proposed General Plan, development of new solid waste disposal facilities could result in environmental effects in areas such as traffic, hydrology, biology, air quality, greenhouse gases, and noise. Any future construction projects in would be required to conduct environmental review pursuant to CEQA prior to approval. As future development and infrastructure projects are considered by the City, each project will be evaluated for conformance with the General Plan, Municipal Code, and other applicable regulations associated with solid waste. Subsequent development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA.

In addition, the proposed General Plan includes actions to further reduce the project's impact on solid waste services, as identified below. With the implementation of the following policies and payment of a solid waste connection fees for project within the Planning Area, potential solid waste impacts would be ensured to remain a ***less than significant*** impact.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

POLICIES

COS 6.1: Provide adequate waste disposal, recycling, and reuse services for present and future residents and businesses, including programs that improve public access to solid waste collection and recycling facilities.

COS 6.2: Participate in source reduction and recycling efforts to reduce the amount of solid waste sent to the landfill and extend the life of the landfill.

COS 6.3: Comply with Assembly Bill 939 source reduction and recycling requirements of 50 percent diversion of solid waste from landfills. Continue to strengthen local recycling efforts in order to assist the State in meeting the statewide source reduction, recycling, and composting requirements established by Assembly Bill 341.

COS 6.4: Increase the City's role in the source reduction and recycling components of waste management through recycling programs at City facilities to reduce the quantity of City-generated waste.

COS 6.5: Ensure that special waste – including hazardous materials, tires, medications, infectious waste, asbestos waste, construction waste, and electronic waste – are recycled and disposed of in a manner that is safe for the environment, residents, and employees.

COS 6.6: Educate the public on ways to divert household waste from the landfill, including education programs on reducing, reusing, and recycling material.

COS 6.7: Consistent with SB 1383, conduct education and outreach on organics recycling for all residents, businesses (including those that generate edible food that can be donated), haulers, solid waste facilities, and local food banks and other food recovery organizations.

ACTIONS

COS-6a: Continue existing, and develop new, diversion strategies (including source reduction, recycling, composting and yard waste programs) to reduce solid waste disposal volume to meet the State-mandated level.

COS-6b: Pursue public funding sources, such as grants, to reduce fiscal impacts of continued implementation of recycling programs.

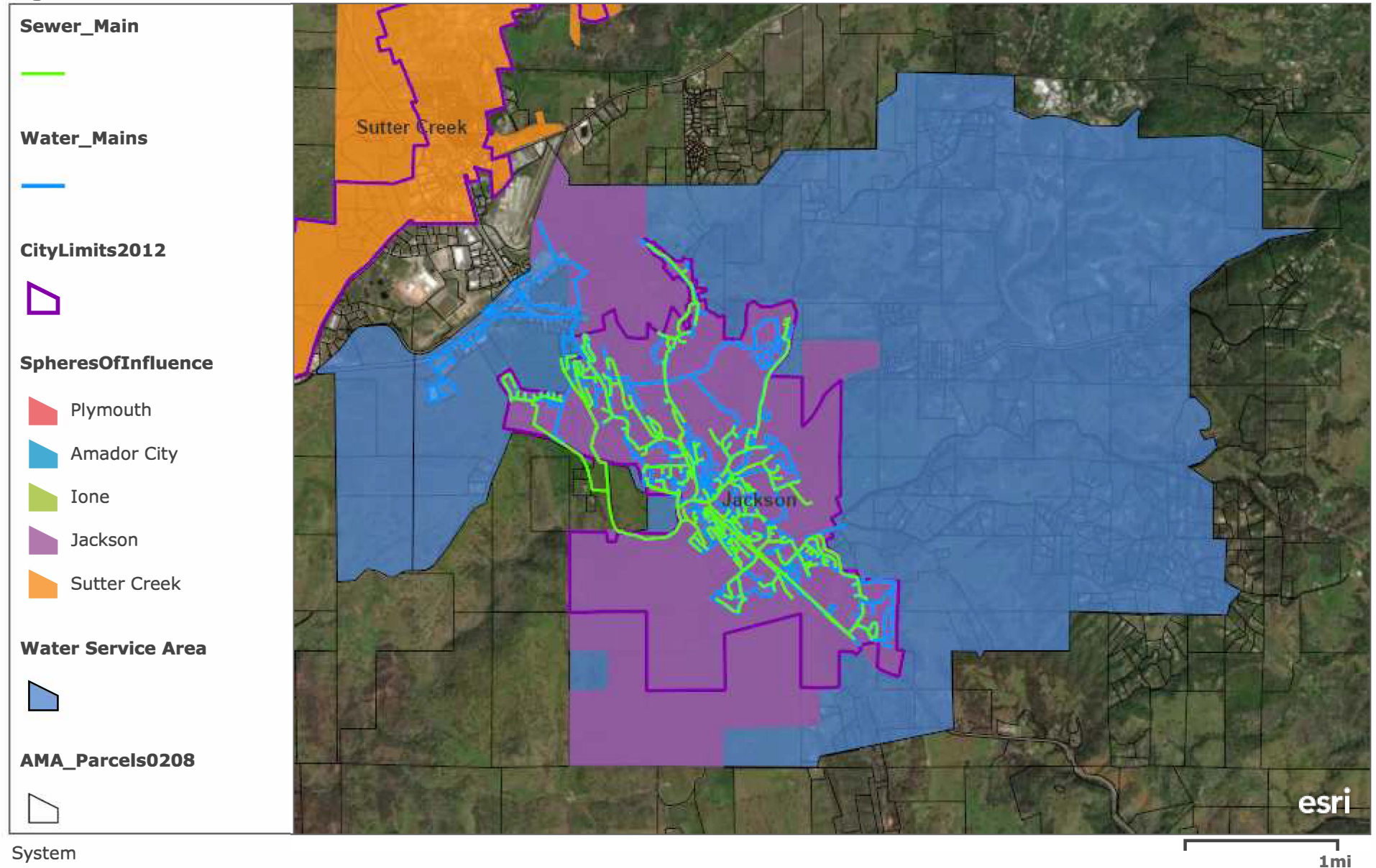
COS-6c: Continue to implement, and update as necessary, the City's Municipal Code to regulate issues related to solid waste, including but not limited to, Chapter 8.04 (Solid Waste).

COS-6d: Develop and promote citywide reuse events such as a community-wide garage sale, and encourage community groups and organizations to pursue reuse events and activities to prevent reusable items from going into the landfill.

COS-6e: Provide a conservation page (or similar page) on the City's website that provides links to resources and provides information regarding local and regional recycling programs, opportunities for reuse of materials, composting strategies, organics recycling, and opportunities for the disposal of hazardous waste.

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Figure 3.15-1: Jackson Utility Systems Service Area



System

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This section provides a background discussion of the hazards associated with wildfires in the Planning Area. The discussion of fire suppression resources is located within Chapter 3.13, Public Services and Recreation, of this report.

Comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from Cal OES. Each of the comments related to this topic are addressed within this section. The NOP and full comments received are included in Appendix A of this Draft EIR.

3.16.1 ENVIRONMENTAL SETTING

FIRE HAZARD SEVERITY ZONES

The state has charged the California Department of Forestry and Fire Protection (CalFire) with the identification of Fire Hazard Severity Zones (FHSZ) within State Responsibility Areas (SRAs). In addition, CalFire must recommend Very High Fire Hazard Severity Zones (VHFHSZ) identified within any Local Responsibility Areas (LRAs). The FHSZ maps are used by the State Fire Marshall as a basis for the adoption of applicable building code standards. Figures 3.8-1 and Figure 3.8-2 show the corresponding Fire Hazard Severity Zones within the City of Jackson and Amador County, respectively.

Local Responsibility Areas

The Jackson Planning Area is located within a Local Responsibility Area (LRA). CalFire has determined that the City of Jackson has no Very High Fire Hazard Severity Zones (VHFHSZ) within Local Responsibility Areas. Figure 3.8-2 shows Fire Hazard Severity Zones for Local, State, and Federal Responsibility Areas.

State Responsibility Areas

There are State Responsibility Areas (SRAs) within the vicinity of the Jackson Planning Area. SRAs surround the City of Jackson and are located outside the City Limits within the City's SOI. FHSZ within the SRAs within the Jackson Planning Area range from "Moderate" to "High". Figure 3.8-1 show Fire Hazard Severity Zones for State Responsibility Areas within the City of Jackson. FHSZ within the SRAs within Amador County range from "Moderate" to "Very High". Figure 3.8-2 shows Fire Hazard Severity Zones for State Responsibility Areas within Amador County.

Federal Responsibility Areas

There are no Federal Responsibility Areas within the Jackson Planning Area. As shown on Figure 3.8-2 the majority of Federal Responsibility Areas (FRA) are located on the eastern side of Amador County.

IDENTIFYING FIRE HAZARDS

Fuel Rank

Fuel rank is a ranking system developed by CalFire that incorporates four wildfire factors: fuel model, slope, ladder index, and crown index.

The U.S. Forest Service has developed a series of fuel models, which categorize fuels based on burn characteristics. These fuel models help predict fire behavior. In addition to fuel characteristics, slope is an important contributor to fire hazard levels. A surface ranking system has been developed by CalFire, which incorporates the applicable fuel models and slope data. The model categorizes slope into six ranges: 0-10%, 11-25%, 26-40%, 41-55%, 56-75% and >75%. The combined fuel model and slope data are organized into three categories, referred to as surface rank. Thus, surface rank is a reflection of the quantity and burn characteristics of the fuels and the topography in a given area.

The ladder index reflects the distance from the ground to the lowest leafy vegetation for tree and plant species. The crown index reflects the quantity of leafy vegetation present within individual specimens of a given species.

The surface rank, ladder index, and crown index for a given area are combined in order to establish a fuel rank of medium, high, or very high. Fuel rank is used by CalFire to identify areas in the California Fire Plan where large, catastrophic fires are most likely.

Amador County contains areas with “moderate” “High” “Very High” and “non-wildland fuel” ranks. Generally the more developed areas within the county near the Highway 49 corridor including the City of Jackson are considered non-wildland with the fuel rank increasing in the eastern foothill areas of the county. The areas warranting “moderate” to “Very High” fuel ranks possess combustible material in sufficient quantities combined with topographic characteristics that pose a wildfire risk.

Fire Threat to People

As shown in Figure 3.8-1, there are no areas within the City or Planning Area classified as Very High Fire Hazards, however, a majority of the planning area outside City Limits is designated as Moderate and some areas surrounding the planning area are designated as High Fire hazard area.

3.16.2 REGULATORY SETTING

FEDERAL

FY 2001 Appropriations Act

Title IV of the Appropriations Act required the identification of “Urban Wildland Interface Communities in the Vicinity of Federal Lands that are at High Risk from Wildfire” by the U.S. Departments of the Interior and Agriculture.

Disaster Mitigation Act (2000)

Section 104 of the Disaster Mitigation Act of 2000 (Public Law 106-390) enacted Section 322, Mitigation Planning of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, which created incentives for state and local entities to coordinate hazard mitigation planning and implementation efforts, and is an important source of funding for fuels mitigation efforts through hazard mitigation grants.

National Incident Management System

The City adopted the National Incident Management System (NIMS), which provides a systematic, proactive approach to guide government agencies, nongovernmental organizations, and the private sector to work together to prevent, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life and property and harm to the environment. NIMS improves the City’s ability to prepare for and respond to potential incidents and hazard scenarios.

National Fire Plan 2000

The summer of 2000 marked a historic milestone in wildland fire records for the United States. Dry conditions (across the western United States), led to destructive wildfire events on an estimated 7.2 million acres, nearly double the 10-year average. Costs in damages including fire suppression activities were approximately 2.1 billion dollars. Congressional direction called for substantial new appropriations for wildland fire management. This resulted in action plans, interagency strategies, and the Western Governor’s Association’s “A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment - A 10-Year Comprehensive Strategy - Implementation Plan”, which collectively became known as the National Fire Plan. This plan places a priority on collaborative work within communities to reduce their risk from large-scale wildfires.

Healthy Forest Initiative 2002/Healthy Forest Restoration ACT 2003

In August 2002, the Healthy Forests Initiative (HFI) was launched with the intent to reduce the severe wildfires risks that threaten people, communities, and the environment. Congress then passed the Healthy Forests Restoration Act (HFRA) on December 3, 2003 to provide the additional administrative tools needed to implement the HFI. The HFRA strengthened efforts to restore healthy forest conditions near communities by authorizing measures such as expedited environmental assessments for hazardous fuels projects on federal land. This Act emphasized the

need for federal agencies to work collaboratively with communities in developing hazardous fuel reduction projects and places priority on fuel treatments identified by communities themselves in their Community Wildfire Protection Plans.

Department of the Interior Department Manual Part 620

Wildland Fire Management. Part 620 of the Department of the Interior Departmental Manual pertains to wildland fire management policies, with the goal of providing an integrated approach to wildland fire management. The guiding principles of the plan emphasize the need for public health and safety considerations, risk management protocols, inter-agency collaboration, and economic feasibility of wildfire management practices, as well as the ecological role of wildfires.

STATE

California Strategic Fire Plan

This statewide plan is a strategic document, which guides fire policy for much of California. The plan is aimed at reducing wildfire risk through pre-fire mitigation efforts tailored to local areas through assessments of fuels, hazards, and risks.

California State Multi-Hazard Mitigation Plan

The purpose of the State Multi-Hazard Mitigation Plan (SHMP) is to significantly reduce deaths, injuries, and other losses attributed to natural- and human-caused hazards in California. The SHMP provides guidance for hazard mitigation activities emphasizing partnerships among local, state, and federal agencies as well as the private sector.

California Government Code

California Government Code Section 65302.5 requires the State Board of Forestry and Fire Protection to provide recommendations for a local jurisdiction's General Plan fire safety element when the jurisdiction amends its general plan. While not a direct and binding fire prevention requirement for individuals, general plans that adopt the Board's recommendations will include goals and policies that provide for contemporary fire prevention standards for the jurisdiction. While the State Board of Forestry and Fire Protection has not specifically commented on the Proposed General Plan at the time that this EIR was written, the Proposed General Plan has been developed to include best practices to ensure contemporary fire prevention standards, as described in greater detail under the impact discussions below.

California Government Code Section 51175 defines Very High Fire Hazard Severity Zones and designates lands considered by the State to be a very high fire hazard.

California Government Code Section 51189 directs the Office of the State Fire Marshal to create building standards for wildland fire resistance. The code includes measures that increase the likelihood of a structure withstanding intrusion by fire (such as building design and construction requirements that use fire-resistant building materials) and provides protection of structure

projections (such as porches, decks, balconies and eaves), and structure openings (such as attics, eave vents, and windows).

California Public Resource Code

The State's Fire Safe Regulations are set forth in Public Resources Code Section 4290, which include the establishment of SRAs.

Public Resources Code Section 4291 sets forth defensible space requirements, which are applicable to anyone that ...owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered with flammable material (§4291(a)).

Public Resources Code Sections 4292-4296 and 14 CCR 1256, Fire Prevention for Electrical Utilities, address the vegetation clearance standards for electrical utilities. They include the standards for clearing around energy lines and conductors such as power-line hardware and power poles. These regulations are critical to wildland fire safety because of the substantial number of power lines in wildlands, the historic source of fire ignitions associated with power lines, and the extensive damage that results from power line caused wildfires in severe wind conditions.

Assembly Bill 337

Per Assembly Bill 337, local fire prevention authorities and CalFire are required to identify VHFHSZs in LRAs. Standards related to brush clearance and the use of fire resistant materials in fire hazard severity zones are also established.

Uniform Fire Code

The Uniform Fire Code (UFC) establishes standards related to the design, construction, and maintenance of buildings. The standards set forth in the UFC range from designing for access by firefighters and equipment and minimum requirements for automatic sprinklers and fire hydrants to the appropriate storage and use of combustible materials.

Senate Bill No. 1241

California Senate Bill No. 1241 requires that the Safety Element component of city or county general plans to incorporate fire risk related to SRAs and Very High Fire Hazard Severity Zones.

Code of Regulations Title 8 (Cal/OSHA)

In accordance with CCR, Title 8, Section 1270 and Section 6773 (Fire Prevention and Fire Protection and Fire Equipment), the Occupational Safety and Health Administration (Cal OSHA) establishes fire suppression service standards. The standards range from fire hose size requirements to the design of emergency access roads.

Code of Regulations Title 14 (Natural Resources)

Division 1.5 (Department of Forestry and Fire Protection), Title 14 of the CCR establishes a variety of wildfire preparedness, prevention, and response regulations.

Code of Regulations Title 19 (Public Safety)

Title 19 of the CCR establishes a variety of emergency fire response, fire prevention, and construction and construction materials standards.

LOCAL

Amador County Sheriff's Office of Emergency Services

The Amador County Sheriff's Office of Emergency Services (OES) primary responsibility is to coordinate the county government's response to disasters or other large scale emergencies. The office is charged with providing the necessary planning, coordination, response support and communications with all agencies affected by large scale emergencies or disasters. OES works in a cooperative effort with other governmental jurisdictions within the county such as: law enforcement, fire, emergency medical services, state and federal agencies, utilities, private industry and volunteer groups in order to provide a coordinated response to disasters. The Emergency Services Coordinator also manages the County Emergency Operations Center (EOC) which is located in the Sheriff's Office. The EOC becomes the single focal point for centralized management and coordination of emergency response and recovery operations during a disaster or other emergency affecting the Amador County Operational Area. The EOC will be activated when an emergency situation occurs that exceeds local and/or in field capabilities to adequately respond to and mitigate the incident.

City of Jackson Municipal Code*Chapter 8.12 Weed and Rubbish Abatement*

This provides the standards for the fire chief or enforcement officer to provide abatement in the event that weeds, refuse or rubbish are a public nuisance.

Chapter 17.36 Hillside Development Standards

This chapter regulates development with the steepness of terrain in order to minimize the impact of grading, unnecessary removal of vegetation, land instability, and fire hazards.

Chapter 14.04 Uniform Codes

This chapter adopts the 2019 Edition of the California Fire Code contained in Part 9 of Title 24 of the California Code of Regulations.

Chapter 8.32 Protection of Critical Infrastructure and Wildfire Risk Areas

The purpose of this chapter to mitigate the threat of fire and other potential causes of destruction and damage to and interference with, critical infrastructure, in order to protect the health, safety, and welfare of the public, by authorizing the removal of persons and their personal property in, on, or near critical infrastructure..

3.16.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact related to wildfires if:

- Located in or near State Responsibility Areas or lands classified as very high fire hazard severity zones, the project would:
 - Substantially 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.
 - Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

IMPACTS AND MITIGATION MEASURES

Impact 3.16-1: General Plan implementation would not have a significant impact related to wildfire risks associated with lands in or near State Responsibility Areas or lands classified as very high fire hazard severity zones (Less than Significant)

The Planning Area is not located within a State Responsibility Area and there are no lands classified as very high fire hazard severity zones within the Planning Area, or immediately adjacent to the planning area.

The Planning Area is located within a Local Responsibility Area (LRA). CalFire has determined that Jackson has no Very High Fire Hazard Severity Zones (VHFHSZ) within Local Responsibility Areas, and furthermore, CalFire does not delineate any VHFHSZs within nearby SRA lands. Nothing in the General Plan will substantially alter the slope, prevailing winds, or other factors that would increase exposure to Jackson residents, employees or visitors to increased pollutant concentrations from wildfire or result in the uncontrollable spread of a wildfire. Additionally, while the City cannot state with certainty that future increased risks associated with post-fire runoff and debris flows and other present and post fire issues would not occur, implementation of the General Plan would not exacerbate this risk beyond the existing environmental conditions.

Any future projects contemplated under the General Plan would be required to comply with the provisions of Federal, State, and local requirements related to wildland fire hazards, including

State fire safety regulations associated with wildland-urban interfaces, fire-safe building standards, and defensible space requirements as part of the project's approval process. As future development and infrastructure projects are considered each project would be evaluated for potential impacts, specific to that project, associated with wildland fire hazards as required under CEQA. As described previously, the General Plan and General Plan Land Use Map does not designate any urban uses in any area designated as a High FHSZs.

Development allowed under the General Plan would be required to comply with the applicable provisions of the California Building Code (CBC), and CA Fire Code (CFC). Future developments utility infrastructure would also be subject to the requirements established in the additional Public Resources Code including: Public Resources Code Section 4292, which requires clearing of flammable fuels for a minimum 10-foot radius from the outer circumference of poles and towers; and Public Resources Code Section 4293, which sets basic requirements for clearances around electrical conductors. Furthermore, the future projects would be required to meet vegetation clearance requirements outlined in Title 14, Section 1104.1(d) of the California Code of Regulations for single overhead facilities, and in CPUC General Order 95 requirements for overhead utility lines in high-fire-threat areas. The General Plan includes requirements for adequate water supply and water flow availability, emergency access, fire protection services, fire safe design site standards, and ensuring public awareness regarding safety. All future development projects would be required to be consistent with the standards related to the California Fire Code and would also be subject to CCR and PUC standard outlined above. Furthermore, future projects are not anticipated to remove or impede evacuation routes, and the General Plan does not include land uses, policies, or other components that conflict with adopted emergency response or evacuation plans.

Therefore, the General Plan would have *less than significant* impact related to wildfire risks associated with lands in or near State Responsibility Areas or lands classified as very high fire hazard severity zones.

GENERAL PLAN POLICIES AND ACTION THAT MINIMIZE POTENTIAL IMPACTS

SAFETY ELEMENT POLICIES

SA 4.1: Provide adequate funding for fire and law enforcement services, facilities, and personnel to accommodate existing and future citizens' needs to ensure a safe and secure environment for people and property.

SA 4.4: Ensure that adequate water supplies are available for fire suppression throughout the City.

SA 4.5: Support efforts to remedy any deficiencies in the water delivery system to ensure adequate fire suppression flows.

SA 4.6: Require development to construct and fund all fire suppression infrastructure and equipment needed to provide adequate fire protection services.

SA 4.7: Promote fire safety through education and building design.

SA 4.8: Promote public outreach to increase community safety. Public outreach should include information related to defensible space and evacuation routes.

SA 4.9: Ensure development projects are reviewed for consistency with the Amador County Local Hazard Mitigation Plan.

SA 4.10: Consider amendments to the Land Use Map in the event of significant structure loss from wildfire to ensure that redevelopment of homes and business does not lead to unreasonable future risk from wildfires.

SAFETY ELEMENT ACTIONS

SA-4b: As part of the development review process, consult with the Fire Department in order to ensure that development projects facilitate adequate fire services and fire prevention measures.

SA-4c: Continue to require all new development to be reviewed for consistency with the relevant State and local Fire Safe Regulations, and the most recently adopted fire code standards.

SA-4d: Reduce the risk of wildfire hazards by working with property owners, the Fire Department, and Public Works Division to maintain fire retardant landscaping, buffer zones, community fire breaks, and private road and public road clearance in areas of high wildfire risk.

SA-4e: Work with Amador County and other partner agencies to review and update local and regional hazard plans, including emergency operation plans and the Amador County Local Hazard Mitigation Plan, to include an analysis of evacuation routes, fire breaks, and other community needs.

SA-4f: Seek funding from state, federal, and other sources to assist in emergency management planning, including community education and outreach describing public procedures and evacuation routes in the event of an emergency or natural disaster.

SA-4g: Promote cooperation between the Jackson Fire Department, Amador Fire Protection District, and other countywide fire districts for training and mutual aid.

SA-4h: Review and require all projects to adhere to Municipal Code requirements to ensure adequate safety services. These include, but are not limited to, Chapter 2.08 (Fire Department), Chapter 17.92 (Subdivision Design and Improvements), and Chapter 8.12 (Weed and Rubbish Abatement).

SA-4i: Review procedures for local implementation of the County Emergency Operations Plan (EOP) and help to educate the community on the need for emergency preparedness.

SA-4j Seek opportunities to provide multiple evacuation routes to residential areas that are served by only one evacuation route. If the addition of new roadways is deemed infeasible, ensure that existing evacuation routes are properly maintained via vegetation removal and roadway maintenance, in order to ensure that they can be effectively utilized during an emergency.

LAND USE ELEMENT ACTIONS

LU-7a Review all development proposals, planning projects, and infrastructure projects to ensure that potential adverse environmental impacts such as exposure to pollutants, including toxic air contaminants, flood and wildfire risk, and unacceptable levels of noise and vibration are reduced impacts to the greatest extent feasible.

CEQA requires an EIR to evaluate a project's effects in relationship to broader changes that are occurring or that may foreseeably occur, in the surrounding environment. Accordingly, this chapter presents discussion of CEQA-mandated analysis for cumulative impacts, irreversible impacts, and growth inducement associated with the proposed General Plan.

4.1 CUMULATIVE SETTING AND IMPACT ANALYSIS

INTRODUCTION

CEQA requires that an EIR contain an assessment of the cumulative impacts that could be associated with the General Plan. According to CEQA Guidelines Section 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." "Cumulatively considerable," as defined in section 15065(a)(3), means that "the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects" (as defined by Section 15130). As defined in CEQA Guidelines Section 15355, a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. A cumulative impact occurs from:

...the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

In addition, Section 15130(b) identifies that the following three elements are necessary for an adequate cumulative analysis:

1) Either:

(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or,

(B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

- 2) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and
- 3) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

CUMULATIVE SETTING

Under CEQA, the discussion of cumulative impacts should focus on the severity of the impacts and the likelihood of their occurrence. The geographic scope for the cumulative analysis covers the entire Jackson Planning Area, which for the purposes of the General Plan includes the geographic area for which the General Plan provides a framework for long-term plans for growth, resource conservation, and continued agricultural activity. State law requires the General Plan to include all territory within Jackson's incorporated area as well as "any land outside its boundaries which in the planning agency's judgment bears relation to its planning" (California Government Code Section 65300). The Planning Area for the Jackson General Plan includes the entire City Limits and the City's SOI, as shown on Figure 2.0-2 (see Chapter 2.0: Project Description). It should be noted that, for some environmental topics, the geographic scope for the cumulative analysis also covers the boundaries of Amador County, the Mountain Counties Air Basin, and/or other jurisdictional boundaries that are relevant to the particular environmental topic.

In most cases in this EIR, the buildout analysis utilizes a 20-year horizon, and 2040 is assumed to be the buildout year of the General Plan, however it should be noted that buildout of the General Plan may be beyond 2040. The year 2040 is used as the benchmark year for the cumulative analysis contained in this EIR. This year was chosen based on the fact that the General Plan was developed as an approximate 20-year plan for Jackson, and the General Plan is scheduled for adoption in early 2023.

Land Use/Growth Projections

Planned land uses within the city include single and multiple family residential, office, commercial, industrial, public facilities, and conservation lands which are included within specific designations identified by the City's Land Use Map. Table 4.0-1 summarizes the City's General Plan land use designations, by number of parcels and acreage.

TABLE 4.0-1: JACKSON GENERAL PLAN LAND USE DESIGNATIONS – CITY LIMITS AND SOI

<i>LAND USE</i>	<i>TOTAL PLANNING AREA ACREAGE</i>	<i>PERCENT OF AREA</i>
JACKSON CITY LIMITS		
Commercial	378.6	16.5%
Historic Commercial	16.8	0.7%
Industrial	29.2	1.3%
Limited Commercial	152.9	6.7%
Open Space	0.6	0.0%
Public	130.0	5.7%
Professional Office	106.9	4.7%
Recreation	169.7	7.4%
Residential Duplex	24.6	1.1%
Residential High Density	38.1	1.7%
Residential Low Density	36.0	1.6%
Residential Medium Density	35.9	1.6%
Right-of-Way	187.8	8.2%
Residential Suburban	443.9	19.3%
Residential Single Family	543.1	23.7%
Total City Limits	2,294.3	
JACKSON SOI		
Limited Commercial	0.3	0.0%
Public	3.6	0.3%
Right-of-Way	5.1	0.4%
SOI (undesignated) ¹	36.9	3.0%
SOI-Open Space (Urban Reserve)	1,171.2	96.2%
Total SOI	1,217.1	
Grand Total - City Limits and SOI	3,511.3	

*1: PORTIONS OF THE CITY'S SOI HAVE NOT BEEN ASSIGNED A LAND USE DESIGNATION ON THE EXISTING GENERAL PLAN LAND USE MAP.
SOURCES: AMADOR COUNTY, 2021; GIS LAND USE DATA FILE; DE NOVO PLANNING GROUP, 2021.*

Table 4.0-2 summarizes the range of net growth, including dwelling units (single family and multifamily) and non-residential square footage (commercial, office, industrial, governmental, public) that could occur. Growth is projected for the area within the City as well as for the Planning Area, with includes areas outside of the City but within the SOI and Planning Area identified for the General Plan Update. It is noted that the total growth estimates anticipate buildout of the entire Planning Area, with the exception of areas identified as Urban Reserve. See Chapter 2.0 for a detailed description of land uses projected for the Planning Area at buildout.

4.0 OTHER CEQA-REQUIRED TOPICS

TABLE 4.0-2: GROWTH PROJECTIONS - PROPOSED GENERAL PLAN LAND USE MAP

	<i>POPULATION</i>	<i>DWELLING UNITS</i>	<i>NONRESIDENTIAL SQUARE FOOTAGE</i>	<i>JOBS</i>	<i>JOBS PER HOUSING UNIT</i>
EXISTING CONDITIONS					
	5,071	2,406	1,827,500	2,987	1.24
NEW GROWTH POTENTIAL					
General Plan – city limits and SOI	1,435	681	300,000	457	0.67
TOTAL GROWTH: EXISTING PLUS NEW GROWTH POTENTIAL					
General Plan – cumulative buildout	6,506	3,087	2,127,500	3,444	1.12

SOURCES: COUNTY ASSESSOR 2020; CALIFORNIA DEPARTMENT OF FINANCE 2020; U.S CENSUS ONTHEMAP; ESRI 2020, DE NOVO PLANNING GROUP 2022.

CUMULATIVE EFFECTS OF THE PROJECT

Method of Analysis

Although the environmental effects of an individual project may not be significant when that project is considered separately, the combined effects of several projects may be significant when considered collectively. Section 15130 of the CEQA Guidelines requires a reasonable analysis of a project's cumulative impacts, which are defined as "two or more individual effects which, when considered together are considerable or which compound or increase other environmental impacts." The cumulative impact that results from several closely related projects is: the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (State CEQA Guidelines 15355[b]). Cumulative impact analysis may be less detailed than the analysis of the project's individual effects (State CEQA Guidelines 15130[b]).

In order to assess cumulative impacts, an EIR must analyze either a list of past, present, and probable future projects (referred to as the "list approach") or a summary of projections contained in an adopted general plan or related planning document (referred to as the "projection method"). Because of the programmatic nature of the Jackson General Plan, this Draft EIR uses the projection method for the cumulative analysis and considers buildout of the proposed General Plan in addition to buildout of the other General Plans within Amador County, as summarized and addressed in the 2018 Regional Transportation Plan/Sustainable Communities Strategy (2018 RTP/SCS). Development of the 2020 RTP/SCS included review of land use plans for each jurisdiction within Amador County, including:

- County of Amador
- City of Jackson
- City of Ione
- City of Plymouth

- City of Sutter Creek
- City of Amador City

Any such planning document shall be referenced and made available to the public at a location specified by the Lead Agency for that specific project.

The 2020 RTP/SCS projects that growth Countywide would result in a population of 883,484 in 2035. Table 4.0-3 shows the population and housing forecasts between 2025 and 2035 in Amador County.

TABLE 4.0-3: POPULATION PROJECTIONS

	2013	2025	2035
Amador City	182	183	184
lone	6,829	8,993	11,158
Jackson	4,613	5,015	5,417
Plymouth	993	1,215	1,437
Sutter Creek	2,484	2,813	3,142
Unincorporated	21,640	23,927	24,188
County Total	775,819	829,426	883,484

SOURCE: AMADOR COUNTY REGIONAL TRANSPORTATION PLAN, TABLE 4.

The Projection Method serves as a guide to determine if the General Plan Update is consistent with the long-term population, employment, and household projections of the region. If the proposed General Plan Update is generally consistent with regional projections, then it would also generally be consistent with regional efforts to address environmental problems such as air quality and traffic.

Cumulative Impacts

Cumulative impacts for most issue areas are not quantifiable and are therefore discussed in general qualitative terms as they pertain to development patterns in the surrounding region. An exception to this is a topic like traffic, which may be quantified by estimating future traffic patterns, pollutant emitters, etc. and determining the combined effects that may result. In consideration of the cumulative scenario described above, the proposed project may result in the following cumulative impacts.

AESTHETICS AND VISUAL RESOURCES

Impact 4.1: Cumulative degradation of the existing visual character of the region (Less than Cumulatively Considerable)

While the Jackson Planning Area contains areas and viewsheds with scenic characteristics, such as views of open space, there are no officially designated scenic vista points in the Planning Area. However, a Vista Point is located on the west side of SR 49/88 just before entering the City. Significant visual resources in the Planning Area generally consist of distant foothill views, and views of agricultural lands, and historic districts. The Vista Point offers views of past mining areas and the foothill region.

Additionally, there are no officially designated scenic highways located in the vicinity of Jackson. Only one highway section in Amador County is listed as an Officially Designated Scenic Highway by the Caltrans Scenic Highway Mapping System; the segment of SR 88 along the southern boundary of Amador County, outside of the City of Jackson. This route traverses the Sierra Nevada Mountain Range to the east. However, this officially designated scenic highway does not provide views of Jackson or the immediate surrounding areas. However, it should be noted that sections of SR 49 and SR 88 in the Jackson vicinity are considered eligible for Scenic Highway designation.

As noted in greater detail in the Project Description chapter (Chapter 2.0), implementation of the proposed General Plan could lead to new and expanded urban and suburban development throughout the City and Planning Area, particularly in areas designated for residential, commercial, industrial, mixed uses, and public/quasi-public uses by the Land Use Map. This new development may result in changes to the visual environment throughout the Planning Area, which may obstruct or interfere with views of visual features surrounding the Planning Area.

Furthermore, buildout under the proposed General Plan and implementation of the General Plan Land Use Map has the potential to result in new and expanded development along highway corridors with scenic values, even though these corridors are not officially designated as State Scenic Highways.

While growth is anticipated to occur in the Jackson Planning Area and within the other cities within Amador County, the majority of growth is anticipated to occur in and around existing urban development. Development of land uses and associated infrastructure is planned to occur in the future to accommodate growth envisioned in the general plans that are effective within the cumulative analysis area, including Amador County and the cities of Lone, Sutter Creek, Plymouth, and Amador City.

Regional growth has and will continue to result in a cumulative aesthetic effect by converting undeveloped land into developed and occupied areas and increasing overall levels of nighttime lighting. Cumulative development entails grading/landform alteration, the development of structures, and the installation of roadways and other infrastructure that has altered and will continue to permanently alter the region's existing visual character. This is considered a potentially significant cumulative impact. Subsequent projects implemented under the proposed General Plan would be required to be consistent with the policies and actions of the proposed General Plan and adopted regulations pertaining to aesthetics and lighting in Jackson. With implementation of adopted policies and regulations provided in Section 3.1 (Aesthetics and Visual Resources), the proposed General Plan would not considerably contribute to permanent changes in visual character, such as obstruction of scenic views, conversion of existing visual character, and increased lighting. The policies and actions included within the General Plan would reduce the cumulative effect of the General Plan on visual character, and would result in a less-than-significant contribution. Therefore, the proposed General Plan's incremental contribution to this cumulative impact would be **less than cumulatively considerable**.

AGRICULTURAL AND FOREST RESOURCES

Impact 4.2: Cumulative impact to agricultural lands and resources (Cumulatively Considerable and Significant and Unavoidable)

As shown on Figure 3.2-1, the Planning Area is designated as has Urban and Built-Up, Grazing Land, Farmland of Local Importance, and Other Land. While the proposed General Plan Land Use Map specifically identifies Open Space lands that would not be converted to urban uses, it also designates a range of planned development, residential, commercial, industrial, public/quasi-public, and other uses that would convert farmland to urban and built up land. Therefore, the proposed Jackson General Plan has the potential to convert farmland to non-agricultural uses. However, the proposed General Plan emphasizes and prioritizes infill development, logical growth extending outward from existing development, and establishes Urban Reserve areas as part of its strategy to preserve and protect the greatest amount of agricultural land feasible.

A large portion of the Planning Area is currently designated for urban land uses (i.e., residential single family, multi-family, public and institutional, mixed use and commercial). Land uses surrounding the Planning Area consist of light industrial, commercial general, commercial, open space, single family residential, rural residential, single family residential agricultural, limited agriculture, exclusive agriculture, and other similar land uses. The applicable policies and actions that provide protection and preservation of agricultural lands are identified under Impact 3.2-1.

The proposed General Plan includes policies and action that are intended to reduce the conversion of farmlands. These include policies that encourage the development of vacant lands within City boundaries prior to conversion of agricultural lands and ensure that urban development near existing agricultural lands will not unnecessarily constrain agricultural practices or adversely affect the economic viability of nearby agricultural operations. Overall, the policies and actions included in the proposed General Plan are intended to support and preserve the agricultural heritage of Jackson as development continues to occur within the Planning Area.

The Jackson General Plan has taken a proactive approach towards focusing new growth and development towards infill locations, and protecting open space areas and agricultural lands throughout the Planning Area to the greatest extent feasible. However, as described in greater detail under Impact 3.2-4, there is no feasible policies available to reduce the potential for future ag-land conversion to a less than significant level. Other conversions of farmland within Amador County over the buildout period is also likely to occur. The policies and actions identified in Section 3.2 would minimize this impact to the greatest extent feasible, and other General Plans in Amador County have also minimized potential impacts to agricultural resources. Nevertheless, this is considered a **cumulatively considerable and significant and unavoidable** impact.

AIR QUALITY

Impact 4.3: Cumulative impact on the region's air quality (Cumulatively Considerable and Significant and Unavoidable)

Construction of the growth anticipated by the proposed General Plan has the potential to temporarily emit criteria air pollutant emissions through the use of heavy-duty construction

equipment, and through vehicle trips generated by workers and haul trucks. In addition, fugitive dust emissions would result from demolition and various soil-handling activities. Mobile source emissions, primarily NO_x and PM emissions (i.e., PM₁₀ and PM_{2.5}), would result from the use of diesel-powered on- and off-road vehicles and equipment. Construction emissions can vary substantially from day-to-day, depending on the level of activity and the specific type of construction activity.

With respect to other emissions, Implementation of the proposed General Plan, would be consistent with all federal and state guidelines, and would be consistent with the applicable air quality plans, but would still be anticipated to lead to overall increases in emissions of criteria pollutants, given the total growth in vehicle trips projected upon full buildout of the proposed General Plan. Nevertheless, as described in Chapter 3.14 (Transportation and Circulation) of this DEIR, under Impact 3.14-1, the proposed General Plan would result in reduced per capita VMT in the City of Jackson.

As described previously, the policies and actions included throughout the proposed General Plan cover the full breadth of air quality issues and promote air quality and vehicle trip reductions throughout the city. With implementation of the General Plan policies and actions that would reduce criteria pollutant emissions, air quality impact would be limited. However, the proposed General Plan would create new development that would increase overall criteria air pollutant emissions within the City of Jackson, due to an increase in vehicle trips in the City in the cumulative year 2040 buildout scenario, compared to the existing condition. Therefore, this impact is considered significant and unavoidable, and **cumulatively considerable**.

BIOLOGICAL RESOURCES

Impact 4.4: Cumulative loss of biological resources, including habitats and special status species (Less than Cumulatively Considerable)

Cumulative development anticipated throughout the greater Amador County region will result in impacts to biological resources, including the permanent loss of habitat for special status species, corridor fragmentation, direct and indirect impacts to special status species, and reduction and degradation of sensitive habitat. Biological resources are a limited resource and the cumulative loss is considered significant.

Subsequent projects implemented under the proposed General Plan would be required to be consistent with the policies and actions of the proposed General Plan. The implementation of an individual project would require a detailed and site-specific review of the site to determine the presence or absence of movement corridors, special-status species, and sensitive habitat on a given project site. If movement corridors, special-status species, or sensitive habitat are present and disturbance is required, Federal and State laws require measures to reduce, avoid, or compensate for impacts to these resources. The requirements of these Federal and State laws are implemented through the permit process. However, as provided under Section 3.4 (Biological Resources), with implementation of the policies and actions included within the General Plan,

implementation of the General Plan would not generate a significant impact on biological resources.

Therefore, the proposed General Plan's incremental contribution to this cumulative impact would be **less than cumulatively considerable**.

CULTURAL AND TRIBAL RESOURCES

Impact 4.5: Cumulative impacts on known and undiscovered cultural resources (Less than Cumulatively Considerable)

Construction of the individual development projects allowed under the land use designations of the proposed General Plan may result in the discovery and removal of cultural resources, including archaeological, paleontological, historical, and Native American resources and human remains. The proposed General Plan policies and actions, as well as State and Federal regulations, will reduce the risk to resources in the region. As discussed in Section 3.5 (Cultural and Tribal Cultural Resources), each project would require specific surveys for potential resources and the evaluation of any resources discovered during construction activities. Other policies and actions designed to reduce impacts to cultural and tribal cultural resources within the Planning Area and the the region as a whole are also provided in Section 3.5 (Cultural and Tribal Cultural Resources). Adherence to these policies, actions, and regulations will avoid and/or minimize a cumulative loss of these important resources if they are found during project-specific surveys or construction. Therefore, the proposed General Plan's incremental contribution to cumulative cultural resource impacts would be **less than cumulatively considerable**.

GEOLOGY AND SOILS

Impact 4.6: Cumulative impacts related to geology and soils (Less than Cumulatively Considerable)

Construction of the individual development projects allowed under the land use designations of the proposed General Plan will result in risks associated with geology and soils. For example, there is an ongoing possibility that a fault located anywhere in the state (or region) could rupture and cause seismic ground shaking. Additionally, grading, excavation, removal of vegetation cover, and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation. Other geologic risks such as liquefaction, landsliding, lateral spreading, and soil expansion are also geologic risks that are present.

Geologic impacts are site-specific and not additive in character. However, cumulative geologic impacts associated with erosion and sedimentation could occur in the County as each individual city and community continues to develop over the next 20 years. While some cumulative erosion-related impacts will occur in the region as individual projects are constructed, the proposed General Plan policies and actions, as well as State and Federal regulations, will reduce the project's contribution to the risk to people in the region. Considering the protection granted by local, State, and Federal agencies and their requirements for seismic design, as discussed in Section 3.6 (Geology and Soils), the overall cumulative impact would not be significant. As a result, the proposed General Plan's incremental contribution to cumulative geologic and soil impacts would be **less than cumulatively considerable**.

GREENHOUSE GASES, CLIMATE CHANGE, AND ENERGY

Impact 4.7: Cumulative impacts related to greenhouse gases, climate change, and energy (Cumulatively Considerable and Significant and Unavoidable)

Implementation of the Jackson General Plan would not directly result in the creation of GHG emissions. However, subsequent development allowed under the General Plan would result in new projects that would increase GHG emissions in the Jackson Planning Area.

There are a variety of ways in which a general plan could contribute to climate change and result in the generation of GHGs. Sprawling land use patterns that place residences far from employment and retail centers can result in increased vehicle miles traveled (VMT), which increase GHG generation. The conversion of forest lands and open space areas into urbanized uses removes vegetation and trees that have positive carbon sequestration value. Imbalances between local jobs and housing can result in increased commute times and increased VMT associated with longer travel distances between home and work.

Cumulative impacts are the collective impacts of one or more past, present, and future projects that, when combined, result in adverse changes to the environment. GHG emissions are cumulative by nature, given that they spread throughout the atmosphere on a global scale. In determining the significance of a project's contribution to anticipated adverse future conditions, a lead agency should generally undertake a two-step analysis. The first question is whether the *combined* effects from *both* the proposed project *and* other projects would be cumulatively

significant. If the agency answers this inquiry in the affirmative, the second question is whether “the project’s *incremental* effects are cumulatively considerable” and thus significant in and of themselves. The cumulative project list for this issue (climate change) comprises anthropogenic (i.e., human-made) GHG emissions sources across the globe and no project alone would reasonably be expected to contribute to a noticeable incremental change to the global climate. However, legislation and executive orders on the subject of climate change in California have established a statewide context and process for developing an enforceable statewide cap on GHG emissions. Given the nature of environmental consequences from GHGs and global climate change, CEQA requires that lead agencies consider evaluating the cumulative impacts of GHGs. Small contributions to this cumulative impact (from which significant effects are occurring and are expected to worsen over time) may be potentially considerable and, therefore, significant.

As future development projects are received and reviewed by the City in subsequent years, those projects will be reviewed for consistency with the General Plan and all relevant State-level programs and requirements. All future projects must implement the most current version of the Title 24 energy efficiency requirements, as required by State law. Consistency with the General Plan and other mandatory State-level programs would ensure that future project-level contributions to global climate change would be less than significant. Moreover, as identified in Section 3.7 (Greenhouse Gases, Climate Change, and Energy), buildout of the General Plan would not be expected cause an inefficient, wasteful, or unnecessary use of energy resources nor conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

In general, expanded and new energy and natural gas infrastructure will be needed to serve growth contemplated in the General Plan. The environmental effect of providing the energy and natural gas services is associated with the physical impacts of providing new and expanded facilities. The specific impacts of providing new and expanded facilities cannot be determined at this time, as the General Plan does not propose or authorize development nor does it designate specific sites for new or expanded utilities facilities and infrastructure. However, the facilities would be primarily provided on sites with land use designations that allow such uses and the environmental impacts of constructing and operating the governmental facilities would likely be similar to those associated with new development, redevelopment, and infrastructure projects under the General Plan. These impacts are described in the relevant chapters (Chapters 3.1 through 3.16, and 4.0) of this Draft EIR. Any future development under the General Plan would be required to comply with regulations, policies, and standards included in the General Plan, and would be subject to CEQA review as appropriate.

Overall, General Plan policies and implementing actions would minimize potential impacts associated with GHG emissions in the Planning Area through the promotion of VMT reduction strategies, multimodal support and transportation improvements, and the support of green building practices, among other policies and actions, and would support requirements under AB 32 and SB 375.

Subsequent development projects will be required to comply with the General Plan and adopted federal, state, and local regulations for the reduction of GHG emissions. The City of has prepared

the General Plan to include numerous goals, policies and implementing actions intended to reduce GHG emissions associated with future development and improvement projects. GHG emissions would be minimized through the implementation of the goals, policies, and actions listed in Chapter 3.7. However, even with implementation of the goals, policies, and actions contained in the proposed General Plan, there is no guarantee that the General Plan alone would be sufficient to limit GHGs to the extent required by AB 32 and SB 375, and other federal and state regulations, and a quantitative GHG at the program levels is not feasible. Therefore, out of an abundance of caution, General Plan implementation is considered to have the potential to generate GHG emissions that could have a significant impact on the environment and/or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. This impact is considered significant and unavoidable, and **cumulatively considerable**.

HAZARDS AND HAZARDOUS MATERIALS

Impact 4.8: Cumulative impacts related to hazardous materials and human health risks. (Less than Cumulatively Considerable)

Construction of the individual development projects allowed under the land use designations of the proposed General Plan may involve the transportation, use, and/or disposal of hazardous materials, which may involve the use of equipment that contains hazardous materials (e.g., solvents and fuels or diesel-fueled equipment), or the transportation of excavated soil and/or groundwater containing contaminants from areas that are identified as being contaminated. Furthermore, because of the regional nature of the General Plan, some future land uses will inevitably transport or use hazardous materials within ¼ mile of a school, or other sensitive receptors such as hospitals and residences.

New development would inevitably increase the use of some hazardous materials within the region, resulting in potential health and safety effects related to hazardous materials use. Any use of hazardous materials must be managed in accordance with federal, State, and local (including Sacramento County) regulations to minimize any risk.

Hazardous materials incidents, if any, are typically site-specific and involve accidental spills or inadvertent releases. Associated health and safety risks generally are limited to those individuals using the materials or to persons in the immediate vicinity of the materials. Hazard-related impacts tend to be site-specific and project-specific. While some cumulative impacts, such as those associated with increases in the use of hazardous materials in the City associated with additional development, will occur in the region as individual projects are constructed, the proposed General Plan policies and actions, as well as State and Federal regulations, will reduce the project's contribution to risks to people in the region. Considering the protection granted by local, State, and Federal agencies and their requirements for the use of hazardous materials in the region, as discussed in Section 3.8 (Hazards and Hazardous Materials), the overall cumulative impact for most hazard impacts would not be significant. Therefore, this impact is considered **less than cumulatively considerable**.

HYDROLOGY AND WATER QUALITY

Impact 4.9: Cumulative impacts related to hydrology and water quality. (Less than Cumulatively Considerable)

Construction of the individual development projects allowed under the land use designations of the proposed General Plan has the potential to result in construction-related water quality impacts, impacts to groundwater recharge, and cause flooding, erosion, or siltation from the alteration of drainage patterns. Further, impacts resulting from buildout of the General Plan and potential development of the Planning Area would include substantial grading, site preparation, and an increase in urbanized development. Increased development in the County, including the Planning Area, could contribute to cumulative water quality impacts.

While some cumulative impacts will occur in the region as individual projects are constructed, the proposed General Plan policies and actions, as well as State and Federal regulations, will substantially reduce the project's contribution to impacts. Considering the protection granted by local, State, and Federal agencies and their permit and monitoring requirements, as discussed in Section 3.9 (Hydrology and Water Quality), and with implementation of the policies and actions included within the General Plan, the overall cumulative impact would not be significant. As a result, the General Plan's incremental contribution to cumulative hydrology impacts would be **less than cumulatively considerable**.

LAND USE, POPULATION, AND HOUSING

Impact 4.10: Cumulative impacts related to local land use, population, and housing (Less than Cumulatively Considerable)

Cumulative land use and planning impacts, such as the potential for conflicts with adjacent land uses and consistency with adopted plans and regulations, are typically site and project-specific. It may be determined in the project-specific design phase of a development project that an individual project may require removal of homes and result in the displacement of people and housing; however, these effects are not cumulatively considerable because there is adequate replacement housing available under the proposed General Plan. Additionally, any removal of homes would require adequate compensation to the homeowner in accordance with Federal and State laws.

The land uses allowed under the proposed General Plan provide opportunities for cohesive new growth at in-fill locations within existing urbanized areas, as well as limited new growth within the Planning Area, but would not create physical division within existing communities. New development and redevelopment projects would be designed to complement the character of existing neighborhoods and provide connectivity between existing development and new development within the cumulative analysis area. The proposed General Plan does not include any new roadways, infrastructure, or other features that would divide existing communities. Moreover, with implementation of General Plan policies and actions intended to guide growth to appropriate areas and provide services necessary to accommodate growth, the land uses allowed under the proposed General Plan, the infrastructure anticipated to accommodate proposed land uses, and

the goal and policy framework would not induce growth that would exceed adopted thresholds, or anticipated regional growth. Lastly, General Plan implementation would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. Therefore, the proposed General Plan's incremental contribution to cumulative land use and population impacts would be **less than cumulatively considerable**.

MINERAL RESOURCES

Impact 4.11: Cumulative impacts related to mineral resources (Less than Cumulatively Considerable)

Within the Planning Area the planning area is designated as MRZ-3a “may contain significant aggregate deposit,” MRZ-2b which may “contain discovered mineral deposits that are significant inferred resources, “ and MRZ-4 “Areas where available information is inadequate for assignment to any other MRZ classification.” However, as noted in Section 3.11, mining operations at the Kennedy and Argonaut Mines have ceased and there are no active mining operations within the Planning Area.

The areas designated as MRZ-2b which extends through the center of the Planning Area and MRZ-3a and extend the boundaries of the Planning Area are currently designated with urban uses, developed and no longer available for mining. Therefore, no significant potential for extraction remains from these known MRZs. There are no other known mineral deposits or resources within Jackson that are of significant value to the region or the state.

Areas within and around the City of Jackson have historically been the site of gold mining activities, including the Argonaut Mine and Amador De Oro sites within the City. Mineral rights are also designated on several assessor parcel maps within the City. However, no lands within the City are classified for mineral resource extraction nor are there any active mines within the City. The proposed project would not convert any lands from current mineral resources use to other uses. As there are no lands designated as having potential mineral resources within the City, the project would not result in the loss of such resources.

Separately, the Planning Area does not contain a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. The proposed project would not result in loss of a mineral resource. As a result, the General Plan's incremental contribution to cumulative mineral resource impacts would be **less than cumulatively considerable**.

NOISE

Impact 4.12: Cumulative impacts related to noise (Less than Cumulatively Considerable)

As shown in Tables 3.12-2 and 3.12-9, the traffic noise increases associated with the proposed General Plan do not exceed the applicable noise exposure criteria. Therefore, the proposed General Plan would have a less than significant, and less than cumulative considerable impact relative to traffic noise.

While the General Plan does not specifically propose any new noise generating uses, the Land Use Map includes land use designations which may result in new noise sources. New projects which may include stationary noise sources such as automotive and truck repair facilities, tire installation centers, car washes, loading docks, corporation yards, parks, and play fields have the potential to create noise levels in excess of the City's standards.

The General Plan includes policies and actions that are intended to reduce noise associated with stationary sources (listed below). Specifically, Policies N-1.4, N-1.5, N-1.6 would reduce noise associated with stationary sources. As described in Chapter 3.12 (Noise), implementation of the proposed policies and actions of the General Plan will reduce noise impacts from stationary noise sources to a less than significant level.

Therefore, this is considered a **less than cumulatively considerable** impact.

PUBLIC SERVICES AND RECREATION

Impact 4.13: Cumulative impacts to public services and recreation (Less than Cumulatively Considerable)

Development accommodated under the General Plan would result in additional residents and businesses in the City, including new residential, industrial, office, and commercial uses. As described in Chapter 2.0, the General Plan is expected to accommodate up to a total of 3,087 residential dwelling units and up to 2,127,500 square feet of non-residential building space within the city limits at full buildout.

This new growth within the City limits would increase the City's population by up to 6,506 residents and would include approximately 3,444 jobs. The full development of the new non-residential uses shown in Chapter 2.0 (Project Description), Table 2.0-2.

Development and growth facilitated by the General Plan would result in increased demand for public services, including fire protection, law enforcement, schools, parks, libraries, and other public and governmental services. The General Plan includes policies and actions to ensure that public services are provided at acceptable levels and to ensure that development and growth does not outpace the provision of public services.

Cumulative growth that would occur within Amador County and other cities within Amador County over the life of the proposed General Plan will result in increased demand for public services, including fire protection, law enforcement, schools, parks, libraries, and other public and governmental services. As the demand for public services and recreation increases, there will likely be a need to address acceptable service ratios, response times, and other performance standards. New or expanded service structures (e.g., offices, maintenance and administrative buildings, schools, parks, fire facilities, libraries, etc.) will be needed to provide for adequate staffing, equipment, and appropriate facilities to serve growth within the cumulative analysis area.

New public services and recreation facilities will be needed to serve growth contemplated in the General Plan. The environmental effect of providing the public services and recreation is

associated with the physical impacts of providing new and expanded facilities. The specific impacts of providing new and expanded facilities cannot be determined at this time, as the General Plan does not propose or authorize development nor does it designate specific sites for new or expanded public facilities. However, the facilities would be primarily provided on sites with land use designations that allow such uses and the environmental impacts of constructing and operating the governmental facilities would likely be similar to those associated with new development, redevelopment, and infrastructure projects under the General Plan. These impacts are described in the relevant chapters (Chapters 3.1 through 3.16, and 4.0) of this Draft EIR. Any future development under the General Plan would be required to comply with regulations, policies, and standards included in the General Plan, and would be subject to CEQA review as appropriate. The General Plan includes a range of policies and actions to ensure that public services are provided in a timely fashion, are adequately funded, are coordinated between the City and appropriate service agency, that new development funds its fair share of services, and that the effects of new development of parks, schools, and other public service facilities are appropriately considered. Payment of applicable impact fees, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the future projects, would ensure that the City maintains acceptable service ratios and that the expansion of public service facilities are adequately funded. The proposed General Plan's incremental contribution to cumulative public services and recreation impacts would be **less than cumulatively considerable**.

TRANSPORTATION

Impact 4.14: Cumulative impacts on the transportation network (Significant and Unavoidable and Cumulatively Considerable)

As discussed in Section 3.14, the implementation of the proposed General Plan would likely contribute to land use development that generates VMT per dwelling unit or employee in excess of the levels necessary to meet State GHG reduction goals. . Although larger changes in the proposed General Plan land use element could potentially reduce VMT further, those changes would also affect the achievement of other goals the City seeks to achieve with the General Plan. VMT reduction also depends on factors such as demographic change, household preferences for housing types and locations, the cost of fuel, and the competitiveness of regional transit relative to driving, which relates to congestion along vehicular commute routes that are not under the City's jurisdiction.

Potential VMT reduction strategies contained in the Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (California Air Pollution Control Officers Association, 2021) were reviewed for potential application to the updated general plan. The effectiveness of many of these strategies in a rural/suburban setting would diminish because of the long trip distances between land uses and limited availability of non-auto modes. Further, the land use element is reflective of the city's desired land use pattern to accomplish other objectives of the general plan and to reflect the market realities of land use development demand in the city. Policy CIRC-8c would require proposed development projects with potentially significant VMT impacts to consider reasonable and feasible project modifications and other measures to reduce their VMT impacts. This would help lessen VMT

growth but not to a level sufficient to reduce this impact to less than significant. Therefore, as described in Chapter 3.14 this impact is considered significant and unavoidable. The feasibility and effectiveness of a local or regional VMT reduction measures is unknown at this time. Therefore, this is considered a **cumulatively considerable** and significant and unavoidable impact.

UTILITIES

Impact 4.15: Cumulative impacts related to utilities (Cumulatively Considerable and Significant and Unavoidable)

Cumulative growth that would occur within the service areas for the Amador Water Agency (AWA) and the City utilities divisions over the life of the proposed General Plan will result in increased demand for water service, sewer service, and solid waste disposal services.

In general, expanded and new utility infrastructure will be needed to serve growth contemplated in the General Plan. The environmental effect of providing the utility services is associated with the physical impacts of providing new and expanded facilities. The specific impacts of providing new and expanded facilities cannot be determined at this time, as the General Plan does not propose or authorize development nor does it designate specific sites for new or expanded facilities and infrastructure associated with utilities. However, the facilities would be primarily provided on sites with land use designations that allow such uses and the environmental impacts of constructing and operating the governmental facilities would likely be similar to those associated with new development, redevelopment, and infrastructure projects under the General Plan. These impacts are described in the relevant chapters (Chapters 3.1 through 3.16, and 4.0) of this Draft EIR. Any future development under the General Plan would be required to comply with regulations, policies, and standards included in the General Plan, and would be subject to CEQA review as appropriate.

Water: Table 3.15-3 summarizes annual projections of demands through 2040. The proposed General Plan includes a range of policies and actions designed to ensure an adequate water supply for development and to minimize the potential adverse effects of increased water use. Given that projected water demands associated with General Plan buildout would not exceed the projected available water (including after taking into account future development within Amador County, neighboring cities, and the broader region), and that the proposed General Plan includes a comprehensive set of goals, policies and actions to ensure an adequate and reliable source of clean potable water, to implement water efficiency measures to reduce demand, and to ensure that adequate facilities are available to serve future development.t.

Additionally, future development in the Planning Area would be required to connect to existing water distribution infrastructure in the vicinity of each site, pay the applicable water system connection fees, and pay the applicable water usage rates. Future projects may be required to implement site specific and limited off-site improvements to the water distribution system in order to connect new project sites to the City's existing water infrastructure network. The specific impacts of providing new and expanded waster distribution infrastructure cannot be determined

at this time, as the General Plan does not propose any specific development projects or include details on any future development projects. However, any future improvements to the existing water distribution infrastructure would be primarily provided on sites with land use designations that allow for urbanized land uses, and the environmental impacts of constructing and operating the new water distribution infrastructure would likely be similar to those associated with new development, redevelopment, and infrastructure projects under the proposed General Plan.

This Draft EIR addresses the potential impacts of development that may occur under the proposed General Plan, including residential, commercial, office, business park, light industrial, public facilities, and a range of other uses. As discussed in Section 3.15, the City would review future projects and require projects to demonstrate adequate supplies available to meet projected demand increases throughout their respective service areas through buildout of the General Plan.

Future projects would be review for adequate service levels and projected water demands associated with General Plan buildout would be included within future master planning documents, and that the proposed General Plan includes a comprehensive set of goals, policies, and actions to ensure an adequate and reliable source of clean potable water. However, as described in Chapter 3.15 (Utilities) potential issues associated with treatment limitations within the AWA service area and specifically the Tanner WTP treatment requirements may impact the ability to treat and provide water and would require additional improvements to support future capacity needs, the details of which are not all known at this time. As such out of an abundance of caution this is considered a **cumulatively considerable** and significant and unavoidable impact.

Wastewater: As Jackson continues to develop in the future, there will be an increased need for water and wastewater services, including a reliable source of recycled water. These needs have been addressed in the WQCF master plan and will require that the city continue to implement phased improvements to some pump stations, sewer mains, and the various wastewater treatment plants when triggered by growth.

It is anticipated that buildout of the General Plan would result in an increase in total demand for wastewater treatment and service. While full buildout of the proposed General Plan would increase the treatment demand of the WQCF, the proposed General Plan includes a range of policies and actions designed to ensure an adequate wastewater treatment capacity for development. Additionally, the City must also periodically review and update their Master Plans, and as growth continues to occur within the Planning Area, the City will identify necessary system upgrades and capacity enhancements to meet growth, prior to the approval of new development.

The proposed General Plan includes a comprehensive set of goals, policies, and actions to ensure an adequate and reliable wastewater collection and treatment system. However as described in Chapter 3.15 (Utilities) impacts 3.15-3 and 3.15-4 potential issues associated with compliance with new discharge permits and treatment requirements may impact the ability to treat and discharge wastewater and would require additional improvements and regulations that could impact discharge capacity, the details of which are not all known at this time. Additionally, buildout of the proposed General Plan could generate additional demands which could exceed the current

treatment capacity of the facility. As such out of an abundance of caution this is considered a **cumulatively considerable** and significant and unavoidable impact.

impacts associated with wastewater treatment and compliance with waste discharge requirements are less than significant. The proposed General Plan's incremental contribution to cumulative wastewater impacts would be **less than cumulatively considerable**.

Stormwater: Development under the proposed General Plan would result in increased areas of impervious surfaces throughout the Planning Area, resulting in the need for additional or expanded stormwater drainage, conveyance, and retention infrastructure. The infrastructure and facilities necessary to serve new growth would involve development of some facilities on-site within new development projects, some facilities off-site on appropriately designated land, and may also involve improvements to existing facilities and disturbance of existing rights-of-way.

Stormwater drainage and conveyance facilities would be evaluated at the project-level in association with subsequent development projects. However, the facilities would be primarily provided on sites with land use designations that allow such uses and the environmental impacts of constructing and operating the facilities would likely be similar to those associated with new development, redevelopment, and infrastructure projects under the General Plan.

As future development and infrastructure projects are considered by the City, each project will be evaluated for conformance with the General Plan, Municipal Code, and other applicable regulations. Subsequent development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA.

With the policies and actions listed in Section 3.15 (Utilities) would ensure that there is adequate stormwater drainage and flood control infrastructure to serve future development under the General Plan, and would ensure that future drainage and flood control infrastructure projects do not result in adverse environmental impacts. The proposed General Plan's incremental contribution to cumulative wastewater impacts would be **less than cumulatively considerable**.

Solid Waste: Future development of projects as contemplated under the proposed General Plan may increase the population within the Planning Area to approximately 6,506 persons. The City of Jackson has achieved a disposal rate of 5.6 PPD per resident in 2018. Assuming these disposal rates remain constant throughout the life of the General Plan, the new growth under General Plan buildout would result in an increase of approximately 36,433 pounds per day of solid waste, which equals or 6,649 tons of solid waste per year.

The City's projected increase in solid waste generation associated with future buildout of the proposed General Plan is within the permitted capacity of the Kiefer Road Landfill. The permitted maximum tons per day (tpd) allowed at the Kiefer Road Landfill is 10,815, with an average intake of 6,362 tpd. The landfill has a total capacity of 117 million cubic yards (58 million tons). The Kiefer Road Landfill is classified as a Class III landfill (a facility at which protection is provided to water quality from municipal, industrial and agricultural wastes) with a maximum permitted capacity of

4.0 OTHER CEQA-REQUIRED TOPICS

117,400,000 cubic yards. The remaining capacity of these landfills include 112,900,000 cubic yards of solid waste at the Kiefer Landfill, with an estimated cease operation date of 2064.

The proposed project will contribute to the cumulative demand for solid waste facilities. The addition of solid waste associated with the proposed General Plan to the Kiefer Road Landfill would not exceed the combined landfills' remaining capacity.

The proposed General Plan does not include any specific projects that would expand or construct new solid waste facilities. While there are no plans for landfill construction or expansion associated with the proposed General Plan, development of new solid waste disposal facilities to serve the region could result in environmental effects in areas such as traffic, hydrology, biology, air quality, greenhouse gases, and noise. Any future construction projects in would be required to conduct environmental review pursuant to CEQA prior to approval. As future development and infrastructure projects are considered by the City, each project will be evaluated for conformance with the General Plan, Municipal Code, and other applicable regulations associated with solid waste. Subsequent development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA. As such, this impact would be less than significant.

Future projects within the Planning Area would be required to comply with applicable state and local requirements including those pertaining to solid waste, construction waste diversion, and recycling. While there is adequate permitted landfill capacity to accommodate future growth, the proposed General Plan includes actions to further reduce the project's impact on solid waste services. The General Plan would not exceed the permitted capacity of the landfill serving the City, and the General Plan complies with regulations related to solid waste. The proposed General Plan's incremental contribution to cumulative solid waste impacts would be **less than cumulatively considerable**.

WILDFIRE

Impact 4.16: Cumulative impact related to wildfire (Less than Cumulatively Considerable)

As described previously, the General Plan and General Plan Land Use Map does not designate any urban uses in any area designated as a High FHSZs.

No specific aspect as a result of implementation of the General Plan will substantially alter the slope, prevailing winds, or other factors that would increase exposure to Jackson residents, employees or visitors to increased pollutant concentrations from wildfire or result in the uncontrollable spread of a wildfire. General Plan implementation would not exacerbate wildfire risks. The Planning Area is not located in or near any State Responsibility Areas and there are no lands classified as very high fire hazard severity zones within or near the Planning Area.

Development allowed under the General Plan would be required to comply with the applicable provisions of the California Building Code (CBC), and CA Fire Code (CFC). Future developments utility infrastructure would also be subject to the requirements established in the additional Public

Resources Code including: Public Resources Code Section 4292, which requires clearing of flammable fuels for a minimum 10-foot radius from the outer circumference of poles and towers; and Public Resources Code Section 4293, which sets basic requirements for clearances around electrical conductors. Furthermore, the future projects would be required to meet vegetation clearance requirements outlined in Title 14, Section 1104.1(d) of the California Code of Regulations for single overhead facilities, and in CPUC General Order 95 requirements for overhead utility lines in high-fire-threat areas. The General Plan includes requirements for adequate water supply and water flow availability, emergency access, fire protection services, fire safe design site standards, and ensuring public awareness regarding safety. All future development projects would be required to be consistent with the standards related to the California Fire Code and would also be subject to CCR and PUC standard outlined above. Furthermore, future projects are not anticipated to remove or impede evacuation routes, and the General Plan does not include land uses, policies, or other components that conflict with adopted emergency response or evacuation plans.

Furthermore, the Jackson General Plan is a long range policy document that does not include site specific designs or proposals, and does not propose any entitlements for development. The majority of all future development would occur within existing developed areas. Implementation of the General Plan policies and actions combined with local and state requirements, as discussed previously, would ensure that potential wildland fire hazards would not be exacerbated by local infrastructure, and this impact would be considered less than significant. Therefore, the proposed General Plan's incremental contribution to cumulative wildfire impacts would be **less than cumulatively considerable**.

4.2 GROWTH-INDUCING EFFECTS

INTRODUCTION

Section 15126.2(d) of the CEQA Guidelines requires that an EIR evaluate the growth-inducing impacts of a proposed action. A growth-inducing impact is defined by the CEQA Guidelines as:

The way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth...It is not assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment.

Based on the CEQA Guidelines, growth inducement is any growth that exceeds planned growth of an area and results in new development that would not have taken place without implementation of the project. A project can have direct and/or indirect growth inducement potential. Direct growth inducement would result if a project, for example, involved construction of new housing. A project would have indirect growth inducement potential if it established substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises) or if it would involve a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and services to support the new employment demand (*Napa Citizens for Honest Government v. Napa County Board of Supervisors*). Similarly, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service. A project providing an increased water supply in an area where water service historically limited growth could be considered growth-inducing.

The CEQA Guidelines further explain that the environmental effects of induced growth are considered indirect impacts of the proposed action. These indirect impacts or secondary effects of growth may result in significant, adverse environmental impacts. Potential secondary effects of growth include increased demand on other community and public services and infrastructure, increased traffic and noise, and adverse environmental impacts such as degradation of air and water quality, degradation or loss of plant and animal habitat, and conversion of agricultural and open space land to developed uses.

Growth inducement may constitute an adverse impact if the growth is not consistent with or accommodated by the land use plans and growth management plans and policies for the area affected. Local land use plans provide for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service, and solid waste service.

The General Plan is a long-term plan intended to accommodate projected population, housing, and employment growth, including the appropriate balance among these factors with the necessary public services and infrastructure. The proposed General Plan would serve as a comprehensive, long-term plan for the physical development of Jackson. Projected growth is described in Section

3.10 (Land Use, Population, and Housing), and the environmental consequences related to the potential growth are fully assessed in each topical section. By definition, the proposed Jackson General Plan is intended to provide for and address future growth in the City.

Because the proposed General Plan provides a framework for development through its Land Use Map, land use designations, goals, policies, and actions, it would directly induce population and employment growth in the Jackson Planning Area by designating land for development that is more intense, in some instances, than current designations allow. The analysis of the indirect growth-inducing impacts for the proposed General Plan focuses on the following factors: inducement of unanticipated population growth; encouragement of economic growth that leads to jobs and housing growth; elimination of obstacles to population growth; and resulting service, facility, or infrastructure demands in excess of existing and planned growth.

The proposed General Plan accommodates future growth in Jackson, including new businesses, expansion of existing businesses, and new residential uses. Infrastructure and services would need to accommodate future growth. The General Plan would encourage development of a broader array of businesses, increasing local employment opportunities, and providing residential development as necessary to serve economic growth. The cumulative development scenario addressed in this Draft EIR is the maximum projected development that could occur within the existing city limits and the Planning Area, if every parcel in the city and the Planning Area developed at or near the higher end of densities and intensities allowed under the proposed General Plan.

As shown in Table 2.0-2, the proposed General Plan would result in approximately 681 new housing units. This new growth may increase the city's population by approximately 1,435 residents and 457 employees compared to the existing General Plan. At buildout, growth associated with the proposed General Plan would yield a total of approximately 6,506 residents and 3,444 jobs. Depending on growth rates, the actual growth during the life of the General Plan could be lower or higher, but would not be expected to exceed the theoretical buildout described in Chapter 2.0.

Given the historical and current population, housing, and employment trends, growth in the City, as well as the entire state, is inevitable. The primary factors that account for population growth are natural increase and net migration. The average annual birth rate for California is expected to be 20 births per 1,000 population. Additionally, California is expected to attract more than one third of the country's immigrants. Other factors that affect growth include the cost of housing, the location of jobs, the economy, the climate, and transportation. While these factors would likely result in growth in Jackson during the planning period of the proposed General Plan, growth will continue to occur based primarily on the demand of the housing market and demand for new commercial, industrial, and other non-residential uses. As future development occurs under the proposed General Plan, new roads, infrastructure, and services would be necessary to serve the development and this infrastructure would accommodate planned growth. However, growth under the proposed General Plan would remain within the general growth levels projected statewide and would not be anticipated to exceed any applicable growth projections or limitations

that have been adopted to avoid an environmental effect. The proposed General Plan is intended to accommodate the City's fair share of statewide housing needs, based on regional numbers provided by the California Department of Housing and Community Development on a regular basis (every five to eight years).

The proposed General Plan includes policies and actions that minimize environmental impacts associated with growth, such as air quality, noise, traffic, water supply, and water quality. Additionally, this Draft EIR identifies General Plan policies and actions, where appropriate, that would serve to reduce or eliminate potentially significant impacts associated with specific environmental issues associated with growth. Chapters 3.1 through 4.0 provide a discussion of environmental effects associated with development allowed under the proposed General Plan.

With implementation of General Plan policies and actions intended to guide growth to appropriate areas and provide services necessary to accommodate growth, the land uses allowed under the proposed General Plan, the infrastructure anticipated to accommodate proposed land uses, and the goal and policy framework would not induce growth that would exceed adopted thresholds. Therefore, population and housing growth associated with the proposed General Plan would result a **less than significant** impact.

4.3 SIGNIFICANT IRREVERSIBLE AND ADVERSE EFFECTS

LEGAL CONSIDERATIONS

CEQA Section 15126.2(c) and Public Resources Code Sections 21100(b)(2) and 21100.1(a), requires that the EIR include a discussion of significant irreversible environmental changes which would be involved in the proposed action should it be implemented. Irreversible environmental effects are described as:

- The project would involve a large commitment of nonrenewable resources;
- The primary and secondary impacts of a project would generally commit future generations to similar uses (e.g., a highway provides access to previously remote area);
- The project involves uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The phasing of the proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Determining whether the proposed project would result in significant irreversible effects requires a determination of whether key resources would be degraded or destroyed such that there would be little possibility of restoring them. Irrecoverable commitments of resources should be evaluated to assure that such current consumption is justified.

Consumption of Nonrenewable Resources

Consumption of nonrenewable resources refers to the loss of physical features within the natural environment, including the conversion of agricultural lands, loss of access to mining reserves, and nonrenewable energy use. The Jackson Planning Area has nonrenewable resources, including biological resources, water resources, and agricultural resources.

One of the objectives of the proposed General Plan is to establish a long-term plan for conservation of resources and future growth and development. Many of the policies and actions aimed at conserving resources are contained within the Resource Conservation Element, and have been identified throughout this EIR. Additionally, the proposed General Plan directs most new development to infill areas, and areas surrounding existing neighborhoods and urbanized areas. As a result, the proposed General Plan will minimize the potential for impacts to the nonrenewable resources in the Planning Area, including biological resources, water resources, and agricultural resources, to the greatest extent feasible. More detailed and focused discussions of potential impacts to these nonrenewable resources are contained throughout this Draft EIR.

Irrecoverable Commitments/Irreversible Physical Changes

Implementation of the proposed General Plan would result in a commitment of land uses designated for the foreseeable future. Land use and development consistent with the General Plan would result in irretrievable commitments by introducing development onto sites that are presently undeveloped.

The conversion of undeveloped lands to urban uses would result in an irretrievable loss of agricultural land, wildlife habitat, and open space.

A variety of resources, including land, energy, water, construction materials, and human resources would be irretrievably committed for development and infrastructure installation associated with uses envisioned by the proposed General Plan. Buildout of the proposed General Plan would require the commitment of a variety of other non-renewable or slowly renewable natural resources such as lumber and other forest products, sand and gravel, asphalt, petrochemicals, and metals.

Additionally, a variety of resources would be committed to the ongoing operation and life of the uses accommodated by the proposed General Plan. The introduction of new residential, commercial, industrial, recreational, and other uses to the Planning Area will result in an increase energy demand associated with building operations, vehicle travel, equipment operation, and other activities. Fossil fuels are the principal source of energy and the Project will increase consumption of available supplies, including gasoline and diesel fuel, and natural gas. These energy resource demands relate to initial construction, operation, maintenance and the transport of people and goods to and from the Planning Area that would occur with implementation of the proposed General Plan.

Additionally, development will physically change the environment in terms of aesthetics, air emission, noise, traffic, open space, and natural resources. These physical changes are irreversible after development occurs. Therefore, the proposed General Plan would result in changes in land use within the Planning Area that would commit future generations to these uses.

Irreversible Damage

The General Plan does not involve uses in which irreversible damage could result from any potential environmental accidents associated with future buildout of the Planning Area. Future development, infrastructure, and other projects allowed under the General Plan may involve the transportation, use, and/or disposal of hazardous materials. However, potential environmental accidents would not result in irreversible damage because the future uses in the Planning Area would be subject to applicable requirements of Federal, State, and local regulations and policies. Additionally, hazardous materials are typically used in industrial, and commercial uses, as well as residential uses. Future uses may involve the transport and disposal of such materials from time to time. Future activities may involve equipment or construction activities that use hazardous materials (e.g., coatings, solvents and fuels, and diesel-fueled equipment), cleanup of sites with known hazardous materials, the transportation of excavated soil and/or groundwater containing contaminants from areas that are identified as being contaminated, or disposal of contaminated materials at an approved disposal site. While hazardous materials may be associated with industrial activities, hazardous materials may also be associated with the regular cleaning and maintenance of residential and other less intense uses.

The General Plan does not propose any uses that are would cause irreversible damage.

Phased Consumption of Resources

Buildout of the General Plan would use energy resources for the operation of buildings (electricity and natural gas), for on-road vehicle trips (e.g., gasoline and diesel fuel), and from off-road construction activities (e.g., diesel fuel) associated with buildout of the General Plan. Each of these activities would require the use of energy resources. Buildout would also require commitment of other resources, as discussed above. Developers of individual projects within the Planning Area would be responsible for conserving energy, to the extent feasible, and would rely heavily on reducing per capita energy consumption to achieve this goal, including through Statewide and local measures. Additionally, developers would have to comply with proposed General Plan policies and implementing actions that reduce energy usage, promote renewable and/or alternative energy sources, and encourage pedestrian/bicycle modes of transportation.

Buildout of the General Plan would be in compliance with all applicable federal, state, and local regulations regulating energy usage. For example, PG&E is responsible for the mix of energy resources used to provide electricity for its customers, and it is in the process of implementing the Statewide RPS to increase the proportion of renewable energy (e.g., solar and wind) within its energy portfolio. PG&E is expected to achieve at least 60% renewables by 2030, and 100 percent zero-carbon electricity by 2045 (in compliance with SB 100). Additionally, energy-saving regulations, including the latest State Title 24 building energy efficiency standards (“part 6”), would be applicable to the proposed project. Other Statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g., the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time. Furthermore, additional project-specific the sustainability features individual development projects could further energy consumption of individual projects.

PG&E, the electricity and natural gas provider to the site, maintains sufficient capacity to serve the Planning Area. The City of Jackson would comply with all existing energy standards in implementing the General Plan project, and would not result in significant adverse impacts on energy resources.

MANDATORY FINDINGS OF SIGNIFICANCE

CEQA Guidelines Section 15065 states that a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has potential environmental effects that are individually limited but cumulatively considerable. As defined in CEQA Guidelines Section 15065(a)(3), cumulatively considerable means “that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.” Cumulative impacts are addressed previously in Section 4.1 for each of the environmental topics.

CEQA Guidelines Section 15065(a)(1) states that a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to (1) substantially reduce the habitat of a fish or wildlife species; (2) cause a fish or wildlife population to drop below self-sustaining levels; or (3) substantially reduce the number or restrict the range of an endangered, rare, or threatened species. These impacts are discussed below.

Additionally, as required by CEQA Guidelines Section 15065(a)(4), a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to cause substantial adverse effects on human beings, either directly or indirectly. These impacts are discussed below.

Substantial Adverse Effects on Fish, Wildlife, and Plant Species

Section 3.4 (Biological Resources) of this Draft EIR fully addresses any impacts that might relate to the reduction of the fish or wildlife habitat, the reduction of fish or wildlife populations, and the reduction or restriction of the range of special-status species as a result of project implementation. As described throughout the analysis in this Draft EIR, the proposed General Plan would not result in any significant impacts that would substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal to the environment. As described in greater detail in Section 3.4 (Biological Resources) any potentially significant impacts related to plant and animal species would be reduced to a less than significant level through implementation of goals, policies and implementation measures provided in the City’s General Plan as well as through adherence to state and federal regulations. Therefore, this is considered a **less than significant** impact.

Substantial Adverse Effects on Human Beings

While changes to the environment that could indirectly affect human beings would be represented by all of the designated CEQA issue areas, those that could directly affect human beings include air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, population and housing, public services and recreation, transportation, utilities, and climate change, which are addressed in Section 3.3 (Air Quality), Section 3.6 (Geology and Soils), Section

3.8 (Hazards and Hazardous Materials), Section 3.9 (Hydrology and Water Quality), Section 3.12 (Noise), Section 3.10 (Land Use, Population and Housing), Section 3.13 (Public Service and Recreation), Section 3.14 (Transportation and Circulation), Section 3.15 (Utilities), and Section 3.7 (Greenhouse Gases, Climate Change and Energy). As described throughout the analysis of this Draft EIR, the proposed General Plan reduces environmental effects including effects that directly and indirectly impact humans through implementation of goals, policies and implementation measures provided in the City's General Plan. However, several environmental impacts would still be considered significant and unavoidable (listed below in Section 4.6). These impacts include increases of criteria pollutants, reduced air quality, which may cause substantial adverse effects on humans and the way humans interact with their environment. Therefore, this is considered a **significant and unavoidable** impact.

Impact 4.17: Irreversible and adverse effects (Significant and Unavoidable)

In summary, the proposed General Plan includes an extensive policy framework that is designed to address land use and environmental issues to the greatest extent feasible, while allowing growth and economic prosperity for the City. However, even with the policies and actions that will serve to reduce potential significant impacts, the proposed General Plan will result in significant irreversible changes and has the potential to result in adverse effects as described above. This impact is considered a **significant and unavoidable** impact under CEQA.

4.4 SIGNIFICANT AND UNAVOIDABLE IMPACTS

CEQA Guidelines Section 15126.2(b) requires an EIR to discuss unavoidable significant environmental effects, including those that can be mitigated but not reduced to a level of insignificance. The following significant and unavoidable impacts of the General Plan are discussed in Sections 3.2, 3.3, 3.7, 3.12, 3.14, and previously in this chapter (cumulative-level). Refer to those discussions for further details and analysis of the significant and unavoidable impacts identified below:

- **Impact 3.2-4:** General Plan implementation would involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use
- **Impact 3.3-1:** General Plan implementation would conflict with or obstruct implementation of the applicable air quality plan, or result in a cumulatively considerable net increase of criteria pollutants
- **Impact 3.7-1:** General Plan implementation has the potential to generate GHG emissions that could have a significant impact on the environment and/or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases
- **Impact 3.14-1:** General Plan implementation may conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)
- **Impact 3.15-1:** General Plan implementation would result in sufficient water supplies available to serve the City and reasonably foreseeable future development during normal, dry and multiple dry years

- **Impact 3.15-2:** General Plan implementation would not require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects
- **Impact 3.15-3:** General Plan implementation would not have the potential to result in a determination by the wastewater treatment provider which serves or may serve the Project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments
- **Impact 3.15-4:** General Plan implementation may require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects
- **Impact 4.2:** Cumulative impact to agricultural lands and resources
- **Impact 4.3:** Cumulative impact on the region's air quality
- **Impact 4.7:** Cumulative impacts related to greenhouse gases, climate change, and energy
- **Impact 4.14:** Cumulative impacts on the transportation network
- **Impact 4.15:** Cumulative impacts related to utilities
- **Impact 4.17:** Irreversible and adverse effects

5.1 CEQA REQUIREMENTS

CEQA requires that an EIR analyze a reasonable range of feasible alternatives that meet most or all of the project objectives while potentially reducing or avoiding one or more environmental effects of the project. The range of alternatives required in an EIR is governed by a “rule of reason” that requires an EIR to set forth only those alternatives necessary to permit a reasoned choice (CEQA Guidelines Section 15126.6(f)). Where a potential alternative was examined but not chosen as one of the range of alternatives, the CEQA Guidelines require that the EIR briefly discuss the reasons the alternative was dismissed.

Alternatives that are evaluated in the EIR must be potentially feasible alternatives. However, not all possible alternatives need to be analyzed. An EIR must “set forth only those alternatives necessary to permit a reasoned choice.” (CEQA Guidelines, Section 15126.6(f).) The CEQA Guidelines provide a definition for a “range of reasonable alternatives” and, thus limit the number and type of alternatives that need to be evaluated in an EIR. An EIR need not include any action alternatives inconsistent with the lead agency’s fundamental underlying purpose in proposing a project. (*In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings* (2008) 43 Cal.4th 1143, 1166.)

First and foremost, alternatives in an EIR must be potentially feasible. In the context of CEQA, “feasible” is defined as:

... capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors. (CEQA Guidelines 15364)

5.2 ALTERNATIVES CONSIDERED IN THIS EIR

FACTORS GUIDING SELECTION OF ALTERNATIVES

A Notice of Preparation was circulated to the public to solicit recommendations for a reasonable range of alternatives to the proposed project. Additionally, a public scoping meeting was held during the public review period to solicit recommendations for a reasonable range of alternatives to the proposed project. No specific alternatives were recommended by commenting agencies or the general public during the NOP public review and comment period.

The alternatives to the General Plan Update selected for analysis in the EIR were developed to minimize significant environmental impacts while fulfilling the basic objectives of the project, and address public, City staff, and elected officials’ input with respect to potential land use and growth scenarios that may be appropriate for consideration as part of the General Plan Update. Significant impacts are summarized in Chapter 4.0 and described in greater detail in Sections 3.1 through 3.16. As described in Chapter 2.0 (Project Description), the following objectives have been identified for the proposed project:

5.0 ALTERNATIVES

- Develop a long-term vision for the City of Jackson
- Engage a broad spectrum of the community members
- Engage key stakeholders to perpetuate long-term involvement
- Establish a greater connection between the General Plan and current planning issues
- Educate the public on the City’s existing conditions and the General Plan Update process
- Provide a range of high-quality housing options
- Attract and retain businesses and industries that provide high-quality and high-paying jobs
- Continue to maintain and improve multimodal transportation opportunities
- Maintain strong fiscal sustainability and continue to provide efficient and adequate public services
- Address new requirements of State law

SIGNIFICANT AND UNAVOIDABLE IMPACTS

The proposed General Plan Update would result in the following significant and unavoidable impacts, which are described in Sections 3.1 through 3.16 and Chapter 4.0:

- **Impact 3.2-4:** General Plan implementation would involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use
- **Impact 3.3-1:** General Plan implementation would conflict with or obstruct implementation of the applicable air quality plan, or result in a cumulatively considerable net increase of criteria pollutants
- **Impact 3.7-1:** General Plan implementation has the potential to generate GHG emissions that could have a significant impact on the environment and/or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases
- **Impact 3.14-1:** General Plan implementation may conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)
- **Impact 3.15-1:** General Plan implementation would result in sufficient water supplies available to serve the City and reasonably foreseeable future development during normal, dry and multiple dry years
- **Impact 3.15-2:** General Plan implementation would not require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects
- **Impact 3.15-3:** General Plan implementation would not have the potential to result in a determination by the wastewater treatment provider which serves or may serve the Project that it does not have adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments

- **Impact 3.15-4:** General Plan implementation may require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects
- **Impact 4.2:** Cumulative impact to agricultural lands and resources
- **Impact 4.3:** Cumulative impact on the region's air quality
- **Impact 4.7:** Cumulative impacts related to greenhouse gases, climate change, and energy
- **Impact 4.14:** Cumulative impacts on the transportation network
- **Impact 4.15:** Cumulative impacts related to utilities
- **Impact 4.17:** Irreversible and adverse effects

ALTERNATIVES TO THE GENERAL PLAN UPDATE

Three alternatives to the General Plan Update were considered based on the analysis performed to identify the environmental effects of the proposed project. Since the General Plan Update was prepared with the intent to be a self-mitigating document, project alternatives focused on amending land uses to potentially address impacts. The alternatives analyzed in this EIR include the following:

ALTERNATIVE 1: NO PROJECT ALTERNATIVE.

Under the No Project Alternative, the City would not adopt the General Plan Update. The existing Jackson General Plan would continue to be implemented and no changes to the General Plan, including the Land Use Map, goals, policies, or actions would occur. Subsequent projects, such as amending the Municipal Code (including the zoning code/map) and master plans, would not occur. The existing General Plan Land Use Map is shown on Figure 5.0-1.

ALTERNATIVE 2: LAND USE BUFFER ALTERNATIVE.

The Land Use Buffer Alternative would be identical to the proposed project in terms of land uses within the City limits and the SOI. The only differences would be that the Land Use Buffer Alternative would incorporate a 200 foot-wide agricultural and open space buffer along the inner perimeter of the southern and western portion of the SOI and the southwest portion of the City. This portion of the City and SOI currently abuts County agricultural lands that are used for grazing. In the future, should these lands be converted to more active agricultural uses such as vineyards or other crops, there could be additional conflicts between these uses and Residential Suburban uses proposed in the SOI. The buffer in this area would also provide aesthetic benefits, as the open space and agricultural appearance of lands in the southern area would be retained. The northern and eastern portions of the SOI would not have a buffer as these areas are adjacent to County lands that are developed with large lot residential development. As a result, the potential for conflicts with agricultural uses is less of an issue in the northern area of the City and SOI. This alternative would also include a buffer prohibiting development within the portion of the SOI encompassed by Safety Area 3 (Overflight Zone) for Westover Field. This buffer could reduce land use and noise impacts associated with Westover Airport and would also reduce visual impacts associated with development in the northern area of the SOI. It is anticipated that development in the northern area of the SOI would be reduced; however, overall development in the City and

SOI would not be significantly reduced under this alternative, but rather be clustered in areas that remain available for development.

ALTERNATIVE 3: REDUCED INTENSITY ALTERNATIVE.

The Reduced Intensity Alternative would consist of a reduction in the amount of development proposed in the City and SOI. In terms of residential uses, only the amount of single-family uses/intensities would be reduced while the amount of multi-family would remain unchanged in both the City and SOI. The majority of the reduction in single-family uses would be occurring within the SOI. Shopping Center Commercial, General Commercial and Office FAR would all be reduced as part of the Reduced Intensity Alternative. The majority of reductions would occur within the City limits rather than the SOI for the commercial uses. All reductions in Office would occur only within the City limits. For the purposes of this analysis it is assume that these reductions would result in 341 fewer residential units, and a reduction in non-residential development by 150,000 square feet.

5.3 ENVIRONMENTAL ANALYSIS

The alternatives analysis provides a summary of the relative impact level of significance associated with each alternative for each of the environmental issue areas analyzed in this EIR. Following the analysis of each alternative, Table 5.0-2 summarizes the comparative effects of each alternative.

The primary difference between the proposed General Plan and Alternatives 2 and 3 are the Land Use Maps associated with each of these alternatives. The goals, policies, and actions contained in the proposed General Plan would also apply and be implemented under Alternatives 2 and 3. Therefore, changes to the Land Use Map are the only variables that may increase or decrease the severity of one or more of the significant environmental impacts identified in this Draft EIR. It is important to note, however, that all of the Land Use Maps, across all of the Alternatives analyzed in this EIR, include essentially the same urban footprint. In other words, none of the Alternatives introduce new urban land uses within areas of the City that are not already designated for such uses by the existing General Plan.

Throughout the preparation of the General Plan Update, the City Council, Planning Commission, and Working Group all expressed a desire and commitment to ensuring that the General Plan not only reflect the community's values and priorities, but also serve as a self-mitigating document and avoid significant environmental impacts to the greatest extent feasible. To further this goal of crafting a self-mitigating General Plan, the environmental analysis contained in this Draft EIR was completed concurrently with the development of the General Plan elements and Land Use Map in order to foster informed decision making regarding the Land Use Map and the General Plan goals, policies, and actions as they were being developed. As the Land Use Map was crafted, refined, and revised throughout the course of the General Plan Update, changes were made on a continuous basis in order to incrementally and substantially reduce potentially significant environmental impacts that were identified. The result of this approach and this process is a proposed General Plan Land Use Map that has reduced potentially significant impacts to the environment, while still meeting the project objectives identified by the City of Jackson.

Based upon the evaluation described in this section, the Reduced Intensity Alternative (Alternative 3) is considered the environmentally superior alternative. Alternative 3 has no environmental impacts that are worse than those under the proposed project and has slightly reduced impacts in every issue area as shown in Table 5.0-2. By contrast, Alternative 2 has environmental impacts generally comparable to those of the proposed project, but better in only limited issue areas. Therefore, Alternative 3 is considered the environmentally superior alternative as it would result in less intensive impacts than the proposed project, however no significant impacts would be reduced to a less than significant level.

ALTERNATIVE 1 - NO PROJECT ALTERNATIVE

Under Alternative 1 (No Project Alternative), the City would continue to implement the existing General Plan and no changes would be made to address updated General Plan Guidelines, or the requirements of State law. Since adoption of the existing General Plan, State legislation has been passed requiring the City to address new safety and circulation requirements in the General Plan and to further address greenhouse gas emissions. Additionally, while the City currently has a certified Housing Element, it will be required to update its Housing Element and receive new State certification by December 2023, and the existing General Plan does not conform to state requirements regarding planning for future housing growth. The General Plan goals, policies, and actions, as well as the Land Use Map, would not be updated to address the vision and concerns of the City's residents, property owners, decision-makers, and other stakeholders that actively participated in the visioning and goal and policy development process.

Under Alternative 1, new growth would be allowed as envisioned under the existing General Plan, with land uses required to be consistent with the existing General Plan Land Use Map. Therefore, Alternative 1 would result in the continuation of existing conditions and development levels, as described in Chapter 3.10 (Land Use and Population) and would result in similar development totals when compared to the proposed Project.

Under Alternative 1, the existing General Plan policy framework would still be in effect, which would constitute a status quo approach to land use regulation in the City. The proposed General Plan, along with the policy framework proposed by the General Plan Update, encourages and aims to provide the framework and land use pattern for logical, orderly growth from the City's compact, historic center extending to well-delineated residential neighborhoods, employment centers, and community amenities to meet the City's long-term housing, employment, and civic needs. The proposed General Plan provide opportunities for cohesive new growth, and would ensure that development pays its fair-share of necessary roadway, public service, and other infrastructure improvements, and that provides for increased protection of natural resources would occur through policy and actions included in the updated plan. Additionally, the proposed General Plan was prepared in conformance with State laws and regulations associated with the preparation of general plans, including requirements for environmental protection.

Alternative 1 would not include updated policies, particularly those related to housing, greenhouse gases, and complete streets policies to address safety, access, and mobility for all roadway users, as required by State law. This alternative would not include various policies

5.0 ALTERNATIVES

proposed in the General Plan update to ensure protection of environmental resources, both at a project level and under cumulative conditions, consistent with the objectives of CEQA.

Alternative 1 fails to meet several of the basic project objectives, including the following:

- Developing a long-term vision for the City of Jackson;
- Establishing a greater connection between the General Plan and current planning issues;
- Continuing to maintain and improve multimodal transportation opportunities;
- Maintaining strong fiscal sustainability and continue to provide efficient and adequate public services; and
- Address new requirements of State law

Therefore, Alternative 1 (No Project) is rejected from further consideration as a CEQA alternative, as it fails to meet several of the project objectives. However, for reference, the environmental effects associated with Alternative 1 are discussed and summarized in Table 5.0-2 to provide a general comparison between the adopted Jackson General Plan (Alternative 1– No Project), the proposed Project, and Alternatives 2 and 3.

ALTERNATIVE 2 – LAND USE BUFFER ALTERNATIVE

As described previously, the Land Use Buffer Alternative would be identical to the proposed project in terms of land uses within the City limits and the SOI. The only differences would be that the Land Use Buffer Alternative would incorporate a 200 foot-wide agricultural and open space buffer along the inner perimeter of the southern and western portion of the SOI and the southwest portion of the City. This portion of the City and SOI currently abuts County agricultural lands that are used for grazing. In the future, should these lands be converted to more active agricultural uses such as vineyards or other crops, there could be additional conflicts between these uses and Residential Suburban uses proposed in the SOI. The buffer in this area would also provide aesthetic benefits, as the open space and agricultural appearance of lands in the southern area would be retained. The northern and eastern portions of the SOI would not have a buffer as these areas are adjacent to County lands that are developed with large lot residential development. As a result, the potential for conflicts with agricultural uses is less of an issue in the northern area of the City and SOI. This alternative would also include a buffer prohibiting development within the portion of the SOI encompassed by Safety Area 3 (Overflight Zone) for Westover Field. This buffer would reduce land use and noise impacts associated with Westover Airport and would also reduce visual impacts associated with development in the northern area of the SOI. It is anticipated that development in the northern area of the SOI would be reduced; however, overall development in the City and SOI would not be significantly reduced under this alternative, but rather be clustered in areas that remain available for development.

Aesthetics

As described in Chapter 3.1 (Aesthetics and Visual Resources) impacts related to Aesthetics were found be less than significant. Implementation of the proposed project would alter the existing

landscape characteristics of the city with large undeveloped areas converting to urban land uses. Implementation of the Land Use Buffer Alternative would result in a similar amount of development as the proposed project; however no development would be allowed within a 200-foot wide buffer within the inner perimeter of the southern SOI and the northern area of the SOI would also have less development. While the buffer would be an agricultural overlay, it would also provide a visual separation between developed uses within the SOI and adjacent undeveloped agricultural lands within the County. This buffer would also retain the existing land uses visible to the north from the Vista Point on SR 49/88. Therefore, impacts associated with degradation of existing visual character would be better in association with the Land Use Buffer Alternative compared to the proposed project.

cumulative development in the City, SOI, and surrounding region would alter the existing landscape characteristics of the region with large undeveloped areas converting to urban land uses, including residential and commercial development. Implementation of the Land Use Buffer Alternative would reduce this impact by maintaining a 200-foot wide agricultural and open space buffer. The buffer would also create a visual separation between proposed urban uses within the City and SOI and adjacent undeveloped agricultural lands in the County. The buffer in Safety Area 3 of Westover Field would also create a visual separation between residential development and airport uses. Cumulative degradation of existing visual character would be reduced in association with the Land Use Buffer Alternative. Therefore this impact would be better in association with the Land Use Buffer Alternative compared to the proposed project.

Agriculture and Forest Resources

As described in Chapter 3.2 (Agriculture and Forest Resources), the proposed General Plan would result in significant and unavoidable impacts related to the conversion of farmlands, including to non-agricultural use. Implementation of the Land Use Buffer Alternative would result in the designation of the same number of acres of land uses to urban uses as the proposed project, but would include a 200-foot wide agricultural overly buffer along the inner perimeter of the southern and western SOI and southwest area of the City. No acreage would be converted to urban uses within this buffer and adjoining agricultural lands would be less impacted by urbanization. Therefore, cumulative agricultural conversion/conflicts would be better in association with the Land Use Buffer Alternative as compared to the proposed project. However this impact would remain significant as development within lands with agricultural value would still be anticipated.

Air Quality

As described in Chapter 3.3 (Air Quality) Impact 3.3-1, the proposed General Plan would result in significant impacts to air quality. Development anticipated under buildout of the General Plan would result in short-term construction emissions. Implementation of the Land Use Buffer Alternative would also result in short-term construction emissions associated with individual development projects proposed on lands designated for urban uses. Any project involving mass grading operations would result in significant air quality impacts during construction.

Additionally the Proposed Project and Alternative 2 would still be anticipated to lead to overall increases in emissions of criteria pollutants, given the total growth in vehicle trips projected upon full buildout of the General Plan.

Implementation of the proposed project (City plus SOI) would result in cumulative contributions to regional air quality. Implementation of the Land Use Buffer Alternative would result in the same amount of development as the proposed project. The only difference would be that the development would be slightly reduced and clustered and maintain a 200-foot wide agricultural and open space buffer and a buffer in the vicinity of Westover Field. Therefore, impacts associated with cumulatively considerable net increases in criteria pollutants are considered similar for both the Land Use Buffer Alternative and the proposed project.

Implementation of the proposed project would contribute to an increase in GHG emission associated with vehicle transportation, building energy use and possibly agricultural uses. This in turn would result in increased atmospheric GHG concentrations which have been linked to climate change. Implementation of the Land Use Buffer Alternative would result in the same amount of development as the proposed project. Therefore, impacts associated with cumulatively considerable potential increases in Long-Term Atmospheric Greenhouse Gas Emissions would be similar in association with the Land Use Buffer Alternative and the proposed project.

Biological Resources

There are various biological resources, including habitat, that occurs throughout the region. As described in Chapter 3.4 (Biological Resources) General Plan implementation would result in less than significant impacts to biological resources. Approval of the General Plan would not directly approve or entitle any development or infrastructure projects. However, implementation of the General Plan and Land Use Map would allow and facilitate future development in Jackson, which could result in adverse impacts to special-status plant and wildlife species, as well as sensitive natural habitat or wildlife movement corridors. Subsequent development projects will be required to comply with the General Plan and adopted Federal, State, and local regulations for the protection of special status plants and animals, including habitat. The City of Jackson has prepared the proposed General Plan to include numerous policies and actions intended to protect special status plants and animals, including habitat, from adverse effects associated with future development and improvement projects. Implementation of the proposed project (City plus SOI) along with potential development in the surrounding area would contribute to cumulative impacts associated with special status plant and wildlife species, habitat loss, etc. Implementation of the Land Use Buffer Alternative would also add to cumulative impacts to special-status plant and wildlife species and habitat. However, the extent of impacts would potentially be less in association with the Land Use Buffer Alternative because less acreage would be disturbed than would occur in association with the proposed project because development would be precluded within the 200-foot wide agricultural and open space buffer and within Safety Area 3 of Westover Field. Therefore, cumulative impacts to special-status plant and wildlife species and habitat loss would be better in association with the Land Use Buffer Alternative than would occur in association with the proposed project.

Cultural and Tribal Cultural Resources

As described in Chapter 3.5 (Cultural and Tribal Cultural Resources) General Plan implementation would result in less than significant impacts to cultural and tribal cultural resources. Implementation of the proposed project could result in the potential disturbance of cultural resources (i.e., prehistoric sites, historic sites, and isolated artifacts and features) and human remains. Less acreage would be disturbed in association with the Land Use Buffer Alternative as compared to the proposed project. Therefore, impacts to cultural resources would be better in association with the Land Use Buffer Alternative compared to the proposed project.

Implementation of the proposed project could also result in the potential disturbance of cultural resources (i.e., prehistoric sites, historic sites, and isolated artifacts and features) and human remains. Less acreage would be disturbed in association with Land Use Buffer Alternative as compared to the proposed project. Therefore, cumulative impacts to cultural resources would be better in association with the Land Use Buffer Alternative compared to the proposed project.

Greenhouse Gases, Climate Change, and Energy

As described in Chapter 3.7 (Greenhouse Gases, Climate Change, and Energy), the proposed General Plan would result in significant impacts to Greenhouse Gases, Climate Change, and Energy.

Implementation of the Land Use Buffer Alternative would result in the same amount of development as the proposed project. Therefore, impacts associated with cumulatively considerable potential increases in Long-Term Atmospheric Greenhouse Gas Emissions would be similar in association with the Land Use Buffer Alternative and the proposed project.

Geology

As described in Chapter 3.6 (Geology), the proposed General Plan would result in less than significant impacts to Geology and Soils. All alternatives would result in similar development patterns. The proposed General Plan and Alternative 2 would also include updated policies related to geologic hazards, including requirements for project reviews and standards for construction and building practices (as described in detail in Chapter 3.6).

All future projects within the Planning Area will be required to comply with state laws including the preparation of stormwater plans, and compliance with the provisions of the California Building Standards Code (CBSC), which requires development projects to perform geotechnical investigations in accordance with State law, engineer improvements to address potential seismic and ground failure issues, and use earthquake-resistant construction techniques to address potential earthquake loads when constructing buildings and improvements. Therefore, impacts related to Geology and Soils would generally remain the same under all alternatives. However, the updated policy document provides for additional policies and action related to geologic hazards and safety when compared to the existing General Plan, therefore the proposed General Plan and Alternatives 2 and 3 would be considered to be slightly superior to the Alternative 1.

Hazards and Hazardous Materials

As described in Chapter 3.8 (Hazards and Hazardous Materials), all impacts related to hazards and hazardous materials were found to be less than significant. The proposed General Plan and Alternative 2 would include updated policies and actions aimed at protecting the public from hazardous materials. These policies and actions in the General Plan would ensure that potential hazards are identified on a project site, that development is located in areas where potential exposure to hazards and hazardous materials can be mitigated to an acceptable level, and that business operations comply with Federal and State regulations regarding the use, transport, storage, and disposal of hazardous materials. The proposed General Plan also includes policies and actions to ensure that the City has adequate emergency response plans and measures to respond in the event of an accidental release of a hazardous substance (as described in detail in Chapter 3.8). Additionally, the proposed General Plan includes policies and actions for adequate water supply and water flow availability, ensuring adequate emergency access, adequate fire protection services, fire safe design site standards, and ensuring public awareness regarding fire safety.

All Project alternatives would result in similar levels of urban uses including commercial, industrial, residential, and mixed-use and public facility development. Additionally, all Project Alternatives would result in development patterns that include future development of urban uses in areas designated as Moderate FHSZ. Therefore, impacts under Alternative 2 would remain similar when compared to the proposed General Plan.

Hydrology and Water Quality

Construction operations associated with future projects could result in temporary increases in runoff, erosion, sedimentation, soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas. The long-term operation of the proposed General Plan could result in long-term impacts to surface water quality from urban stormwater runoff and could enter groundwater or surface water systems. Additionally, the proposed General Plan would result in new impervious surfaces that could reduce rainwater infiltration and groundwater recharge. Minimization measures incorporated into the project would reduce potential water quality impacts to a less than significant level. The General Plan would not place persons or structures in a flood hazard zone. As described in Chapter 3.9 (Hydrology and Water Quality), under all impact areas, implementation of the proposed General Plan would result in less than significant impacts related to Hydrology and Water Quality.

Under the Alternative 2, development would occur in a manner similar to the proposed General Plan within an urbanized environment, where flood control and water quality protection measures are well established and enforced. Similar to the proposed General Plan, stormwater from future development would flow into the City's stormwater system via a network of drains, pipes, and detention basins. Future development projects allowed under the Alternative 2 would be required to develop permanent storm water control measures and incorporate these measures into the alternative in order to mitigate the impacts of pollutants in storm water runoff

from the alternative. Because the alternative would be required to implement improvements in order to manage and treat stormwater flows from the site, impacts related to water quality would be similar.

Alternative 1 as this alternative does not include an update to the General Plan Policy Document. Therefore, this impact under the No-Project Alternative may be slightly increased when compared to all other alternatives. Under Alternative 2, these impacts would be similar as the proposed General Plan; however, the smaller development footprint of this Alternative would decrease the potential to result in a discharge of pollutants into detention basins and storm drains and change the existing drainage pattern of the site; therefore, impacts related to hydrology and water quality would be slightly better under Alternative 2 when compared to the proposed General Plan.

Land Use Planning and Population/Housing

The proposed General Plan and Alternative 2 are long-range land use plans. As described in Chapter 3.10 (Land Use, Population, and Housing) all impacts related to land use, population, and housing were found to be less than significant under the Proposed General Plan. As described previously, the proposed General Plan and Alternative 2 would include adoption of the updated policy document consistent with the Proposed General Plan. Therefore, Alternative 2 would also result in the same impact level as the proposed General Plan. However, numerous programs and policies within the Proposed General Plan's policy document allow for greater consistency with applicable state and regional plans versus the existing General Plan, and would also promote efficiency in the delivery of urban services, and local agency coordination. Finally, the amount and typology of allowable development under the Proposed General Plan, and Alternative 2 has been crafted to meet City's Regional Housing Needs Allocation (RHNA) for future housing needs. Continuation of the existing General Plan and its Housing Element would not enable the City to meet its RHNA obligation for new State certification by December 2023. In all, Alternative 1 (No Project Alternative) would result in less consistency with pertinent state and regional plans relative to the proposed General Plan and when compared to all other alternatives.

Mineral Resources

As described in Chapter 3.11, the proposed General Plan would result in less than significant impacts relating mineral resources. All of the alternatives, like the Proposed General Plan, accommodate development generally in the same areas, and these areas are, for the most part, either already urbanized or in an open space land use. Given that no mineral resources would be impacted by the proposed project, impacts associated with each of the alternatives would be the same and all would remain less than significant.

Noise

As described in Chapter 3.12 (Noise), and 4.0 (Other CEQA) the proposed General Plan would result in less than significant noise impacts. Buildout of the General Plan would contribute to increases in transportation noise and in increases in traffic noise levels at existing sensitive receptors. The proposed General Plan and Alternative 2 include General Plan Policies intended to minimize exposure to excessive noise, including noise associated with increased traffic.

Additional policies would ensure that new development mitigates potential noise impacts to the greatest extent feasible through incorporating the noise control treatments necessary to achieve acceptable noise levels and sets criteria for evaluating future increases in traffic noise levels.

Development as a result of implementation of the proposed General Plan, would result in short-term increases in construction noise. Implementation of the Land Use Buffer Alternative would result in similar construction noise as the same amount of development would occur for both this alternative and the proposed project. The only difference would be that the development would be slightly reduced and clustered to avoid the 200-foot agricultural and open space buffer and the buffer within Safety Area 3 of Westover Field. Therefore, short-term construction noise impacts would be similar for both the Land Use Buffer Alternative and the proposed project.

Implementation of the Land Use Buffer Alternative would result in similar noise levels to the proposed project as the same amount of development would occur and the proposed buffers would not protect residential uses from roadway traffic noise. Both the proposed project and the Land Use Buffer Alternative would result in similar increases in transportation noise by extending the existing noise impact areas along transportation system alignments. Increases in distances to traffic noise contours could result in increased exposure of existing and proposed sensitive land uses, such as residential dwellings, to unacceptable noise levels. Therefore, impacts associated with an increase in noise exposing sensitive receptors to roadway traffic noise would be similar for both the Land Use Buffer Alternative and the proposed project.

Implementation of the Land Use Buffer Alternative could reduce some of the impacts associated with increases in ambient noise levels by requiring a buffer within Safety Area 3 of Westover Field which would preclude development in this area. Areas within the SOI and the City located within this buffer would not be allowed to develop. The Land Use Buffer Alternative would avoid would partially reduce noise levels at receptors by requiring a buffer within Safety Zone 3 of Westover Field. This buffer would preclude development on the northern portion of the SOI and city that is encompassed within Safety Zone 3. Therefore, cumulative exposure of sensitive receptors to aircraft noise impacts are considered better in association with the Land Use Buffer Alternative as compared to the proposed project.

Public Services and Recreation

As described in Chapter 3.13, the proposed General Plan would result in less than significant impacts relating to public services and recreation. New development would place increased demands on public services such as police, fire, schools, parks, libraries, and other governmental services. The proposed General Plan includes policies and actions that require payment of impact fees to the City and other public agencies to ensure that additional development allowed does not have adverse impacts on these services and agencies.

Under Alternative 2, the development area and development types would remain similar. Overall, Alternative 2 would have a similar impacts to public services when compared to the proposed Project and Alternative 3.

Transportation and Circulation

As described in Chapter 3.14 (Transportation and Circulation), the proposed General Plan would result in significant and unavoidable impacts to the circulation network.

As described in section 3.14, the cumulative 2040 average VMT values for the City of Jackson range from 1% to 5% below existing averages but continue to be well below the County-wide averages for residential. Residents of Jackson in the future will likely engage in similar travel patterns to existing residents based on planned land use, roadways, and alternative modes of transportation in the City, resulting in the absolute VMT of the City and increasing and the VMT per unit and per employee in Jackson remaining similar or reduced when compared to baseline in the planning horizon.

Residents of Jackson in the future will likely engage in similar travel patterns to existing residents based on planned land use, roadways, and alternative modes of transportation in the City, resulting in the absolute VMT of the City and increasing and the VMT per unit and per employee in Jackson remaining similar to baseline in the planning horizon. The proposed general plan includes the following policies designed to reduce vehicle travel and VMT.

The implementation of the proposed General Plan would likely contribute to land use development that generates VMT per dwelling unit or employee in excess of the levels necessary to meet State GHG reduction goals. Consistent with Policy CIRC-8c, the city will require new land use development projects to reduce VMT through feasible CAPCOA on-site VMT reduction strategies. Although larger changes in the proposed General Plan land use element could potentially reduce VMT further, those changes would also affect the achievement of other goals the City seeks to achieve with the General Plan. VMT reduction also depends on factors such as demographic change, household preferences for housing types and locations, the cost of fuel, and the competitiveness of regional transit relative to driving, which relates to congestion along vehicular commute routes that are not under the City's jurisdiction. As a result, the VMT impacts associated with employment-based uses allowed by the proposed General Plan were considered significant and unavoidable.

The Land Use Buffer Alternative would result in similar roadway segment impacts because the same amount of development is proposed for this alternative as for the proposed project. The only difference is that development would be slightly reduced and clustered to avoid locating urban uses within the land use buffers identified for the alternative. Therefore, roadway segment impacts under City buildout would be similar for both the Land Use Buffer Alternative and the proposed project.

Utilities and Service Systems

As described in Chapter 3.15, the proposed General Plan may result in impacts relating to Utilities.

New development would place increased demands on utilities. Under Alternative 2, the Planning Area would be developed with a similar development patterns and uses as the Proposed General Plan. The quantity of infrastructure installed would not be substantially reduced, as all

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alternatives would require similar development patterns. Therefore, this alternative would have similar impacts to utilities when compared to the proposed General Plan.

Wildfire

As described in Chapter 3.16, the proposed General Plan have less-than-significant impacts related to wildfire risks associated with lands in or near State Responsibility Areas or lands classified as very high fire hazard severity zones. Because all alternatives would result in the same Planning Area, the impact under all scenarios would remain the same.

Irreversible Effects

The proposed project would have a significant and unavoidable impact associated with irreversible environmental effects as described under Impact 4.17. Implementation of the proposed General Plan would result in a commitment of land uses designated for the foreseeable future. Land use and development consistent with the General Plan would result in irretrievable commitments by introducing development onto sites that are presently undeveloped. The conversion of agricultural lands to urban uses would result in an irretrievable loss of agricultural land, wildlife habitat, and open space. Additionally, development will physically change the environment in terms of aesthetics, air emission, noise, traffic, open space, and natural resources. These physical changes are irreversible after development occurs. Therefore, the proposed General Plan would result in changes in land use within the Planning Area that would commit future generations to these uses.

ALTERNATIVE 3 – REDUCED INTENSITY ALTERNATIVE

The Reduced Intensity Alternative would consist of a reduction in the amount of development in residential dwelling units and non-residential square proposed in the City and SOI. The reductions for the Planning Area compared to the proposed project are shown in Table 5.0-1.

TABLE 5.0-1: REDUCED INTENSITY ALTERNATIVE LAND USES COMPARED TO THE PROPOSED PROJECT PLANNING AREA

<i>EXISTING CONDITIONS</i>	<i>PROPOSED PROJECT - GENERAL PLAN UPDATE</i>	<i>ALTERNATIVE 3 – REDUCED INTENSITY ALTERNATIVE</i>	<i>DIFFERENCE</i>
<i>RESIDENTIAL DWELLING UNITS</i>			
2,406	681	341	-340
<i>NONRESIDENTIAL SQUARE FOOTAGE</i>			
1,827,500	300,000	150,000	-150,000

SOURCE: DE NOVO PLANNING GROUP, 2023

Aesthetics

Chapter 3.1 (Aesthetics and Visual Resources) identifies that cumulative development in the City, SOI, and surrounding region would alter the existing landscape characteristics of the region with large undeveloped areas converting to urban land uses, including residential and commercial development. Implementation of the Reduced Intensity Alternative would lessen this impact by reducing the amount of development proposed in the City and SOI. Cumulative degradation of

existing visual character would be less extensive in association with the Reduced Intensity Alternative. Therefore, this impact would be better in association with the Reduced Intensity Alternative compared to the proposed project.

Agriculture and Forest Resources

Chapter 3.2 (Agriculture and Forest Resources), the proposed General Plan would result in significant and unavoidable impacts related to the conversion of farmlands to non-agricultural use. Implementation of the Reduced Intensity Alternative would partially avoid this impact by reducing the overall level of development proposed in the City and SOI. Therefore, cumulative agricultural conversion/conflicts associated with the Reduced Intensity Alternative would be better in association with the Reduced Intensity Alternative as compared to the proposed project.

Air Quality

As described in Chapter 3.3 (Air Quality), the proposed General Plan implementation would result in significant impacts to air quality. Implementation of the Reduced Intensity Alternative would also result in short-term construction emissions associated with individual development projects proposed on lands designated for urban uses. However, the amount of development proposed in association with the Reduced Intensity Alternative would be less than the amount included in the proposed project. Therefore, the potential for air quality impacts associated with increases in short-term construction emissions would be better for the Reduced Intensity Alternative compared to the proposed project.

Less residential development would occur, resulting in less opportunities for sensitive receptors to be exposed to localized pollutant concentrations. As a result, impacts associated with increased exposure of sensitive receptors to localized pollutant concentrations would be less, and therefore better in association with the Reduced Intensity Alternative as compared to the proposed project.

Biological Resources

There are various biological resources, including habitat, that occurs throughout the region. As described in Chapter 3.4 (Biological Resources) General Plan implementation would result in less than significant impacts to biological resources. Implementation of the proposed project (City plus SOI) along with potential development in the surrounding area would contribute to cumulative impacts associated with special status plant and wildlife species, habitat loss, etc. Implementation of the Reduced Intensity Alternative would also add to cumulative impacts to special-status plant and wildlife species and habitat. However, the extent of impacts would be less in association with the Reduced Intensity Alternative because less development is proposed and therefore, less acreage would be disturbed than would occur in association with the proposed project. Therefore, cumulative impacts to special-status plant and wildlife species and habitat loss would be better in association with the Reduced Intensity Alternative as compared to the proposed project.

Cultural and Tribal Cultural Resources

As described in Chapter 3.5 (Cultural and Tribal Cultural Resources) General Plan implementation would result in less than significant impacts to cultural and tribal cultural resources.

Implementation of the proposed project could result in the potential disturbance of cultural resources (i.e., prehistoric sites, historic sites, and isolated artifacts and features) and human remains. Less acreage would be disturbed in association with the Reduced Intensity Alternative as compared to the proposed project. Therefore, impacts to cultural resources would be better in association with the Reduced Intensity Alternative compared to the proposed project.

Furthermore, implementation of the proposed project could result in the potential disturbance of cultural resources (i.e., prehistoric sites, historic sites, and isolated artifacts and features) and human remains. Less acreage would be disturbed in association with the Reduced Intensity Alternative as compared to the proposed project. Therefore, cumulative impacts to cultural resources would be better in association with the Reduced Intensity Alternative compared to the proposed project.

Greenhouse Gases, Climate Change, and Energy

As described in Chapter 3.7 (Greenhouse Gases, Climate Change, and Energy), the proposed General Plan would result in significant impacts to Greenhouse Gases, and Climate Change.

Implementation of the Reduced Intensity Alternative would result in less development and population than the proposed project. While cumulative increases in criteria pollutants would still occur in association with implementation of the Reduced Intensity Alternative, they would be considerably less than would occur in association with the proposed project based on the reduction in residential and non-residential land uses, and the cumulative decrease in potential SOI development. Therefore, impacts associated with cumulatively considerable net increases in GHGs are considered better in association with the Reduced Intensity Alternative as compared to the proposed project.

Geology

As described in Chapter 3.6 (Geology), the proposed General Plan would result in less than significant impacts to Geology and Soils. All alternatives would result in similar development patterns. The proposed General Plan and Alternatives 2 and 3 would also include updated policies related to geologic hazards, including requirements for project reviews and standards for construction and building practices (as described in detail in Chapter 3.6).

All future projects within the Planning Area will be required to comply with state laws including the preparation of stormwater plans, and compliance with the provisions of the California Building Standards Code (CBSC), which requires development projects to perform geotechnical investigations in accordance with State law, engineer improvements to address potential seismic and ground failure issues, and use earthquake-resistant construction techniques to address potential earthquake loads when constructing buildings and improvements. Therefore, impacts related to Geology and Soils would generally remain the same under all alternatives. However, the updated policy document provides for additional policies and action related to geologic hazards and safety when compared to the existing General Plan, therefore the proposed General Plan and Alternatives 2 and 3 would be considered to be slightly superior to the Alternative 1 (No Project).

Hazards and Hazardous Materials

As described in Chapter 3.8 (Hazards and Hazardous Materials), all impacts related to hazards and hazardous materials were found to be less than significant. The proposed General Plan and Alternative 2 would include updated policies and actions aimed at protecting the public from hazardous materials. These policies and actions in the General Plan would ensure that potential hazards are identified on a project site, that development is located in areas where potential exposure to hazards and hazardous materials can be mitigated to an acceptable level, and that business operations comply with Federal and State regulations regarding the use, transport, storage, and disposal of hazardous materials. The proposed General Plan also includes policies and actions to ensure that the City has adequate emergency response plans and measures to respond in the event of an accidental release of a hazardous substance (as described in detail in Chapter 3.8). Additionally, the proposed General Plan includes policies and actions for adequate water supply and water flow availability, ensuring adequate emergency access, adequate fire protection services, fire safe design site standards, and ensuring public awareness regarding fire safety.

All Project alternatives would result in similar levels of urban uses including commercial, industrial, residential, and mixed-use and public facility development. Additionally, all Project Alternatives would result in development patterns that include future development of urban uses in areas designated as Moderate FHSZ. Therefore, impacts under Alternative 2 would remain similar when compared to the proposed General Plan. As shown in Table 5.0-1, Alternative 3 would result in the development fewer residential units, and reduced non-residential square feet decreasing the total number of residents potentially exposed to, hazardous materials, and business that handle them. Therefore, impacts would be better when compared to the Proposed General Plan.

Hydrology and Water Quality

Implementation of the proposed General Plan has the potential to result in the violation of water quality standards and waste discharge of pollutants into surface waters during both construction and long-term operations. Construction operations could result in temporary increases in runoff, erosion, sedimentation, soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas. The long-term operation of the proposed General Plan could result in long-term impacts to surface water quality from urban stormwater runoff and could enter groundwater or surface water systems. Additionally, the proposed General Plan would result in new impervious surfaces that could reduce rainwater infiltration and groundwater recharge. Minimization measures incorporated into the project would reduce potential water quality impacts and result in less than significant impacts. The General Plan would not place persons or structures in a flood hazard zone. As described in Chapter 3.9 (Hydrology and Water Quality), under all impact areas, implementation of the proposed General Plan would result in less than significant impacts related to Hydrology and Water Quality.

Under the Alternative 3, development would occur in a manner similar to the proposed General Plan within a highly urbanized environment, where flood control and water quality protection measures are well established and enforced. However, Alternative 3 provides for a reduced intensity of residential uses, preserving the land from future development. Therefore, future development allowed under this alternative would result in less land covered with impervious surfaces compared to the proposed General Plan. Similar to the proposed General Plan, stormwater from future development would flow into the City's stormwater system via a network of drains, pipes, and detention basins. Future development projects allowed under the Alternative 3 would be required to develop permanent storm water control measures and incorporate these measures into the alternative in order to mitigate the impacts of pollutants in storm water runoff from the alternative. Because the alternative would be required to implement improvements in order to manage and treat stormwater flows from the site, impacts related to water quality would be similar.

As described in Chapter 3.9 (Hydrology and Water Quality), when the proposed General Plan is eventually developed, the on-site impervious area would increase, leading to faster runoff rates. Alternative 3 would provide for a reduced amount of impervious surface due the reduced intensity of residential uses when compared to the proposed General Plan.

As described in Chapter 3.9 (Hydrology and Water Quality) General Plan implementation has the potential to result in the discharge of pollutants into detention basins and storm drains, and would change the existing drainage pattern on the site, although these impacts are less than significant as a result of compliance with local, state, and federal regulations, as well as compliance with General Plan policies. Under Alternative 3, these impacts would be similar as the proposed General Plan; however, the smaller development footprint of this Alternative would decrease the potential to result in a discharge of pollutants into detention basins and storm drains and change the existing drainage pattern of the site; therefore, impacts related to hydrology and water quality would be slightly better under Alternative 3 when compared to the proposed General Plan.

Land Use Planning and Population/Housing

As described in Chapter 3.10 (Land Use, Population, and Housing) all impacts related to land use, population, and housing were found to be less than significant under the Proposed General Plan. Implementation of the Reduced Intensity Alternative would reduce this impact while still accommodating growth. Both the proposed project and the Reduced Intensity Alternative would result in growth that is not anticipated as part of the City's existing General Plan Land Use Element. However, because less development is proposed under the Reduced Intensity Alternative, it would result in less intense, and therefore potentially fewer land use conflicts associated with population, housing and employment uses than the proposed project.

Adoption of the General Plan in conjunction with proposed development within the adjacent areas of Amador County would result in increased population, as well as housing and non-residential uses, in the City of Jackson, its SOI and the surrounding region. The Reduced Intensity Alternative proposes less residential development in both the City and the SOI compared to the

proposed project. Therefore, this alternative would result in fewer housing opportunities and would be less consistent with regional and statewide housing objectives.

Mineral Resources

As described in Chapter 3.11, the proposed General Plan would result in less than significant impacts relating mineral resources. All of the alternatives, like the Proposed General Plan, accommodate development generally in the same areas, and these areas are, for the most part, either already urbanized or in an open space land use. Given that no mineral resources would be impacted by the proposed project, impacts associated with each of the alternatives would be the same and all would remain less than significant.

Noise

As described in Chapter 3.12 (Noise), and 4.0 (Other CEQA) the proposed General Plan would result in less than significant noise impacts. Buildout of the General Plan would contribute to increases in transportation noise and in increases in traffic noise levels at existing sensitive receptors. The proposed General Plan and Alternative 3 include General Plan Policies intended to minimize exposure to excessive noise, including noise associated with increased traffic. Additional policies would ensure that new development minimizes potential noise impacts to the through incorporating the noise control treatments necessary to achieve acceptable noise levels and sets criteria for evaluating future increases in traffic noise levels.

Development as a result of implementation of the proposed General Plan would result in short-term increases in construction noise. Implementation of the Reduced Intensity Alternative would result in less short-term construction noise as a fewer residential units and less square feet of non-residential uses are proposed in association with this alternative. Therefore, short-term construction noise impacts would be better in association with the Reduced Intensity Alternative as compared to the proposed project.

Public Services and Recreation

As described in Chapter 3.13, the proposed General Plan would result in less than significant impacts relating to public services and recreation. New development would place increased demands on public services such as police, fire, schools, parks, libraries, and other governmental services. The proposed General Plan includes policies and actions that require payment of impact fees to the City and other public agencies to ensure that additional development allowed does not have adverse impacts on these services and agencies.

Under Alternative 3, the development area and development types would remain similar. However, because less development is proposed under the Reduced Intensity Alternative, it would result in less intense, and therefore fewer impacts associated with public services (the demand for police, fire and other public services) would be slightly reduced.

Transportation and Circulation

As described in Chapter 3.14 (Transportation and Circulation), the proposed General Plan would result in significant and unavoidable impacts to the circulation network related to increased VMT.

As described in section 3.14, the cumulative 2040 average VMT values for the City of Jackson range from 1% to 5% below existing averages but continue to be well below the County-wide averages for residential. Residents of Jackson in the future will likely engage in similar travel patterns to existing residents based on planned land use, roadways, and alternative modes of transportation in the City, resulting in the absolute VMT of the City and increasing and the VMT per unit and per employee in Jackson remaining similar to baseline in the planning horizon.

The implementation of the proposed General Plan would likely contribute to land use development that generates VMT per dwelling unit or employee in excess of the levels necessary to meet State GHG reduction goals. Consistent with Policy CIRC-8c, the city will require new land use development projects to reduce VMT through feasible CAPCOA on-site VMT reduction strategies. Although larger changes in the proposed General Plan land use element could potentially reduce VMT further, those changes would also affect the achievement of other goals the City seeks to achieve with the General Plan. VMT reduction also depends on factors such as demographic change, household preferences for housing types and locations, the cost of fuel, and the competitiveness of regional transit relative to driving, which relates to congestion along vehicular commute routes that are not under the City's jurisdiction. As a result, the VMT impacts associated with employment-based uses allowed by the proposed General Plan were considered significant and unavoidable.

Under Alternative 3, the Planning Area would be developed with a reduction in the amount of development proposed in the City and SOI. Therefore, the decrease in total residential unit count and population has the potential to decrease the total residential vehicle miles traveled, the reduced intensification and the increases in higher density under Alternative 3 are generally seen to increase opportunities for walking and bicycling and provide additional opportunities for trip internalization. Therefore, the transportation impacts are anticipated to be slightly better under Alternative 3 and the proposed General Plan. Therefore, the transportation impacts are slightly reduced under Alternative 3 and the proposed General Plan when compared to Alternative 2 and Alternative 1 (No Project), which implement the existing General Plan Land Use Map.

Utilities and Service Systems

As described in Chapter 3.15, the proposed General Plan may result in impacts relating Utilities.

Implementation of the Reduced Intensity Alternative would demand less water, wastewater treatment and solid waste than the proposed project because this alternative includes less residential and non-residential development. Additional utility system facilities would be required to serve new development associated with the proposed project. These new facilities would be more extensive than what would be necessary to serve uses associated with the Reduced Intensity Alternative. As a result, impacts to system facilities would be better in association with the

Reduced Intensity Alternative compared to the proposed project. However this would not reduce impacts to a less than significant level.

Wildfire

As described in Chapter 3.16, the proposed General Plan have less-than-significant impacts related to wildfire risks associated with lands in or near State Responsibility Areas or lands classified as very high fire hazard severity zones. Because all alternatives would result in the same Planning Area, the impact under all scenarios would remain the same.

Irreversible Effects

The proposed project would have a significant and unavoidable impact associated with irreversible environmental effects as described under Impact 4.17. Implementation of the proposed General Plan would result in a commitment of land uses designated for the foreseeable future. Land use and development consistent with the General Plan would result in irretrievable commitments by introducing development onto sites that are presently undeveloped. The conversion of agricultural lands to urban uses would result in an irretrievable loss of agricultural land, wildlife habitat, and open space. Additionally, development will physically change the environment in terms of aesthetics, air emission, noise, traffic, open space, and natural resources. These physical changes are irreversible after development occurs. Therefore, the proposed General Plan would result in changes in land use within the Planning Area that would commit future generations to these uses. During the planning horizon, development under Alternative 3 would be similar in comparison to the proposed General Plan and Alternative 2.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an environmentally superior alternative be identified among the alternatives that are analyzed in the EIR. If the No Project Alternative is the environmentally superior alternative, an EIR must also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6(e)(2)). The environmentally superior alternative is that alternative with the least adverse environmental impacts when compared to the proposed General Plan.

A comparative analysis of the proposed General Plan and each of the Project alternatives is provided in Table 5.0-2 below. The table includes a numerical scoring system, which assigns a score of 1 to 5 to each of the alternatives with respect to how each alternative compares to the proposed project in terms of the severity of the environmental topics addressed in this EIR. A score of “3” indicates that the alternative would have the same level of impact when compared to the proposed project. A score of “1” indicates that the alternative would have a better (or reduced) impact when compared to the proposed project. A Score of “2” indicates that the alternative would have a slightly better (or slightly reduced) impact when compared to the proposed project. A score of “4” indicates that the alternative would have a slightly worse (or slightly increased) impact when compared to the proposed project. A score of “5” indicates that the alternative would have a worse (or increased) impact when compared to the proposed

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project. The project alternative with the lowest total score is considered the environmentally superior alternative.

As shown in Table 5.0-2, Alternative 3 (Reduced Intensity Alternative) is the environmentally superior alternative when looked at in terms of all potential environmental impacts. All of the alternatives fail to reduce any significant and unavoidable impacts to a less than significant level. Throughout the preparation of the General Plan Update, the City Council, Planning Commission, and GPAC all expressed a desire and commitment to ensuring that the General Plan not only reflect the community's values and priorities, but also serve as a self-mitigating document and avoid significant environmental impacts to the greatest extent feasible. To that end, the proposed General Plan includes the fully range of minimizing policies and actions to reduce potential impacts to the greatest extent possible.

TABLE 5.0-2: COMPARISON OF ALTERNATIVES TO THE PROPOSED PROJECT

<i>ENVIRONMENTAL ISSUE</i>	<i>PROPOSED PROJECT</i>	<i>ALTERNATIVE 1 (NO PROJECT)</i>	<i>ALTERNATIVE 2</i>	<i>ALTERNATIVE 3</i>
Aesthetics	3 – Same	4 – Slightly Worse	2 – Slightly Better	2 – Slightly Better
Agricultural Resources	3 – Same	4 – Slightly Worse	2 – Slightly Better	2 – Slightly Better
Air Quality	3 – Same	4 – Slightly Worse	3 – Same	1 – Better
Biological Resources	3 – Same	4 – Slightly Worse	2 – Slightly Better	2 – Slightly Better
Cultural Resources	3 – Same	4 – Slightly Worse	2 – Slightly Better	2 – Slightly Better
Geology and Soils	3 – Same	4 – Slightly Worse	2 – Slightly Better	2 – Slightly Better
Greenhouse Gases, Climate Change, and Energy	3 – Same	4 – Slightly Worse	3 – Same	2 – Slightly Better
Hazards and Hazardous Materials	3 – Same	4 – Slightly Worse	3 – Same	2 – Slightly Better
Hydrology and Water Quality	3 – Same	4 – Slightly Worse	2 – Slightly Better	2 – Slightly Better
Land Use and Population	3 – Same	3 – Same	3 – Same	2 – Slightly Better
Mineral Resources	3 – Same	3 – Same	3 – Same	3 – Same
Noise	3 – Same	4 – Slightly Worse	2 – Slightly Better	2 – Slightly Better
Public Services and Recreation	3 – Same	4 – Slightly Worse	3 – Same	2 – Slightly Better
Transportation and Circulation	3 – Same	4 – Slightly Worse	3 – Same	2 – Slightly Better
Utilities	3 – Same	3 – Same	3 – Same	2 – Slightly Better
Wildfire	3 – Same	3 – Same	3 – Same	3 – Same
Irreversible Effects	3 – Same	4 – Slightly Worse	3 – Same	3 – Same
SUMMARY	51	65	44	36

Overall, based upon the evaluation described in this section, the Reduced Intensity Alternative (Alternative 3) is considered the environmentally superior alternative. Alternative 3 has no environmental impacts that are worse than those under the proposed project and has better impacts in every issue area as shown in Table 5.0-2, above. By contrast, Alternative 2 has environmental impacts generally comparable to those of the proposed project, but better in only limited issue areas. Therefore, Alternative 3 is considered the environmentally superior alternative as it would result in less intensive impacts than the proposed project.

SATISFACTION OF PROJECT OBJECTIVES

Alternative 1

As described previously Alternative 1 failed to meet several basic Project objectives and thus was not further considered. Alternative 1 fails to meet several of the basic project objectives, including

addressing new requirements of State law; and addressing emerging transportation, housing, and employment trends.

Alternative 2

Like The proposed Project, Alternative 2 reflects the current goals and vision expressed by city residents, businesses, decision-makers, and other stakeholders; through the updated policy document, and addresses new requirements of State law, including climate resiliency planning, environmental justice, complete streets, etc.

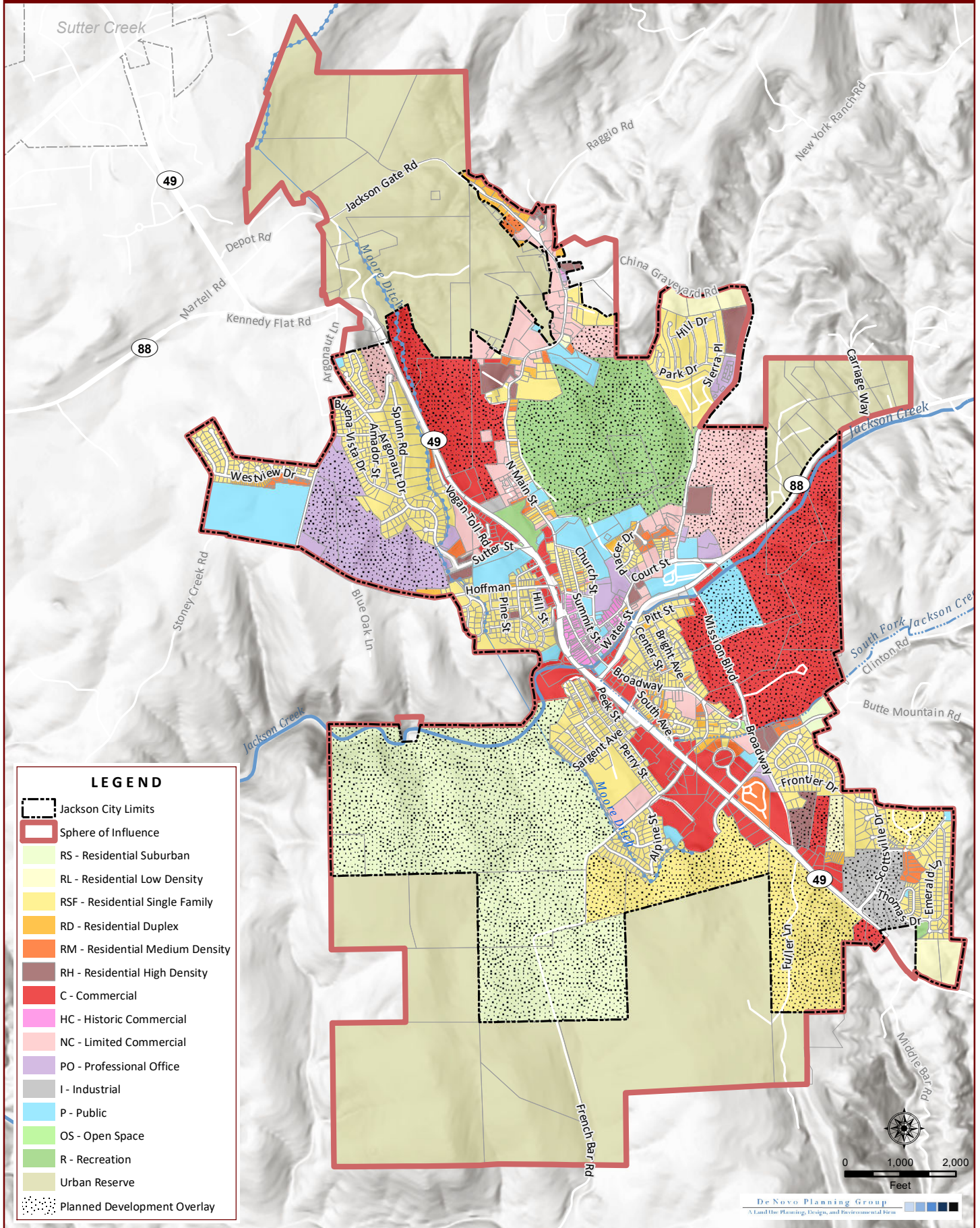
Alternative 2 would provide for some reductions of impacts due to additional open space buffers and associated undeveloped lands, however this alternative would not reduce any significant impacts to a less than significant level. Additionally, this alternative would create separations and could physically divide community connectivity with developments located on either side of the buffer, and would require utility infrastructure be extended in a non-orderly fashion to accommodate development on either side of the buffered areas resulting in many inefficiencies for future development activities and improvements.

Alternative 3

Like the proposed Project, Alternative 3 would satisfy most Project objectives as it would adopt the updated policy document as well as the updated Land Use Map. However this alternative would allow reduces residential densities and would allow for less residential growth that would be allowed under the proposed Project. Alternative 3 meets most Project objectives and would be slightly environmentally superior to the proposed Project. However, this alternative would not reduce any significant impacts to a less than significant level, and would reduce the overall housing opportunities within the planning area, and would be inferior in meeting regional and state housing goals, and may limit the city's ability to meet future regional housing needs and objectives.

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Figure 5.0-1: Existing General Plan



Sources: City of Jackson; ACTC; ArcGIS Online World Elevation/Terrain Image Service. Map date: March 10, 2021.

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Appendix A

Notice of Preparation and NOP Comments



Notice of Preparation and Scoping Meeting Jackson General Plan Update Environmental Impact Report

Date: November 23, 2022

To: State Clearinghouse, Agencies, Organizations and Interested Parties

Subject: Notice of Preparation and Scoping Meeting for the Jackson General Plan Update Environmental Impact Report

Scoping Meeting: **December 5, 2022, 6:30 p.m.**

Comment Period: **November 23, 2022 to December 27, 2022.**

The City of Jackson (City) will serve as Lead Agency in the preparation of a programmatic Environmental Impact Report (EIR) for the City of Jackson General Plan Update (Plan).

The purpose of this notice is (1) to serve as a Notice of Preparation (NOP) of an EIR pursuant to the State CEQA Guidelines Section 15082, (2) to advise and solicit comments and suggestions regarding the scope and content of the EIR to be prepared for the proposed project, and (3) to notice the public scoping meeting. The proposed project is a long-term General Plan consisting of policies that will guide future development activities and City actions. No specific development projects are proposed as part of the Plan. Information regarding the project description, project location, and topics to be addressed in the Draft EIR is provided below. Additional project documents and information are available at the City of Jackson, Community Development Department, Planning Department located at 33 Broadway Jackson, CA 95642, and on-line at: www.ci.jackson.ca.us

For questions regarding this notice, please contact Farhad Mortazavi, City Planner by email planning@ci.jackson.ca.us

Notice of Preparation 30-Day Comment Period

The City, as Lead Agency, requests that responsible and trustee agencies, and the Office of Planning and Research, respond in a manner consistent with Section 15082(b) of the CEQA Guidelines. Pursuant to Public Resources Code Section 21080.4, responsible agencies, trustee agencies and the Office of Planning and Research must submit any comments in response to this notice no later than 30 days after receipt. In accordance with the time limits established by CEQA, the NOP public review period will begin on November 23, 2022 and end on December 27, 2022.

In the event that the City does not receive a response from any Responsible or Trustee Agency by the end of the review period, the City may presume that the Responsible Agency or Trustee

Agency has no response to make (State CEQA Guidelines Section 15082(b)(2)). All Comments in response to this notice must be submitted in writing at the address below, or via email, by the close of the 30-day NOP review period, which is 5:00 PM on December 27, 2022:

Farhad Mortazavi
City of Jackson
33 Broadway Jackson, CA 95642
planning@ci.jackson.ca.us

Scoping Meeting

The City will hold a scoping meeting to provide an opportunity for agency representatives and the public to assist the City in determining the scope and content of the EIR.

The scoping meeting will be held on December 5, 2022 6:30 p.m. at:

City Hall Council Chambers
City of Jackson
33 Broadway Jackson, CA 95642

For comments before or after the meeting or additional information, please contact Farhad Mortazavi, City Planner, at 209-223-1646 x 111 or by email: planning@ci.jackson.ca.us

Project Location and Setting

Amador County is located in the Mother Lode of California, which includes the central and eastern portion of California and extends from the Central Valley/Sierra Nevada foothills east, almost to the state line. El Dorado County borders the County on the north, Calaveras County borders Amador County on the south, Sacramento and the San Joaquin Counties border on the west, and to the east is Alpine County. There are five incorporated cities in the County, which include the City of Lone, Amador City, the City of Plymouth, the City of Sutter Creek, and the City of Jackson (the County seat).

The City of Jackson, incorporated December 5, 1905. Jackson is located in the central portion of Amador County, at the intersection of State Routes 49 and 88 (SR 49/88) in the Sierra Nevada foothills. Figure-1 depicts the regional location of Jackson.

Project Description

The City of Jackson is preparing a comprehensive update to its existing General Plan. The City of Jackson's current General Plan has been periodically amended, including updates to the Housing Element in 2015, the Land Use and Circulation Element in 2008, updates to the Noise, and Open Space and Conservation Elements in 1987, and updates to the Safety Element in 1981.

The City's General Plan includes a broad goal policy framework that guides land use and planning decisions within the city. The overall purpose of the General Plan is to create a policy framework that articulates a vision for the City's long-term physical form and development, while preserving and enhancing the quality of life for residents and increasing opportunities for high-quality local job growth and housing options. The key components of the General Plan will include broad goals for the future of Jackson, and specific policies and actions that will help implement the stated goals.

The updated General Plan will guide the City's development and conservation through land use objectives and policy guidance. The City will implement the Plan by requiring development, infrastructure improvements, and other projects to be consistent with its policies and by implementing the actions included in the Plan, including subsequent project-level environmental review, as required under CEQA.

State law requires the City to adopt a comprehensive, long-term general plan for the physical development of its planning area. The Plan must include land use, circulation, housing, conservation, open space, noise, and safety elements, as specified in Government Code Section 65302, to the extent that the issues identified by State law exist in the City's planning area.

The Jackson General Plan includes a comprehensive set of goals, policies, and actions (implementation measures), as well as a revised Land Use Map (Figure 2).

- A **goal** is a description of the general desired result that the City seeks to create through the implementation of the General Plan.

- A **policy** is a specific statement that guides decision-making as the City works to achieve its goals. Once adopted, policies represent statements of City regulations. The General Plan’s policies set out the standards that will be used by City staff, the Planning Commission, and the City Council in their review of land development projects, resource protection activities, infrastructure improvements, and other City actions. Policies are on-going and don’t necessarily require specific action on behalf of the City.
- An **action** is an implementation measure, procedure, technique, or specific program to be undertaken by the City to help achieve a specified goal or implement an adopted policy. The City must take additional steps to implement each action in the General Plan. An action is something that can and will be completed.

The Plan has been prepared to address the requirements of State law and the relevant items addressed in Government Code Section 65300 et seq. The Jackson General Plan is intended to reflect the desires and vision of residents, businesses, and City Council.

The following objectives are identified for the proposed update to the General Plan:

- Develop a long-term vision for the City of Jackson
- Engage a broad spectrum of the community members
- Engage key stakeholders to perpetuate long-term involvement
- Establish a greater connection between the General Plan and current planning issues
- Educate the public on the City’s existing conditions and the General Plan Update process
- Provide a range of high-quality housing options
- Attract and retain businesses and industries that provide high-quality and high-paying jobs
- Continue to maintain and improve multimodal transportation opportunities
- Maintain strong fiscal sustainability and continue to provide efficient and adequate public services
- Address new requirements of State law

Growth Projections

While no specific development projects are proposed as part of the General Plan Update, the General Plan will accommodate future growth in Jackson, including new businesses, expansion of existing businesses, and new residential uses. The Growth analysis assumes an approximately 20-year horizon, and 2040 is assumed to be the horizon year of the General Plan.

Table 1 below summarizes the range of growth, including residential units (single family and multifamily) and non-residential square footage (commercial, office, industrial, governmental,

public/quasi-public) that would be anticipated to occur under cumulative 2040 conditions. These figures are based on the land use designations for the City shown on the proposed Land Use Map (see Figure 2) known land use constraints, the ACTC travel model, and Department Of Finance countywide 2040 growth projections.

As shown in Table 1, the General Plan by 2040 would be anticipated to result in 681 dwelling units accommodating an additional 1,435 residents, and approximately 300,000 square feet of nonresidential development that would accommodate an additional 457 jobs within Jackson.

TABLE 1: GROWTH PROJECTIONS - PROPOSED GENERAL PLAN LAND USE MAP

	<i>POPULATION</i>	<i>DWELLING UNITS</i>	<i>NONRESIDENTIAL SQUARE FOOTAGE</i>	<i>JOBS</i>	<i>JOBS PER HOUSING UNIT</i>
<i>EXISTING CONDITIONS</i>					
	5,071	2,406	1,827,500	2,987	1.24
<i>NEW GROWTH POTENTIAL</i>					
General Plan – city limits and SOI	1,435	681	300,000	457	0.67
<i>TOTAL GROWTH: EXISTING PLUS NEW GROWTH POTENTIAL</i>					
General Plan – cumulative 2040	6,506	3,087	2,127,500	3,444	1.12

SOURCES: COUNTY ASSESSOR 2020; CALIFORNIA DEPARTMENT OF FINANCE 2020; U.S CENSUS ONTHEMAP; ESRI 2020, DE NOVO PLANNING GROUP 2022.

Growth projections should not be considered a precise prediction for growth, as the actual amount of development that will occur throughout the 20-year planning horizon of the General Plan is based on many factors outside of the City’s control. Actual future development would depend on future real estate and labor market conditions, property owner preferences and decisions, site-specific constraints, and other factors. Additionally, it should be noted that historic growth rates have been much lower than the total growth allowed under the General Plan and that the General Plan Update did not included substantial map revisions that would result in growth allowed in excess of the what is allowed under the Existing General Plan Map. Furthermore, the California Department of Finance (DoF) projects that Amador County will grow from a population of 37,577 persons in 2020 to 39,743 persons by 2040. This represents a 5.7% increase in growth and the addition of 2,166 persons. Table 1 shows that new growth projected in the City of Jackson and its SOI could result in the addition of 1,435 persons. This represents a 28.3% population growth rate, which far exceeds the overall growth rate projected by the DoF for Amador County. The analyses that follow are therefore considered conservative as they are based on a much higher rate of growth within the City of Jackson versus what the DoF expected for Amador County as a whole.

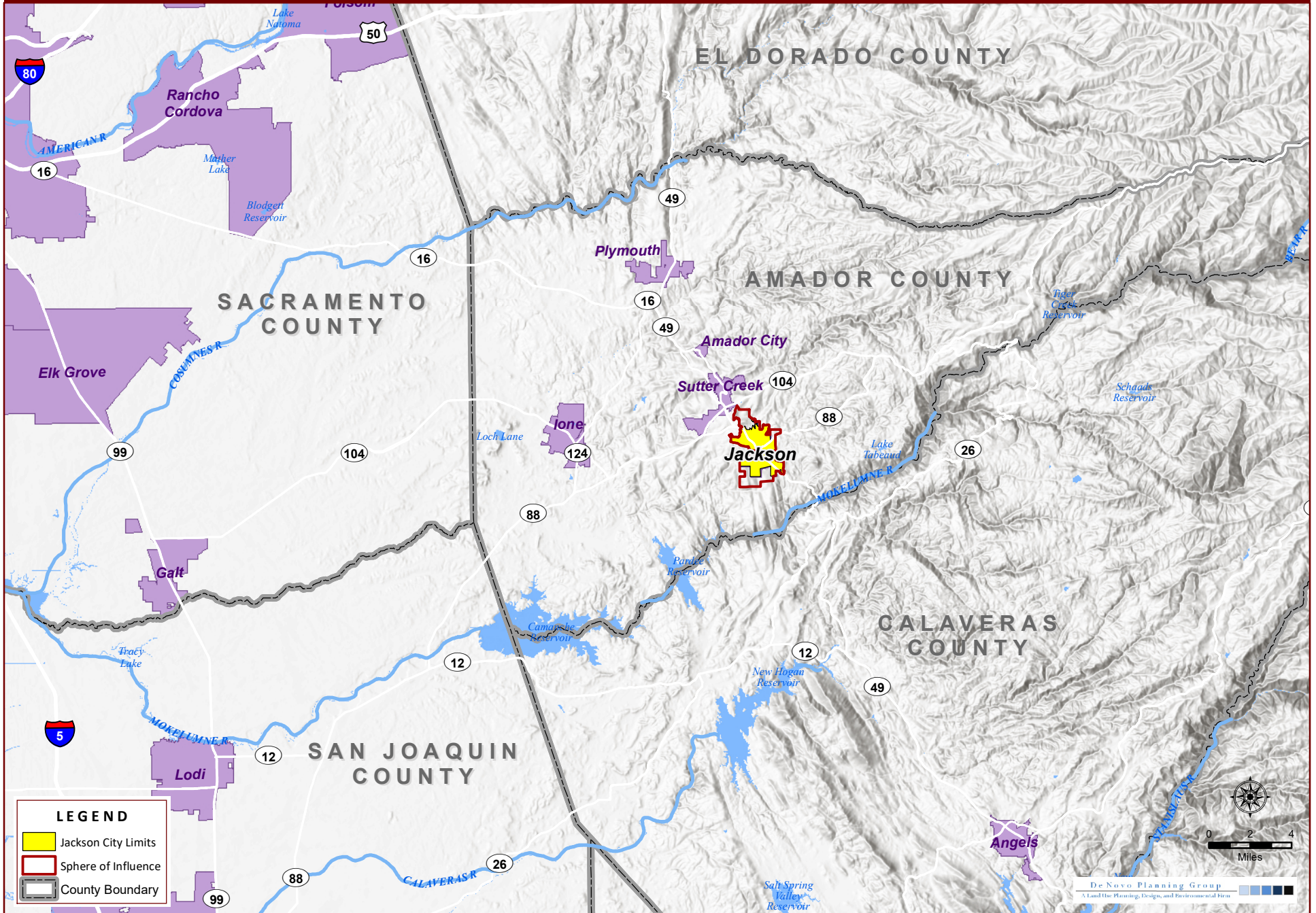
Program EIR Analysis

The City, as the Lead Agency under the California Environmental Quality Act (CEQA), will prepare a Program EIR for the Jackson General Plan Update. The EIR will be prepared in accordance with CEQA, the CEQA Guidelines (Guidelines), relevant case law, and City procedures. No Initial Study will be prepared pursuant to Section 15063(a) of the CEQA Guidelines.

The EIR will analyze potentially significant impacts associated with adoption and implementation of the General Plan. In particular, the EIR will focus on areas that have development potential. The EIR will evaluate the full range of environmental issues contemplated under CEQA and the CEQA Guideline. At this time, the City anticipates that EIR sections will be organized in the following topical areas:

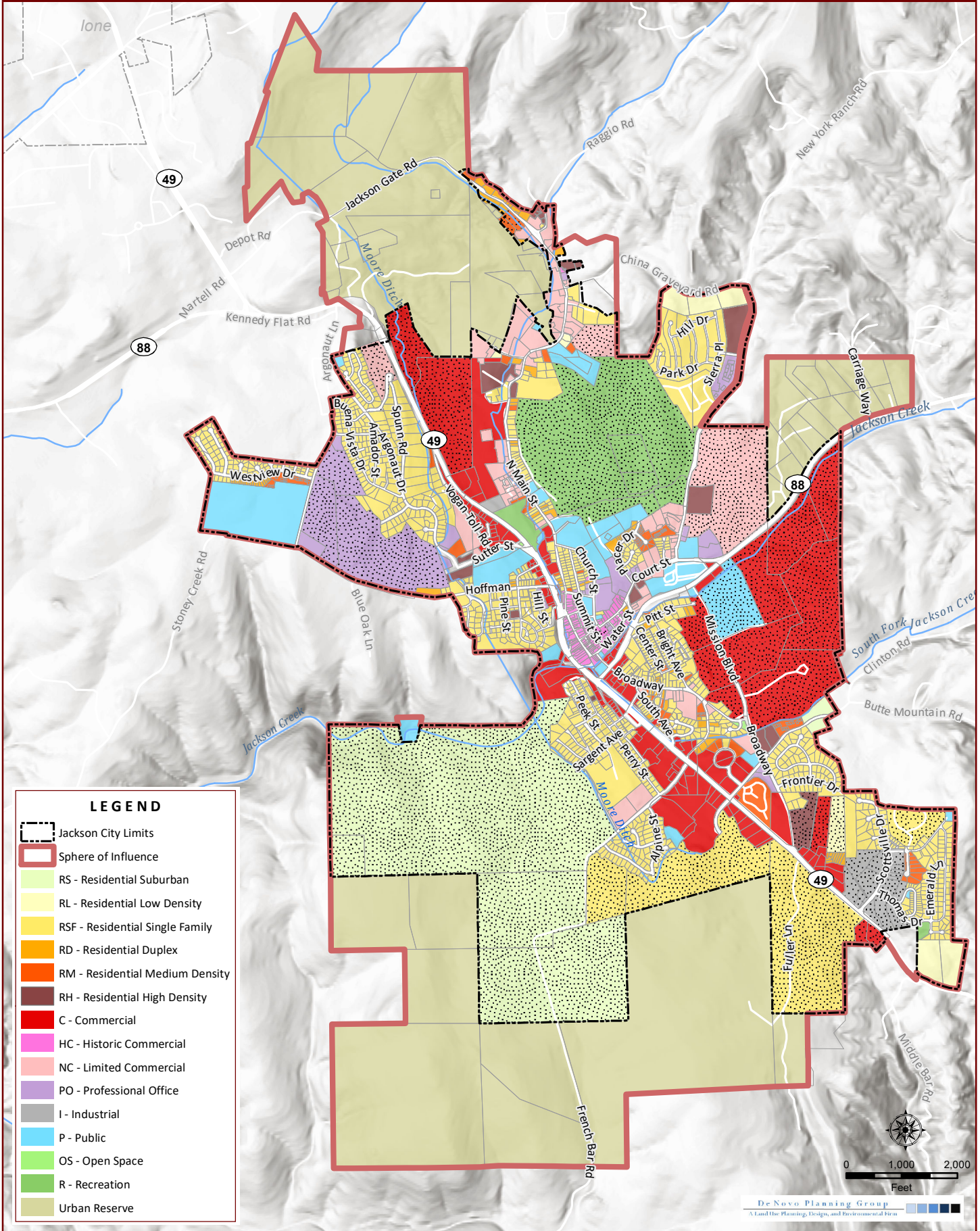
- Aesthetic Resources
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural and Tribal Cultural Resources
- Geology, Soils, and Mineral Resources
- Greenhouse Gases, Climate Change, and Energy
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services and Recreation
- Transportation
- Utilities/Service Systems
- Wildfire
- Mandatory Findings of Significance/Cumulative Impacts
- Alternatives

Figure-1. Regional Location Map



Sources: California State Geoportal; ArcGIS Online World Elevation/Terrain Image Service. Map date: September 19, 2022.

Figure 2. General Plan Land Uses



Sources: City of Jackson; ACTC; ArcGIS Online World Elevation/Terrain Image Service. Map date: March 2, 2022. Revised: September 15, 2022.

NATIVE AMERICAN HERITAGE COMMISSION

November 30, 2022

Farhad Mortazavi
City of Jackson
33 Broadway
City of Jackson, CA 95642

Re: 2022110545, Jackson General Plan Update Project, Amador County

Dear Mr. Mortazavi:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b))). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1))). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides 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. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52



CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
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COMMISSIONER
[Vacant]

COMMISSIONER
[Vacant]

EXECUTIVE SECRETARY
Raymond C. Hitchcock
Miwok/Nisenan

NAHC HEADQUARTERS
1550 Harbor Boulevard
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California 95691
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nahc@nahc.ca.gov
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AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project:

Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- a. A brief description of the project.
- b. The lead agency contact information.
- c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subs. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1 (b)).

- a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- a. Alternatives to the project.
- b. Recommended mitigation measures.
- c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- a. Type of environmental review necessary.
- b. Significance of the tribal cultural resources.
- c. Significance of the project's impacts on tribal cultural resources.
- d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
- b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

- 7. Conclusion of Consultation:** Consultation with a tribe shall be considered concluded when either of the following occurs:
- a.** The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
 - b.** A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).
- 8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document:** Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).
- 9. Required Consideration of Feasible Mitigation:** If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).
- 10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:**
- a.** Avoidance and preservation of the resources in place, including, but not limited to:
 - i.** Planning and construction to avoid the resources and protect the cultural and natural context.
 - ii.** Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
 - b.** 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:
 - i.** Protecting the cultural character and integrity of the resource.
 - ii.** Protecting the traditional use of the resource.
 - iii.** Protecting the confidentiality of the resource.
 - c.** 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.
 - d.** Protecting the resource. (Pub. Resource Code §21084.3 (b)).
 - e.** Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
 - f.** Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).
- 11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource:** An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
- a.** The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
 - b.** The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
 - c.** The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. **Tribal Consultation**: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. **No Statutory Time Limit on SB 18 Tribal Consultation**. There is no statutory time limit on SB 18 tribal consultation.
3. **Confidentiality**: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. **Conclusion of SB 18 Tribal Consultation**: Consultation should be concluded at the point in which:
 - a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
 - b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:
 - a. If part or all of the APE has been previously surveyed for cultural resources.
 - b. If any known cultural resources have already been recorded on or adjacent to the APE.
 - c. If the probability is low, moderate, or high that cultural resources are located in the APE.
 - d. If a survey is required to determine whether previously unrecorded cultural resources are present.
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
 - b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
 - a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
 - b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
 - a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
 - b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
 - c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Pricilla.Torres-Fuentes@nahc.ca.gov.

Sincerely,

Pricilla Torres-Fuentes

Pricilla Torres-Fuentes
Cultural Resources Analyst

cc: State Clearinghouse



Koyo Land Conservancy dba Colfax Todds Valley Consolidated Tribe

December 8, 2022

Yvonne Kimball
33 Broadway
Jackson, CA 95642-2301

Re: City of Jackson General Plan Update

Dear Yvonne Kimball,

I write on behalf of the Colfax Todds Valley Consolidated Tribe regarding the notification received by this office December 1, 2022. The notification references City of Jackson General Plan Update. We appreciate your effort to contact us and wish to respond.

After review of the notification and the projects components, it is determined Colfax Todds Valley Consolidated Tribe has no objection to the commencement of the Project(s).

If Tribal Cultural Resources (TCRs) should be inadvertently encountered, during the project, Colfax Todds Valley Consolidated Tribe requests additional notification so steps may be taken to protect and preserve them.

Respectfully,

Pamela Cubbler
Vice Chairwoman/ Treasurer/ Cultural Preservation Officer
Colfax Todds Valley Consolidated Tribe
530-320-3943



**SHINGLE SPRINGS BAND
OF MIWOK INDIANS**

Shingle Springs Rancheria
(Verona Tract), California
5168 Honpie Road
Placerville, CA 95667
Phone: 530-676-8010
shinglespringsrancheria.com

CULTURAL RESOURCES

December 13, 2022

City of Jackson

RE: City of Jackson General Plan Update

Dear Farhad Mortazavi,

Thank you for your letter dated November 23, 2022 in regard to the above mentioned project. Based on the information provided, the Shingle Springs Band Of Miwok Indians is not aware of any known cultural resources on this site. However, SSR would like to have continued consultation through updates, as the project progresses. This will foster greater communication between the Tribe and your agency.

SSR would also like to request all completed record searches and or surveys that were done in or around the project area up to and including environmental, archaeological and cultural reports. If during the progress of the project new information or human remains are found, we would like to be able to go over our process with you to protect such important and sacred artifacts (especially near rivers and streams).

If such finds are made, please contact Kara Perry, Director of Site Protection, at (530) 488-4049 or kperry@ssband.org.

Thank you for providing us with this notice and opportunity to comment.

Sincerely,

Daniel Fonseca
Cultural Resource Director
Tribal Historic Preservation Officer (THPO)
Most Likely Descendant (MLD)

On Thu, Dec 22, 2022 at 10:18 AM Peri, Jared@CalOES <Jared.Peri@caloes.ca.gov> wrote:

Cal OES has reviewed the Jackson General Plan Update Environmental Impact Report. Our office has a couple of comments.

The Safety Element addresses or will address the following natural hazards:

Wildfire

Unable to verify additional hazards in the given document

When reviewing your FEMA adopted Local Hazard Mitigation Plan we find that the identified natural hazards are as follows:

Climate Change

Dam Failure

Drought

Earthquake

Extreme Cold

Extreme Heat

Flooding

Landslide

Severe Storm

Severe Weather

Wildfire

Below is the link to the California Office of Planning and Research Safety Element Guidelines

[General Plan Guidelines, Chapter 4: Required Elements \(ca.gov\)](#)

Required Contents the safety element must, consistent with Government Code Section 65302(g), provide for the protection of the community from any unreasonable risks associated with the effects of:

- Seismically induced surface rupture, ground shaking, ground failure
- Tsunami, seiche, and dam failure
- Slope instability leading to mudslides and landslides
- Subsidence
- Liquefaction
- Other seismic hazards identified pursuant to Chapter 7.8 (commencing with Section 2690) of Division 2 of the Public Resources Code, and other geologic hazards known to the legislative body
- Flooding
- Wildland and urban fires
- Climate change

As an additional note while you are making changes to your General Plan and potentially the Safety Element, we wanted to point out **some** of the steps that are required to become AB2140 compliant. The jurisdiction must update the Safety Element of their general plan to include language referring to the LHMP, and direct the reader to the location of the LHMP. The direction component can be done by inserting a weblink to the current HMP, or by including directions to where it can be found. As long as the date or year of the current HMP isn't referenced, the jurisdiction will only have to make this change to the Safety Element once. If the Safety Element has the year of the expired HMP, or the HMP is inserted into the Safety Element, it will have to be revised.

- a. Sample language to add to the Safety Element includes: "The Local Hazard Mitigation Plan (LHMP) for the City of XYZ planning area was developed in accordance with the Disaster Mitigation Act of 2000 (DMA 2000) and followed FEMA's 2011 Local Hazard Mitigation Plan guidance. The LHMP incorporates a process where hazards are identified and profiled, the people and facilities at risk are analyzed, and mitigation actions are developed to reduce or

eliminate hazard risk. The implementation of these mitigation actions, which include both short-term and long-term strategies, involve planning, policy changes, programs, projects, and other activities. The Local Hazard Mitigation Plan can be found at this location (Insert web link, or the actual LHMP, or guidance to where the LHMP can be located)."

Thank you for the opportunity to review and comment.

Jared Peri, Senior Emergency Services Coordinator

Hazard Mitigation Planning Division

California Governor's Office of Emergency Services

Mobile: (916) 524-3470

Email: Jared.Peri@caloes.ca.gov

Program Email: mitigationplanning@caloes.ca.gov

California Department of Transportation

OFFICE OF THE DISTRICT 10 PLANNING
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December 27, 2022

Farhad Mortazavi
City of Jackson
33 Broadway
Jackson, CA 95642

**AMA-49/88 General Plan
Update
City of Jackson
Notice of Preparation (NOP)
SCH: 2022110545**

Mr. Mortazavi,

Caltrans appreciates the opportunity to review and respond to the City of Jackson's Notice of Preparation on its comprehensive update to its existing General Plan. The City of Jackson's current General Plan has been periodically amended, including updates to the Housing Element in 2015, the Land Use and Circulation Element in 2008, updates to the Noise and Open Space and Conservation Elements in 1987 to the Safety Element in 1981. The City's General Plan includes a broad goal policy framework that guides land use and planning decisions within the City. The overall purpose of the General Plan is to create a policy framework that articulates a vision for the City's long-term physical form and development while preserving and enhancing the quality of life for residents and increasing opportunities for high-quality local job growth and housing options. The key components of the General Plan will include broad goals for the future of Jackson and specific policies and actions that will help implement the stated goals.

The City of Jackson is located in the central portion of Amador County, at the intersection of State Routes 49 and 88 (SR 49/88) in the Sierra Nevada foothills.

Caltrans has the following comments:

Advance Planning

SR 49 has been added to the National Highway System in Amador County from the Calaveras County Line to the City of Plymouth. It is now listed as a Principal Arterial through Jackson.

There has also been a broad department concern with the impacts to the State Highway System from ongoing climate change and with emergency evacuation routes since the Camp Fire in Butte County. We strongly support policy and planning elements to address future flooding and fire events on the highways, as well as updating as-needed emergency evacuation planning and routes which may include the state highway system (SHS). One area of concern is the number and distribution of heliports as an alternative evacuation mode. Our

office also looks forward to a further opportunity to review these and other updates and changes to the Draft General Plan.

Traffic Operations

Senate Bill (SB) 743 is changing the California Environmental Quality Act (CEQA) analysis of transportation impacts. It requires local land use projects to provide a safe transportation system, reduce per capita vehicle miles traveled (VMT), increase accessibility by mode share of bicycle, pedestrian, and transit travel, and reduce greenhouse gas (GHG) emissions. VMT reduction is necessary to meet the statewide GHG goals. Caltrans recommends VMT per capita thresholds are 15% below existing regional VMT per capita.

VMT considerations tie closely with housing and land uses. Please include VMT discussions in the Transportation/Circulation element and other appropriate sections in the Jackson General Plan updates.

Please contact Paul Bauldry at (209) 670-9488 (email: paul.bauldry@dot.ca.gov), or me at (209) 483-7234 (email: Gregoria.Ponce@dot.ca.gov) if you have any questions or concerns.

Sincerely,

Gregoria Ponce'

Gregoria Ponce', Chief
Office of Rural Planning

cc: State Clearinghouse

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bcc: **Traffic Operations** – Zeyu “Chester” Gao
Environmental— Elizabeth Hummel
Hydraulics – Brandon Yu
Encroachment – Abel Preciado/ Francisco Rodriguez
Advance Planning – Lynn O’Connor



State of California – Natural Resources Agency
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CHARLTON H. BONHAM, Director



December 22, 2022

Farhad Mortazavi
City Planner
City of Jackson
33 Broadway
Jackson, CA 95642
planning@ci.jackson.ca.us

Subject: Jackson General Plan Update - DRAFT PROGRAM ENVIRONMENTAL
IMPACT REPORT (DPEIR)
SCH# 2022110545

Dear Mr. Mortazavi:

The California Department of Fish and Wildlife (CDFW) received and reviewed the Notice of Preparation of an Environmental Impact Report (EIR) from the City of Jackson for the Jackson General Plan Update (Project) in Amador County pursuant the California Environmental Quality Act (CEQA) statute and guidelines.¹

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish, wildlife, plants and their habitats. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may need to exercise its own regulatory authority under the Fish and Game Code (Fish & G. Code).

CDFW ROLE

CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has authority over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (*Id.*, § 1802.). Similarly, for purposes of CEQA, CDFW provides, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

¹ CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

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CDFW may also act as a Responsible Agency under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority. (Fish & G. Code, § 1600 et seq.) Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the project proponent may seek related take authorization as provided by the Fish and Game Code.

PROJECT DESCRIPTION SUMMARY

The Project site is located throughout all parcels within the City of Jackson, CA. The City of Jackson covers approximately 2,432 acres.

The Project consists of updating the current General Plan. The plan will be a Programmatic General Plan consisting of a land use map, a policy document consisting of goals, policies, and actions that will guide future development activities and City actions. No specific development projects are proposed as part of the General Plan Update.

The Project description should include the whole action as defined in the CEQA Guidelines section 15378 and should include appropriate detailed exhibits disclosing the Project area including temporary impacted areas such as equipment staging areas, spoils areas, adjacent infrastructure development, and access and haul roads if applicable.

As required by section 15126.6 of the CEQA Guidelines, the EIR should include an appropriate range of reasonable and feasible alternatives that would attain most of the basic Project objectives and avoid or minimize significant impacts to resources under CDFW's authority.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations presented below to assist the City of Jackson in adequately identifying and/or mitigating the Project's significant, or potentially significant, impacts on biological resources. The comments and recommendations are also offered to enable CDFW to adequately review and comment on the proposed Project with respect to impacts on biological resources. CDFW recommends that the forthcoming EIR address the following:

Assessment of Biological Resources

Section 15125(c) of the CEQA Guidelines states that knowledge of the regional setting of a project is critical to the assessment of environmental impacts and that special emphasis should be placed on environmental resources that are rare or unique to the

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region. To enable CDFW staff to adequately review and comment on the Project, the EIR should include a complete assessment of the flora and fauna within and adjacent to the Project footprint, with emphasis on identifying rare, threatened, endangered, and other sensitive species and their associated habitats. CDFW recommends the EIR specifically include:

1. An assessment of all habitat types located within the Project footprint, and a map that identifies the location of each habitat type. CDFW recommends that floristic, alliance- and/or association-based mapping and assessment be completed following, *The Manual of California Vegetation*, second edition (Sawyer 2009). Adjoining habitat areas should also be included in this assessment where site activities could lead to direct or indirect impacts offsite. Habitat mapping at the alliance level will help establish baseline vegetation conditions.
2. A general biological inventory of the fish, amphibian, reptile, bird, and mammal species that are present or have the potential to be present within each habitat type onsite and within adjacent areas that could be affected by the Project. CDFW recommends that the California Natural Diversity Database (CNDDDB), as well as previous studies performed in the area, be consulted to assess the potential presence of sensitive species and habitats. A nine United States Geologic Survey (USGS) 7.5-minute quadrangle search is recommended to determine what may occur in the region, larger if the Project area extends past one quad (see *Data Use Guidelines* on the Department webpage www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data). Please review the webpage for information on how to access the database to obtain current information on any previously reported sensitive species and habitat, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code, in the vicinity of the Project. CDFW recommends that CNDDDB Field Survey Forms be completed and submitted to CNDDDB to document survey results. Online forms can be obtained and submitted at: <https://www.wildlife.ca.gov/Data/CNDDDB/Submitting-Data>.

Please note that CDFW's CNDDDB is not exhaustive in terms of the data it houses, nor is it an absence database. CDFW recommends that it be used as a starting point in gathering information about the *potential presence* of species within the general area of the Project site. Other sources for identification of species and habitats near or adjacent to the Project area should include, but may not be limited to, State and federal resource agency lists, California Wildlife Habitat Relationship (CWHR) System, California Native Plant Society (CNPS) Inventory, agency contacts, environmental documents for other projects in the vicinity, academics, and professional or scientific organizations.

3. A complete and recent inventory of rare, threatened, endangered, and other sensitive species located within the Project footprint and within offsite areas with the potential to be affected, including California Species of Special Concern and

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California Fully Protected Species (Fish & G. Code § § 3511, 4700, 5050, and 5515). Species to be addressed should include all those which meet the CEQA definition (CEQA Guidelines § 15380). The inventory should address seasonal variations in use of the Project area and should not be limited to resident species. The EIR should include the results of focused species-specific surveys, completed by a qualified biologist and conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable. Species-specific surveys should be conducted in order to ascertain the presence of species with the potential to be directly, indirectly, on or within a reasonable distance of the Project activities. CDFW recommends the City of Jackson rely on survey and monitoring protocols and guidelines available at:

www.wildlife.ca.gov/Conservation/Survey-Protocols. Alternative survey protocols may be warranted; justification should be provided to substantiate why an alternative protocol is necessary. Acceptable species-specific survey procedures should be developed in consultation with CDFW and the U.S. Fish and Wildlife Service, where necessary. Some aspects of the Project may warrant periodic updated surveys for certain sensitive taxa, particularly if the Project is proposed to occur over a protracted time frame, or in phases, or if surveys are completed during periods of drought or deluge.

4. A complete analysis of water resources including mapping of groundwater dependent ecosystems (GDEs) and interconnected surface water (ISW) within the City of Jackson. Analysis should assess potential localized reduction in groundwater levels and associated reduction in groundwater availability for GDEs and ISW.
5. A thorough, recent (within the last two years), floristic-based assessment of special-status plants and natural communities, following CDFW's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (see www.wildlife.ca.gov/Conservation/Plants).
6. Information on the regional setting that is critical to an assessment of environmental impacts, with special emphasis on resources that are rare or unique to the region (CEQA Guidelines § 15125[c]).

Analysis of Direct, Indirect, and Cumulative Impacts to Biological Resources

The EIR should provide a thorough discussion of the Project's potential direct, indirect, and cumulative impacts on biological resources. To ensure that Project impacts on biological resources are fully analyzed, the following information should be included in the EIR:

1. The EIR should define the threshold of significance for each impact and describe the criteria used to determine whether the impacts are significant (CEQA Guidelines, § 15064, subd. (f)). The EIR must demonstrate that the significant

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environmental impacts of the Project were adequately investigated and discussed and it must permit the significant effects of the Project to be considered in the full environmental context.

2. A discussion of potential impacts from lighting, noise, human activity, and wildlife-human interactions created by Project activities especially those adjacent to natural areas, exotic and/or invasive species occurrences, and drainages. The EIR should address Project-related changes to drainage patterns and water quality within, upstream, and downstream of the Project site, including: volume, velocity, and frequency of existing and post-Project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and post-Project fate of runoff from the Project site.
3. A discussion of potential indirect Project impacts on biological resources, including resources in areas adjacent to the Project footprint, such as nearby public lands (e.g., National Forests, State Parks, etc.), open space, adjacent natural habitats, riparian ecosystems, wildlife corridors, and any designated and/or proposed reserve or mitigation lands (e.g., preserved lands associated with a Conservation or Recovery Plan, or other conserved lands).
4. A cumulative effects analysis developed as described under CEQA Guidelines section 15130. The EIR should discuss the Project's cumulative impacts to natural resources and determine if that contribution would result in a significant impact. The EIR should include a list of present, past, and probable future projects producing related impacts to biological resources or shall include a summary of the projections contained in an adopted local, regional, or statewide plan, that consider conditions contributing to a cumulative effect. The cumulative analysis shall include impact analysis of vegetation and habitat reductions within the area and their potential cumulative effects. Please include all potential direct and indirect Project-related impacts to riparian areas, wetlands, wildlife corridors or wildlife movement areas, aquatic habitats, sensitive species and/or special-status species, open space, and adjacent natural habitats in the cumulative effects analysis.
5. In accordance with CEQA section 15385, coverage of a specific action under this Programmatic EIR should be analyzed under a tiered CEQA document. Narrower or ultimately site-specific analyses should take into account the Best Management Practices (BMP) and Avoidance and Minimization Measures outlined in this Program EIR, but should also evaluate specific or changed site conditions for additional BMPs or Avoidance and Minimization Measures.

Mitigation Measures for Project Impacts to Biological Resources

The EIR should include appropriate and adequate avoidance, minimization, and/or mitigation measures for all direct, indirect, and cumulative impacts that are expected to occur as a result of the construction and long-term operation and maintenance of the

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Project. CDFW also recommends the environmental documentation provide scientifically supported discussion regarding adequate avoidance, minimization, and/or mitigation measures to address the Project's significant impacts upon fish and wildlife and their habitat. For individual projects, mitigation must be roughly proportional to the level of impacts, including cumulative impacts, in accordance with the provisions of CEQA (Guidelines § § 15126.4(a)(4)(B), 15064, 15065, and 16355). In order for mitigation measures to be effective, they must be specific, enforceable, and feasible actions that will improve environmental conditions. When proposing measures to avoid, minimize, or mitigate impacts, CDFW recommends consideration of the following:

1. **Species of Special Concern:** Several Species of Special Concern (SSC) have the potential to occur within or adjacent to the Project area, including, but not limited to: western pond turtle (*Emys marmorata*). Project activities described in the EIR should be designed to avoid any SSC that have the potential to be present within or adjacent to the Project area. CDFW also recommends that the EIR fully analyze potential adverse impacts to SSC due to habitat modification, loss of foraging habitat, and/or interruption of migratory and breeding behaviors. CDFW recommends the City of Jackson include in the analysis how appropriate avoidance, minimization and mitigation measures will reduce impacts to SSC.
2. **Sensitive Plant Communities:** CDFW considers sensitive plant communities to be imperiled habitats having both local and regional significance. Plant communities, alliances, and associations with a statewide ranking of S-1, S-2, S-3, and S-4 should be considered sensitive and declining at the local and regional level. These ranks can be obtained by querying the CNDDDB and are included in *The Manual of California Vegetation* (Sawyer 2009). The EIR should include measures to fully avoid and otherwise protect sensitive plant communities from Project-related direct and indirect impacts.
3. **Native Wildlife Nursery Sites:** CDFW recommends the EIR fully analyze potential adverse impacts to native wildlife nursery sites, including but not limited to bat maternity roosts. Based on review of Project materials, aerial photography, and observation of the site from public roadways, the Project site contains potential nursery site habitat for structure and tree roosting bats and is near potential foraging habitat. Bats are considered non-game mammals and are afforded protection by state law from take and/or harassment, (Fish & G. Code, § 4150; Cal. Code of Regs, § 251.1). CDFW recommends that the EIR fully identify the Project's potential impacts to native wildlife nursery sites, and include appropriate avoidance, minimization and mitigation measures to reduce impacts or mitigate any potential significant impacts to bat nursery sites.
4. **Mitigation:** CDFW considers adverse Project-related impacts to sensitive species and habitats to be significant to both local and regional ecosystems, and the EIR should include mitigation measures for adverse Project-related impacts to these resources. Mitigation measures should emphasize avoidance and reduction of

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Project impacts. For unavoidable impacts, onsite habitat restoration, enhancement, or permanent protection should be evaluated and discussed in detail. If onsite mitigation is not feasible or would not be biologically viable and therefore not adequately mitigate the loss of biological functions and values, offsite mitigation through habitat creation and/or acquisition and preservation in perpetuity should be addressed.

The EIR should include measures to perpetually protect the targeted habitat values within mitigation areas from direct and indirect adverse impacts in order to meet mitigation objectives to offset Project-induced qualitative and quantitative losses of biological values. Specific issues that should be addressed include restrictions on access, proposed land dedications, long-term monitoring and management programs, control of illegal dumping, water pollution, increased human intrusion, etc.

5. *Habitat Revegetation/Restoration Plans*: Plans for restoration and revegetation should be prepared by persons with expertise in the regional ecosystems and native plant restoration techniques. Plans should identify the assumptions used to develop the proposed restoration strategy. Each plan should include, at a minimum: (a) the location of restoration sites and assessment of appropriate reference sites; (b) the plant species to be used, sources of local propagules, container sizes, and seeding rates; (c) a schematic depicting the mitigation area; (d) a local seed and cuttings and planting schedule; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation on site; (g) specific success criteria; (h) a detailed monitoring program; (i) contingency measures should the success criteria not be met; and (j) identification of the party responsible for meeting the success criteria and providing for conservation of the mitigation site in perpetuity. Monitoring of restoration areas should extend across a sufficient time frame to ensure that the new habitat is established, self-sustaining, and capable of surviving drought.

CDFW recommends that local onsite propagules from the Project area and nearby vicinity be collected and used for restoration purposes. Onsite seed collection should be appropriately timed to ensure the viability of the seeds when planted. Onsite vegetation mapping at the alliance and/or association level should be used to develop appropriate restoration goals and local plant palettes. Reference areas should be identified to help guide restoration efforts. Specific restoration plans should be developed for various Project components as appropriate. Restoration objectives should include protecting special habitat elements or re-creating them in areas affected by the Project. Examples may include retention of woody material, logs, snags, rocks, and brush piles. Fish and Game Code sections 1002, 1002.5 and 1003 authorize CDFW to issue permits for the take or possession of plants and wildlife for scientific, educational, and propagation purposes. Please see our website for more information on Scientific Collecting Permits at www.wildlife.ca.gov/Licensing/Scientific-Collecting#53949678-regulations-.

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6. *Nesting Birds*: Please note that it is the Project proponent's responsibility to comply with all applicable laws related to nesting birds and birds of prey. Migratory non-game native bird species are protected by international treaty under the federal Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 U.S.C. 703 *et seq.*). CDFW implemented the MBTA by adopting the Fish and Game Code section 3513. Fish and Game Code sections 3503, 3503.5 and 3800 provide additional protection to nongame birds, birds of prey, their nests and eggs. Sections 3503, 3503.5, and 3513 of the Fish and Game Code afford protective measures as follows: section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the Fish and Game Code or any regulation made pursuant thereto; section 3503.5 states that it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by the Fish and Game Code or any regulation adopted pursuant thereto; and section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Potential habitat for nesting birds and birds of prey is present within the Project area. The Project should disclose all potential activities that may incur a direct or indirect take to nongame nesting birds within the Project footprint and its vicinity. Appropriate avoidance, minimization, and/or mitigation measures to avoid take must be included in the EIR.

CDFW recommends the EIR include specific avoidance and minimization measures to ensure that impacts to nesting birds or their nests do not occur. Project-specific avoidance and minimization measures may include, but not be limited to: Project phasing and timing, monitoring of Project-related noise (where applicable), sound walls, and buffers, where appropriate. The EIR should also include specific avoidance and minimization measures that will be implemented should a nest be located within the Project site. In addition to larger, protocol level survey efforts (e.g., Swainson's hawk surveys) and scientific assessments, CDFW recommends a final preconstruction survey be required no more than three (3) days prior to vegetation clearing or ground disturbance activities, as instances of nesting could be missed if surveys are conducted earlier.

7. *Moving out of Harm's Way*: The Project is anticipated to result in the clearing of natural habitats that support native species. To avoid direct mortality, the City of Jackson should state in the EIR a requirement for a qualified biologist with the proper handling permits, will be retained to be onsite prior to and during all ground- and habitat-disturbing activities. Furthermore, the EIR should describe that the qualified biologist with the proper permits may move out of harm's way special-status species or other wildlife of low or limited mobility that would otherwise be injured or killed from Project-related activities, as needed. The EIR should also

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describe qualified biologist qualifications and authorities to stop work to prevent direct mortality of special-status species. CDFW recommends fish and wildlife species be allowed to move out of harm's way on their own volition, if possible, and to assist their relocation as a last resort. It should be noted that the temporary relocation of onsite wildlife does not constitute effective mitigation for habitat loss.

8. *Translocation of Species*: Additionally, the EIR should cover a range of possibilities for mitigation. The use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species are generally experimental in nature and largely unsuccessful. Therefore, the EIR should describe additional mitigation measures utilizing habitat restoration, conservation, and/or preservation, in addition to avoidance and minimization measures, if it is determined that there may be impacts to rare, threatened, or endangered species.

The EIR should incorporate mitigation performance standards that would ensure that impacts are reduced to a less-than-significant level. Mitigation measures proposed in the EIR should be made a condition of approval of the Project. Please note that obtaining a permit from CDFW by itself with no other mitigation proposal may constitute mitigation deferral. CEQA Guidelines section 15126.4, subdivision (a)(1)(B) states that formulation of mitigation measures should not be deferred until some future time. To avoid deferring mitigation in this way, the EIR should describe avoidance, minimization and mitigation measures that would be implemented should the impact occur.

California Endangered Species Act

CDFW is responsible for ensuring appropriate conservation of fish and wildlife resources including threatened, endangered, and/or candidate plant and animal species, pursuant to the California Endangered Species Act (CESA). CDFW recommends that a CESA Incidental Take Permit (ITP) be obtained if the Project has the potential to result in "take" (Fish & G. Code § 86 defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") of State-listed CESA species, either through construction or over the life of the Project.

State-listed species with the potential to occur in the area include, but are not limited to: foothill yellow-legged frog (*Rana boylei*, Endangered), and crotch bumble bee (*Bombus crotchii*, Candidate).

The EIR should disclose the potential of the Project to take State-listed species and how the impacts will be avoided, minimized, and mitigated. Please note that mitigation measures that are adequate to reduce impacts to a less-than significant level to meet CEQA requirements may not be enough for the issuance of an ITP. To issue an ITP, CDFW must demonstrate that the impacts of the authorized take will be minimized and fully mitigated (Fish & G. Code §2081 (b)). To facilitate the issuance of an ITP, if applicable, CDFW recommends the EIR include measures to minimize and fully mitigate the impacts to any State-listed species the Project has potential to take. CDFW

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encourages early consultation with staff to determine appropriate measures to facilitate future permitting processes and to engage with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service to coordinate specific measures if both State and federally listed species may be present within the Project vicinity.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) (Fish & G. Code §1900 *et seq.*) prohibits the take or possession of State-listed rare and endangered plants, including any part or product thereof, unless authorized by CDFW or in certain limited circumstances. Take of State-listed rare and/or endangered plants due to Project activities may only be permitted through an ITP or other authorization issued by CDFW pursuant to California Code of Regulations, Title 14, section 786.9 subdivision (b).

Lake and Streambed Alteration Program

The EIR should identify all perennial, intermittent, and ephemeral rivers, streams, lakes, other hydrologically connected aquatic features, and any associated biological resources/habitats present within the entire Project footprint (including utilities, access and staging areas). The environmental document should analyze all potential temporary, permanent, direct, indirect and/or cumulative impacts to the above-mentioned features and associated biological resources/habitats that may occur because of the Project. If it is determined the Project will result in significant impacts to these resources the EIR shall propose appropriate avoidance, minimization and/or mitigation measures to reduce impacts to a less-than-significant level.

Section 1602 of the Fish and Game Code requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following:

1. Substantially divert or obstruct the natural flow of any river, stream or lake;
2. Substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or
3. Deposit debris, waste or other materials where it may pass into any river, stream or lake.

Please note that "any river, stream or lake" includes those that are episodic (i.e., those that are dry for periods of time) as well as those that are perennial (i.e., those that flow year-round). This includes ephemeral streams and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water.

If upon review of an entity's notification, CDFW determines that the Project activities may substantially adversely affect an existing fish or wildlife resource, a Lake and Streambed Alteration (LSA) Agreement will be issued which will include reasonable measures necessary to protect the resource. CDFW's issuance of an LSA Agreement is

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a “project” subject to CEQA (see Pub. Resources Code 21065). To facilitate issuance of an LSA Agreement, if one is necessary, the EIR should fully identify the potential impacts to the lake, stream, or riparian resources, and provide adequate avoidance, mitigation, and monitoring and reporting commitments. Early consultation with CDFW is recommended, since modification of the Project may avoid or reduce impacts to fish and wildlife resources. Notifications for projects should be submitted online through CDFW’s Environmental Permit Information Management System (EPIMS). For more information about EPIMS, please visit

<https://wildlife.ca.gov/Conservation/Environmental-Review/EPIMS>. More information about LSA Notifications, forms, and fees may be found at <https://www.wildlife.ca.gov/Conservation/Environmental-Review/LSA>.

Please note that other agencies may use specific methods and definitions to determine impacts to areas subject to their authorities. These methods and definitions often do not include all needed information for CDFW to determine the extent of fish and wildlife resources affected by activities subject to Notification under Fish and Game Code section 1602. Therefore, CDFW does not recommend relying solely on methods developed specifically for delineating areas subject to other agencies’ jurisdiction (such as United States Army Corps of Engineers) when mapping lakes, streams, wetlands, floodplains, riparian areas, etc. in preparation for submitting a Notification of an LSA.

CDFW relies on the lead agency environmental document analysis when acting as a responsible agency issuing an LSA Agreement. CDFW recommends lead agencies coordinate with us as early as possible, since potential modification of the proposed Project may avoid or reduce impacts to fish and wildlife resources and expedite the Project approval process.

The following information will be required for the processing of an LSA Notification and CDFW recommends incorporating this information into any forthcoming CEQA document(s) to avoid subsequent documentation and Project delays:

1. Mapping and quantification of lakes, streams, and associated fish and wildlife habitat (e.g., riparian habitat, freshwater wetlands, etc.) that will be temporarily and/or permanently impacted by the Project, including impacts from access and staging areas. Please include an estimate of impact to each habitat type.
2. Discussion of specific avoidance, minimization, and mitigation measures to reduce Project impacts to fish and wildlife resources to a less-than-significant level. Please refer to section 15370 of the CEQA Guidelines.

Based on review of Project materials, aerial photography and observation of the site from public roadways, the Project site supports a number of waterways, their named and unnamed tributaries, and associated habitats, including but not limited to Consumnes River, Mokelumne River, Sutter Creek, and Jackson Creek. CDFW

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recommends the EIR fully identify the Project's potential impacts to the stream and/or its associated vegetation and wetlands.

CHEMICAL USE

Rodenticides that control small mammal populations would also reduce available burrows, making the habitat no longer suitable for burrowing owls and other sensitive wildlife species. Lack of underground refugia could result in increase exposure to predators, heat, and other elements. Additionally, the widespread use of rodenticides has been documented to result in wildlife losses due to non-target exposure of fully protected and listed species as well as losses through secondary exposure (McMillin et al. 2008, Hosea 2000). CDFW recommends that the EIR fully identify, and address, the Project's potential impacts to fish and wildlife populations from the use of agricultural pesticides and related pest control activities.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database, which may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special-status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDDB). The CNDDDB field survey form can be found at the following link: <https://www.wildlife.ca.gov/Data/CNDDDB/Submitting-Data>. The completed form can be submitted online or mailed electronically to CNDDDB at the following email address: CNDDDB@wildlife.ca.gov.

FILING FEES

The Project, as proposed, would have an effect on fish and wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the City of Jackson and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code § 711.4; Pub. Resources Code, § 21089.)

CONCLUSION

Pursuant to Public Resources Code sections 21092 and 21092.2, CDFW requests written notification of proposed actions and pending decisions regarding the Project. Written notifications shall be directed to: California Department of Fish and Wildlife North Central Region, 1701 Nimbus Road, Rancho Cordova, CA 95670.

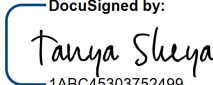
CDFW appreciates the opportunity to comment on the NOP of the EIR for the Jackson General Plan Update and recommends that the City of Jackson address CDFW's comments and concerns in the forthcoming EIR. CDFW personnel are

Jackson General Plan Update
Page 13 of 13

available for consultation regarding biological resources and strategies to minimize impacts.

If you have any questions regarding the comments provided in this letter, or wish to schedule a meeting and/or site visit, please contact Zach Kearns, Environmental Scientist at (916) 358-1134 or zachary.kearns@wildlife.ca.gov.

Sincerely,

DocuSigned by:

1ABC45303752499...
Tanya Sheya
Environmental Program Manager

ec: Billie Wilson, Senior Environmental Scientist (Supervisory)
Zach Kearns, Environmental Scientist

Office of Planning and Research, State Clearinghouse, Sacramento

Literature Cited

Hosea, R.C. 2000. Exposure of Non-Target Wildlife to Anticoagulant Rodenticides in California. Proceedings, 19th Vert. Pest Conf. (A.C. Crabb, Ed.) Publ. Univ. of Cal., Davis.

McMillin, S. C., R.C. Hosea, B.J. Finlayson, B.L. Cypher, and A Mekebri. 2008. Anticoagulant Rodenticide Exposure in an Urban Population of the San Joaquin Kit Fox. Proc.23rd Vertebrate. Pest Conf. (R. M. Timm and M. B. Madon, Eds.) Published at Univ. of Calif., Davis. Pp. 163-165.

Sawyer, J. O., T. Keeler-Wolf, and J. M. Evens. 2009. A Manual of California Vegetation, 2nd ed. California Native Plant Society Press, Sacramento, California.
<http://vegetation.cnps.org/>



Yana Garcia
Secretary for
Environmental Protection



Department of Toxic Substances Control

Meredith Williams, Ph.D.
Director
8800 Cal Center Drive
Sacramento, California 95826-3200



Gavin Newsom
Governor

SENT VIA ELECTRONIC MAIL

December 23, 2022

Mr. Farhad Mortazi
City of Jackson
33 Broadway
City of Jackson, CA 95642
Planning@ci.jackson.ca.us

NOTICE OF PREPARATION AND SCOPING MEETING, JACKSON GENERAL PLAN UPDATE ENVIRONMENTAL IMPACT REPORT – DATED NOVEMBER 23, 2022 (STATE CLEARINGHOUSE NUMBER: 2022110545)

Dear Mr. Mortazi:

The Department of Toxic Substances Control (DTSC) received a Notice of Preparation of an Environmental Impact Report (EIR) for the Jackson General Plan Update (Project). The Lead Agency is receiving this notice from DTSC because the Project includes one or more of the following: groundbreaking activities, work in close proximity to a roadway, work in close proximity to mining or suspected mining or former mining activities, presence of site buildings that may require demolition or modifications, importation of backfill soil, and/or work on or in close proximity to an agricultural or former agricultural site.

General Plan Update California Environmental Quality Act documents often reference the listing compiled in accordance with California Government Code Section 65962.5, commonly known as the Cortese List. Not all sites impacted by hazardous waste or hazardous materials will be found on the Cortese List. DTSC recommends that the Hazards and Hazardous Materials section of the EIR address actions to be taken for any sites impacted by hazardous waste or hazardous materials within the Project area, not just those found on the Cortese List. DTSC recommends consulting with other agencies that may provide oversight to hazardous waste facilities and sites in order to determine a comprehensive listing of all sites impacted by hazardous waste or hazardous materials within the Project area. DTSC hazardous waste facilities and sites with known or suspected contamination issues can be found on DTSC's [EnviroStor](#) data

management system. The [EnviroStor Map](#) feature can be used to locate hazardous waste facilities and sites for a county, city, or a specific address. A search within EnviroStor indicates that numerous hazardous waste facilities and sites are present within the Project's region.

DTSC recommends that the following issues be evaluated in the Hazards and Hazardous Materials section of the EIR:

1. A State of California environmental regulatory agency such as DTSC, a Regional Water Quality Control Board (RWQCB), or a local agency that meets the requirements of [Health and Safety Code section 101480](#) should provide regulatory concurrence that any Project site is safe for construction and the proposed use.
2. The EIR should acknowledge the potential for historic or future activities on or near Project sites to result in the release of hazardous wastes/substances on Project sites. In instances in which releases have occurred or may occur, further studies should be carried out to delineate the nature and extent of the contamination, and the potential threat to public health and/or the environment should be evaluated. The EIR should also identify the mechanism(s) to initiate any required investigation and/or remediation and the government agency who will be responsible for providing appropriate regulatory oversight.
3. Refiners in the United States started adding lead compounds to gasoline in the 1920s in order to boost octane levels and improve engine performance. This practice did not officially end until 1992 when lead was banned as a fuel additive in California. Tailpipe emissions from automobiles using leaded gasoline contained lead and resulted in aerially deposited lead (ADL) being deposited in and along roadways throughout the state. ADL-contaminated soils still exist along roadsides and medians and can also be found underneath some existing road surfaces due to past construction activities. Due to the potential for ADL-contaminated soil, DTSC recommends collecting soil samples for lead analysis prior to performing any intrusive activities on project sites.
4. If any sites within Project areas or sites located within the vicinity of Project areas have been used or are suspected of having been used for mining activities, proper investigation for mine waste should be discussed in the EIR. DTSC recommends that any Project sites with current and/or former mining operations onsite or in the Project site area should be evaluated for mine waste according to DTSC's 1998 [Abandoned Mine Land Mines Preliminary Assessment Handbook](#).
5. If buildings or other structures are to be demolished on any project sites included in the proposed project, surveys should be conducted for the presence of

lead-based paints or products, mercury, asbestos containing materials, and polychlorinated biphenyl caulk. Removal, demolition and disposal of any of the above-mentioned chemicals should be conducted in compliance with California environmental regulations and policies. In addition, sampling near current and/or former buildings should be conducted in accordance with DTSC's 2006 [Interim Guidance Evaluation of School Sites with Potential Contamination from Lead Based Paint, Termiticides, and Electrical Transformers.](#)

6. If any projects initiated as part of the proposed Project require the importation of soil to backfill any excavated areas, proper sampling should be conducted to ensure that the imported soil is free of contamination. DTSC recommends the imported materials be characterized according to DTSC's 2001 [Information Advisory Clean Imported Fill Material.](#)
7. If any sites included as part of the proposed Project have been used for agricultural, weed abatement or related activities, proper investigation for organochlorinated pesticides should be discussed in the EIR. DTSC recommends the current and former agricultural lands be evaluated in accordance with DTSC's 2008 [Interim Guidance for Sampling Agricultural Properties \(Third Revision\).](#)

DTSC appreciates the opportunity to comment on the EIR. Should you choose DTSC to provide oversight for any environmental investigations, please visit DTSC's [Site Mitigation and Restoration Program](#) page to apply for lead agency oversight. Additional information regarding voluntary agreements with DTSC can be found at [DTSC's Brownfield website.](#)

If you have any questions, please contact me at (916) 255-3710 or via email at [Gavin.McCreary@dtsc.ca.gov.](mailto:Gavin.McCreary@dtsc.ca.gov)

Sincerely,



Gavin McCreary, M.S.
Project Manager
Site Evaluation and Remediation Unit
Site Mitigation and Restoration Program
Department of Toxic Substances Control

cc: (next page)

Mr. Farhad Mortazi
December 23, 2022
Page 4

cc: (via email)

Governor's Office of Planning and Research
State Clearinghouse
State.Clearinghouse@opr.ca.gov

Mr. Dave Kereazis
Office of Planning & Environmental Analysis
Department of Toxic Substances Control
Dave.Kereazis@dtsc.ca.gov

Appendix B

Continuous and Short-Term Ambient Noise Measurement Results

Appendix B: Continuous and Short-Term Ambient Noise Measurement Results



Appendix B1: Continuous Noise Monitoring Results

Site: LT-1

Project: City of Jackson General Plan Update

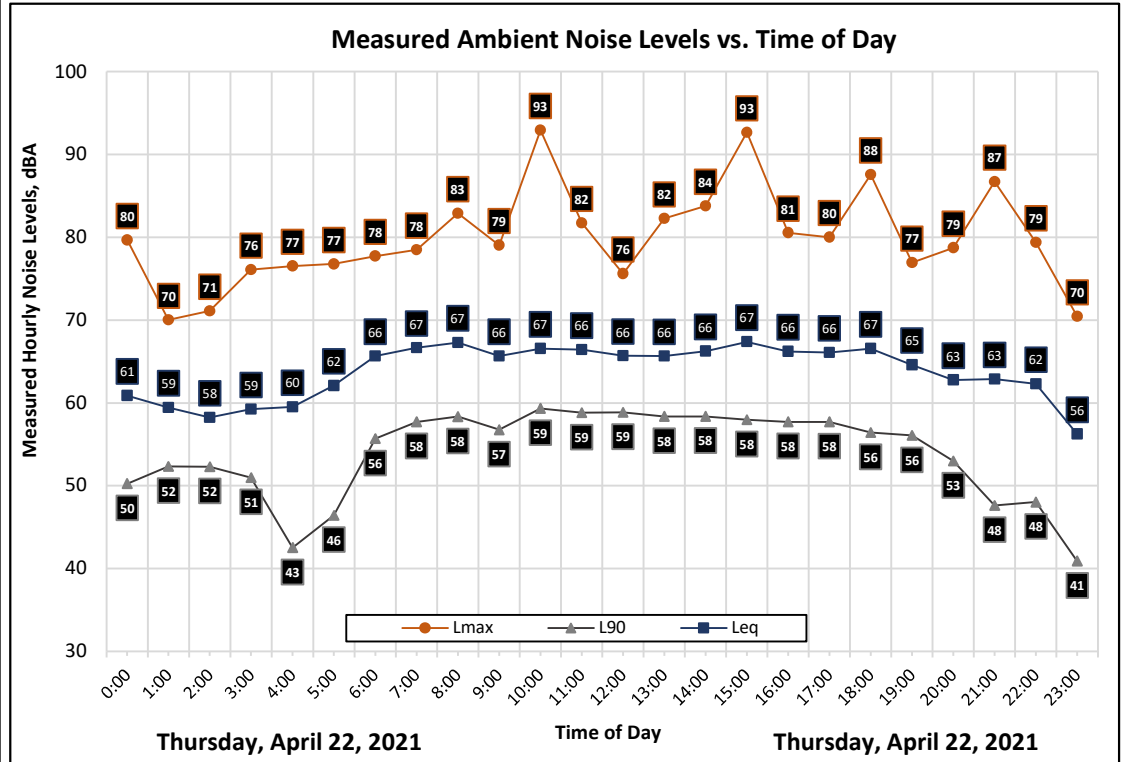
Meter: LDL 820-2

Location: Mel's Diner

Calibrator: CAL200

Coordinates: 38.3485553°, -120.7753417°

Date	Time	Measured Level, dBA			
		L _{eq}	L _{max}	L ₅₀	L ₉₀
Thursday, April 22, 2021	0:00	61	80	60	50
Thursday, April 22, 2021	1:00	59	70	59	52
Thursday, April 22, 2021	2:00	58	71	56	52
Thursday, April 22, 2021	3:00	59	76	57	51
Thursday, April 22, 2021	4:00	60	77	51	43
Thursday, April 22, 2021	5:00	62	77	57	46
Thursday, April 22, 2021	6:00	66	78	64	56
Thursday, April 22, 2021	7:00	67	78	65	58
Thursday, April 22, 2021	8:00	67	83	66	58
Thursday, April 22, 2021	9:00	66	79	64	57
Thursday, April 22, 2021	10:00	67	93	65	59
Thursday, April 22, 2021	11:00	66	82	65	59
Thursday, April 22, 2021	12:00	66	76	65	59
Thursday, April 22, 2021	13:00	66	82	64	58
Thursday, April 22, 2021	14:00	66	84	65	58
Thursday, April 22, 2021	15:00	67	93	65	58
Thursday, April 22, 2021	16:00	66	81	65	58
Thursday, April 22, 2021	17:00	66	80	65	58
Thursday, April 22, 2021	18:00	67	88	64	56
Thursday, April 22, 2021	19:00	65	77	63	56
Thursday, April 22, 2021	20:00	63	79	60	53
Thursday, April 22, 2021	21:00	63	87	57	48
Thursday, April 22, 2021	22:00	62	79	56	48
Thursday, April 22, 2021	23:00	56	70	49	41



Statistics	Leq	L _{max}	L ₅₀	L ₉₀
Day Average	66	83	64	57
Night Average	61	75	57	49
Day Low	63	76	57	48
Day High	67	93	66	59
Night Low	56	70	49	41
Night High	66	80	64	56
L _{dn}	68	Day %		85
CNEL	69	Night %		15

Appendix B2: Continuous Noise Monitoring Results

Date	Time	Measured Level, dBA			
		L _{eq}	L _{max}	L ₅₀	L ₉₀
Thursday, April 22, 2021	0:00	57	77	36	33
Thursday, April 22, 2021	1:00	55	79	38	36
Thursday, April 22, 2021	2:00	55	76	37	34
Thursday, April 22, 2021	3:00	57	79	35	32
Thursday, April 22, 2021	4:00	60	81	46	42
Thursday, April 22, 2021	5:00	65	82	58	51
Thursday, April 22, 2021	6:00	67	83	65	59
Thursday, April 22, 2021	7:00	69	83	68	64
Thursday, April 22, 2021	8:00	70	85	69	64
Thursday, April 22, 2021	9:00	69	86	68	64
Thursday, April 22, 2021	10:00	70	89	69	64
Thursday, April 22, 2021	11:00	69	86	68	64
Thursday, April 22, 2021	12:00	72	87	71	68
Thursday, April 22, 2021	13:00	69	85	69	65
Thursday, April 22, 2021	14:00	69	83	69	65
Thursday, April 22, 2021	15:00	70	85	69	66
Thursday, April 22, 2021	16:00	70	93	69	66
Thursday, April 22, 2021	17:00	69	85	69	65
Thursday, April 22, 2021	18:00	68	89	66	62
Thursday, April 22, 2021	19:00	68	91	64	58
Thursday, April 22, 2021	20:00	65	81	62	55
Thursday, April 22, 2021	21:00	63	85	55	47
Thursday, April 22, 2021	22:00	62	86	50	41
Thursday, April 22, 2021	23:00	59	75	41	33

Statistics	Leq	Lmax	L50	L90
Day Average	69	86	67	63
Night Average	62	80	45	40
Day Low	63	81	55	47
Day High	72	93	71	68
Night Low	55	75	35	32
Night High	67	86	65	59
Ldn	70	Day %		91
CNEL	70	Night %		9

Site: LT-2

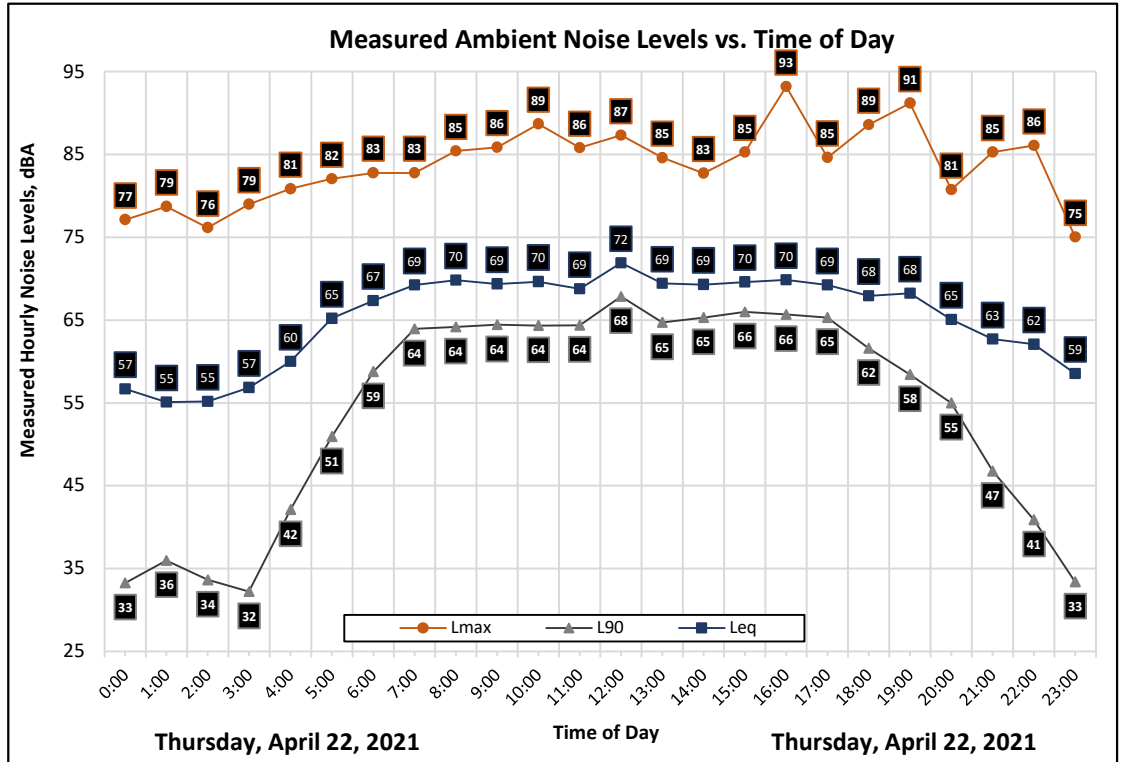
Project: City of Jackson General Plan Update

Meter: LDL 820-3

Location: Highway 49 South

Calibrator: CAL200

Coordinates: 38.3355764°, -120.7568857°



Appendix B3: Continuous Noise Monitoring Results

Site: LT-3

Project: City of Jackson General Plan Update

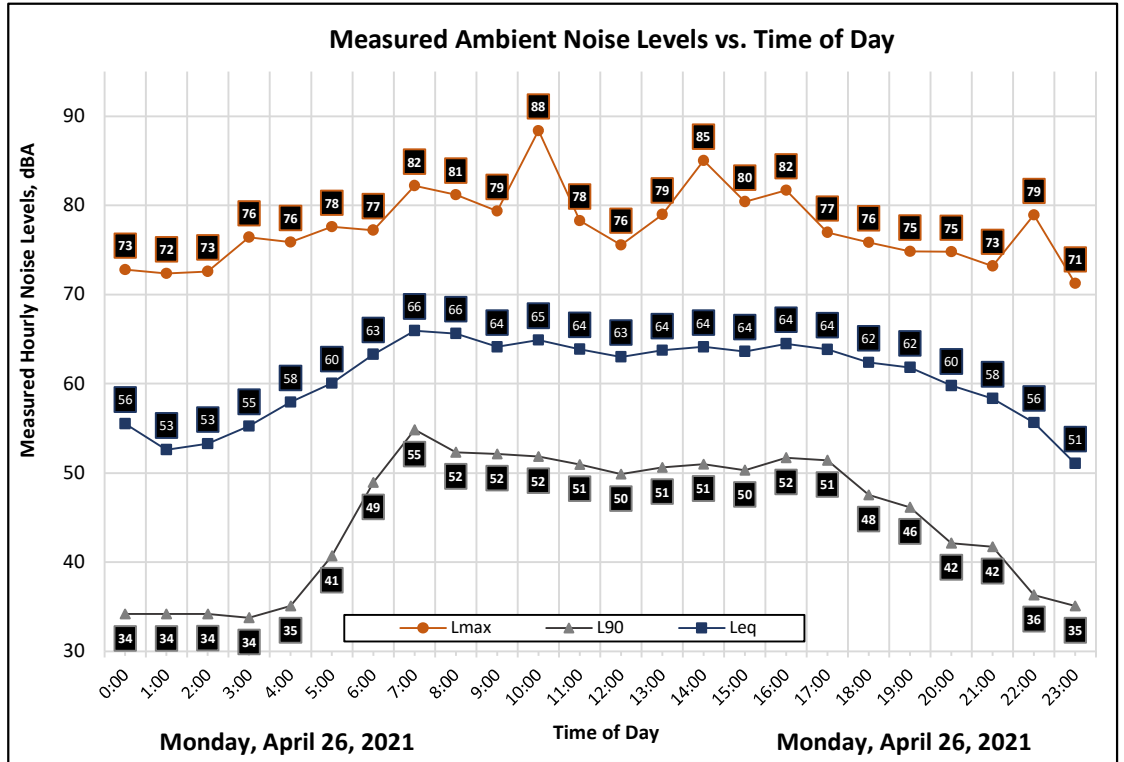
Meter: LDL 820-4

Location: Highway 88

Calibrator: CAL200

Coordinates: 38.3513419°, -120.7674154°

Date	Time	Measured Level, dBA			
		L _{eq}	L _{max}	L ₅₀	L ₉₀
Monday, April 26, 2021	0:00	56	73	38	34
Monday, April 26, 2021	1:00	53	72	37	34
Monday, April 26, 2021	2:00	53	73	37	34
Monday, April 26, 2021	3:00	55	76	35	34
Monday, April 26, 2021	4:00	58	76	45	35
Monday, April 26, 2021	5:00	60	78	52	41
Monday, April 26, 2021	6:00	63	77	59	49
Monday, April 26, 2021	7:00	66	82	63	55
Monday, April 26, 2021	8:00	66	81	63	52
Monday, April 26, 2021	9:00	64	79	60	52
Monday, April 26, 2021	10:00	65	88	62	52
Monday, April 26, 2021	11:00	64	78	61	51
Monday, April 26, 2021	12:00	63	76	60	50
Monday, April 26, 2021	13:00	64	79	61	51
Monday, April 26, 2021	14:00	64	85	61	51
Monday, April 26, 2021	15:00	64	80	60	50
Monday, April 26, 2021	16:00	64	82	62	52
Monday, April 26, 2021	17:00	64	77	61	51
Monday, April 26, 2021	18:00	62	76	59	48
Monday, April 26, 2021	19:00	62	75	58	46
Monday, April 26, 2021	20:00	60	75	54	42
Monday, April 26, 2021	21:00	58	73	52	42
Monday, April 26, 2021	22:00	56	79	46	36
Monday, April 26, 2021	23:00	51	71	41	35



Statistics	Leq	Lmax	L50	L90
Day Average	64	79	60	50
Night Average	58	75	43	37
Day Low	58	73	52	42
Day High	66	88	63	55
Night Low	51	71	35	34
Night High	63	79	59	49
Ldn	65	Day %	88	
CNEL	66	Night %	12	



Appendix B4: Continuous Noise Monitoring Results

Date	Time	Measured Level, dBA			
		L _{eq}	L _{max}	L ₅₀	L ₉₀
Thursday, April 22, 2021	0:00	59	82	38	30
Thursday, April 22, 2021	1:00	57	80	33	27
Thursday, April 22, 2021	2:00	58	81	32	24
Thursday, April 22, 2021	3:00	62	85	38	31
Thursday, April 22, 2021	4:00	63	85	46	32
Thursday, April 22, 2021	5:00	68	86	58	39
Thursday, April 22, 2021	6:00	70	86	65	52
Thursday, April 22, 2021	7:00	72	88	69	55
Thursday, April 22, 2021	8:00	72	87	69	56
Thursday, April 22, 2021	9:00	72	92	69	56
Thursday, April 22, 2021	10:00	73	95	70	59
Thursday, April 22, 2021	11:00	72	88	69	60
Thursday, April 22, 2021	12:00	73	90	70	62
Thursday, April 22, 2021	13:00	72	91	69	60
Thursday, April 22, 2021	14:00	73	89	70	61
Thursday, April 22, 2021	15:00	73	95	69	58
Thursday, April 22, 2021	16:00	72	91	69	60
Thursday, April 22, 2021	17:00	72	87	69	58
Thursday, April 22, 2021	18:00	71	87	67	55
Thursday, April 22, 2021	19:00	70	86	66	54
Thursday, April 22, 2021	20:00	68	86	63	48
Thursday, April 22, 2021	21:00	65	89	55	35
Thursday, April 22, 2021	22:00	66	86	55	38
Thursday, April 22, 2021	23:00	60	82	42	28

Statistics	Leq	Lmax	L50	L90
Day Average	72	89	68	56
Night Average	65	84	45	33
Day Low	65	86	55	35
Day High	73	95	70	62
Night Low	57	80	32	24
Night High	70	86	65	52
Ldn	73	Day %		91
CNEL	73	Night %		9

Site: LT-4

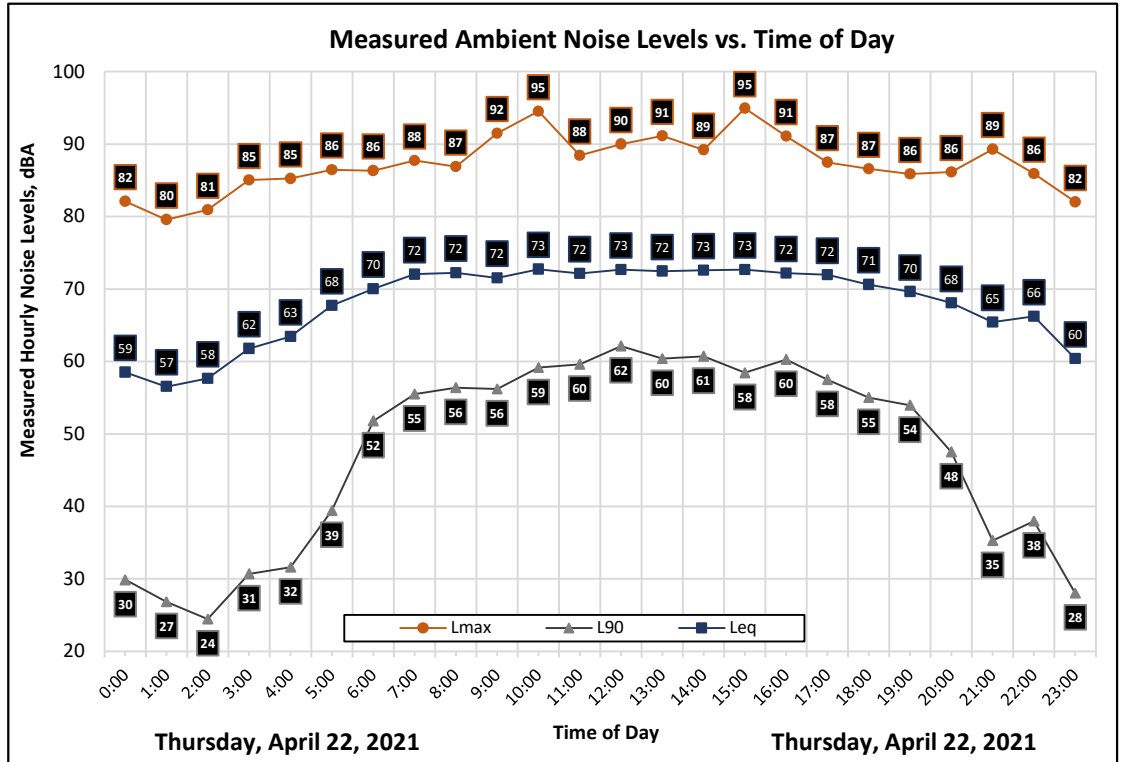
Project: City of Jackson General Plan Update

Meter: LDL 812-2

Location: Highway 49 North

Calibrator: CAL200

Coordinates: 38.363669°, -120.785868°



Appendix B5 : Short Term Noise Monitoring Results

Site: ST-1

Project: City of Jackson General Plan Update

Meter: LDL 831-4

Location: Argonaut High School Track

Calibrator: CAL200

Coordinates: 38.3544573°, -120.7957352°

Start: 2021-04-21 11:58:20

Stop: 2021-04-21 12:08:20

SLM: Model 831

Serial: 2893

Measurement Results, dBA

Duration: 0:10

L_{eq}: 58

L_{max}: 80

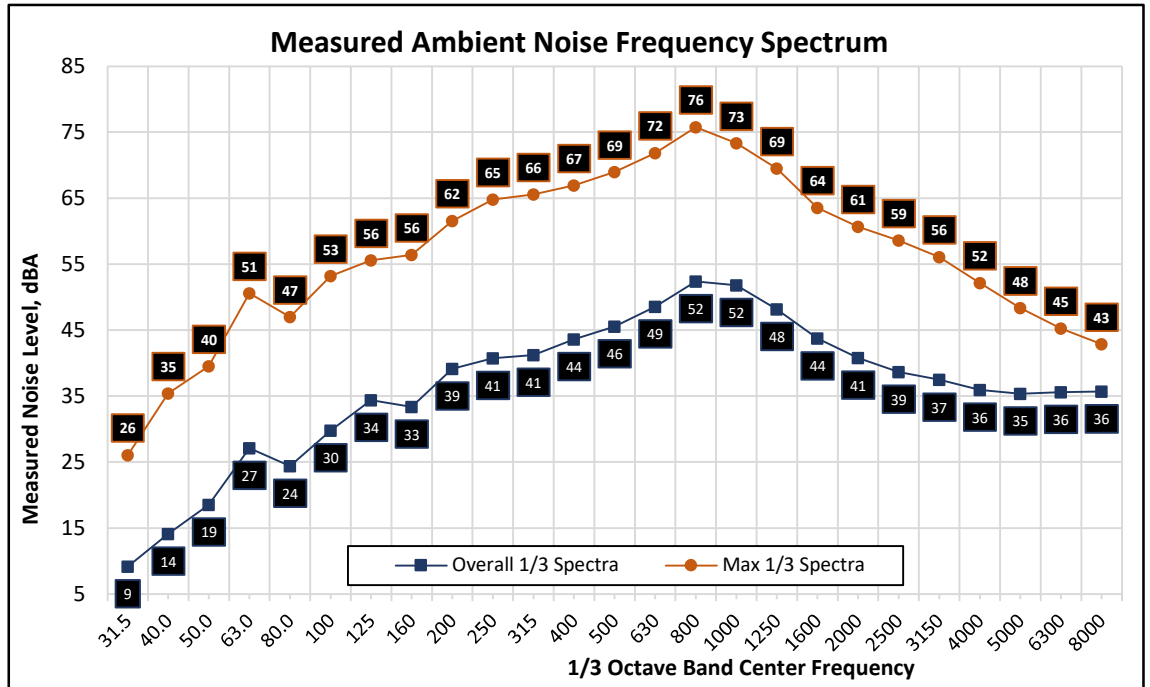
L_{min}: 31

L₅₀: 35

L₉₀: 33

Notes

Primary noise sources from wind, birds, very distant traffic, and occasional cars on Stony Creek Road.



Appendix B6 : Short Term Noise Monitoring Results

Site: ST-2

Project: City of Jackson General Plan Update

Meter: LDL 831-4

Location: French Bar Road

Calibrator: CAL200

Coordinates: 38.3344469°, -120.7771331°

Start: 2021-04-21 12:36:39

Stop: 2021-04-21 12:46:39

SLM: Model 831

Serial: 2893

Measurement Results, dBA

Duration: 0:10

L_{eq}: 40

L_{max}: 50

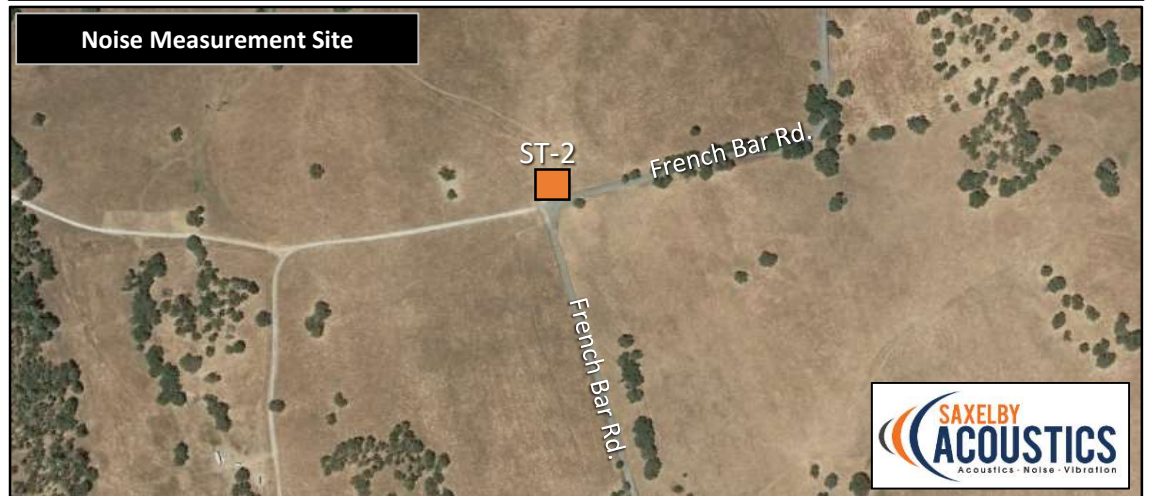
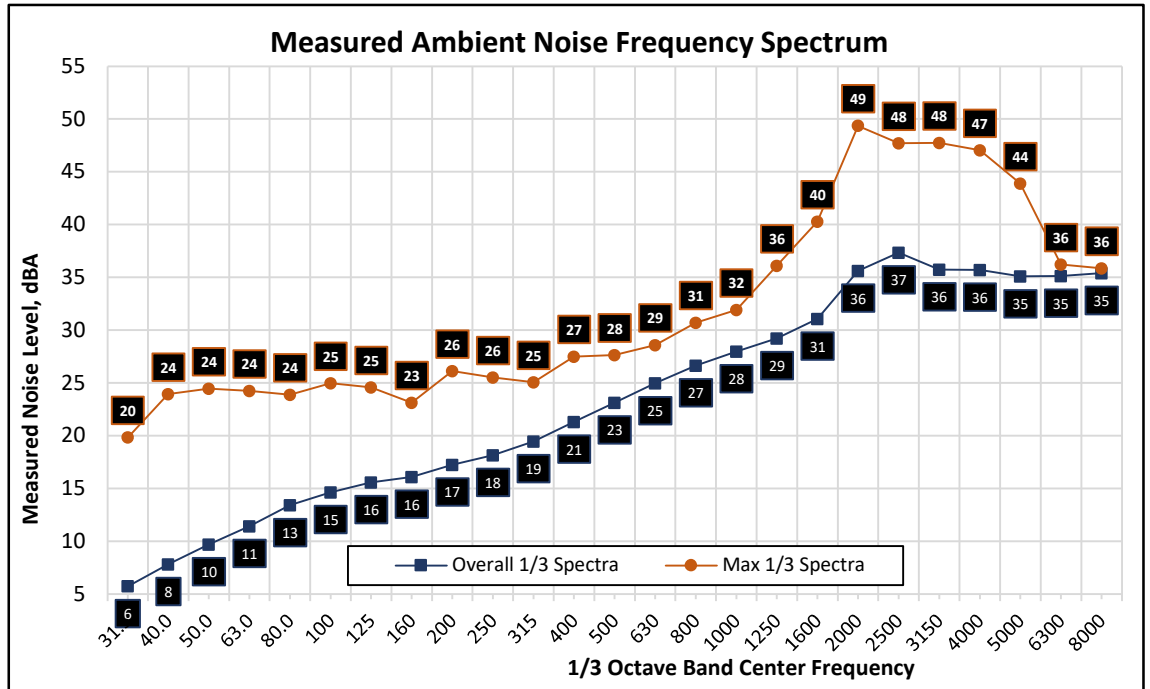
L_{min}: 27

L₅₀: 37

L₉₀: 31

Notes

No traffic. Primary noise source is from birds. Secondary noise sources from some wind, distant weed eaters and equipment.



Appendix B7 : Short Term Noise Monitoring Results

Site: ST-3

Project: City of Jackson General Plan Update

Meter: LDL 831-4

Location: Thomas Drive

Calibrator: CAL200

Coordinates: 38.3349142°, -120.7541053°

Start: 2021-04-21 12:55:07

Stop: 2021-04-21 13:05:07

SLM: Model 831

Serial: 2893

Measurement Results, dBA

Duration: 0:10

L_{eq} : 68

L_{max} : 95

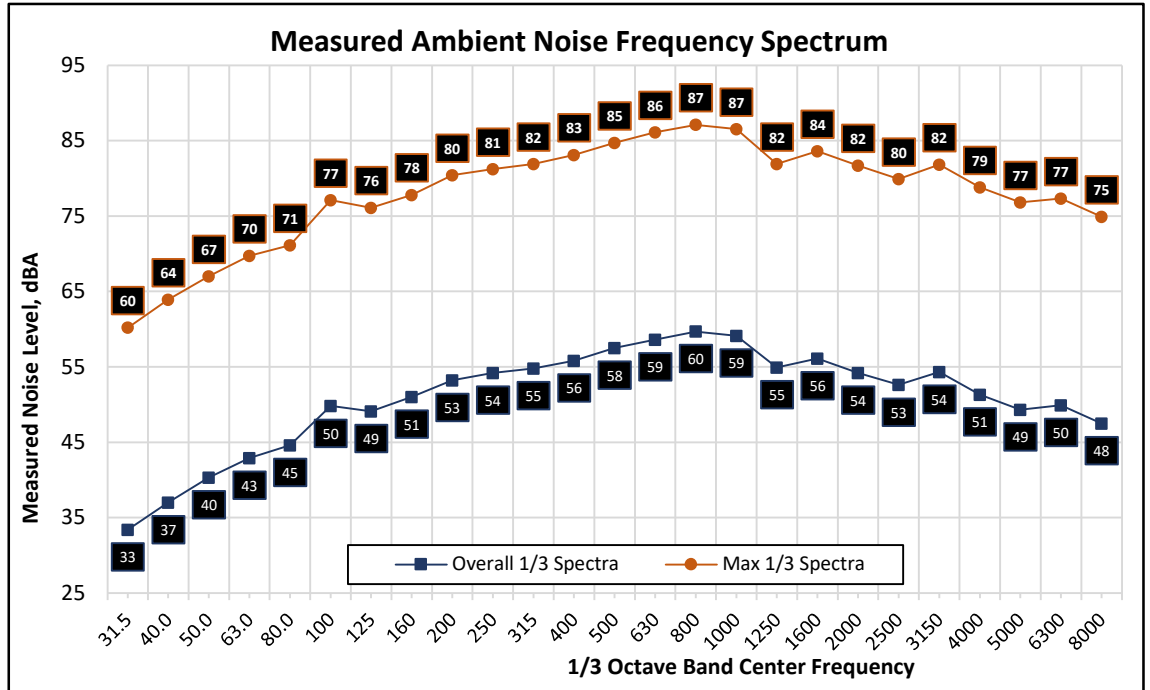
L_{min} : 39

L_{50} : 48

L_{90} : 43

Notes

Primary noise source is Highway 49 in the distance.



Appendix B8 : Short Term Noise Monitoring Results

Site: ST-4

Project: City of Jackson General Plan Update

Meter: LDL 831-4

Location: Kennedy Tailing Wheels Park

Calibrator: CAL200

Coordinates: 38.3634078°, -120.7759375°

Start: 2021-04-21 13:51:24

Stop: 2021-04-21 14:01:24

SLM: Model 831

Serial: 2893

Measurement Results, dBA

Duration: 0:10

L_{eq} : 59

L_{max} : 79

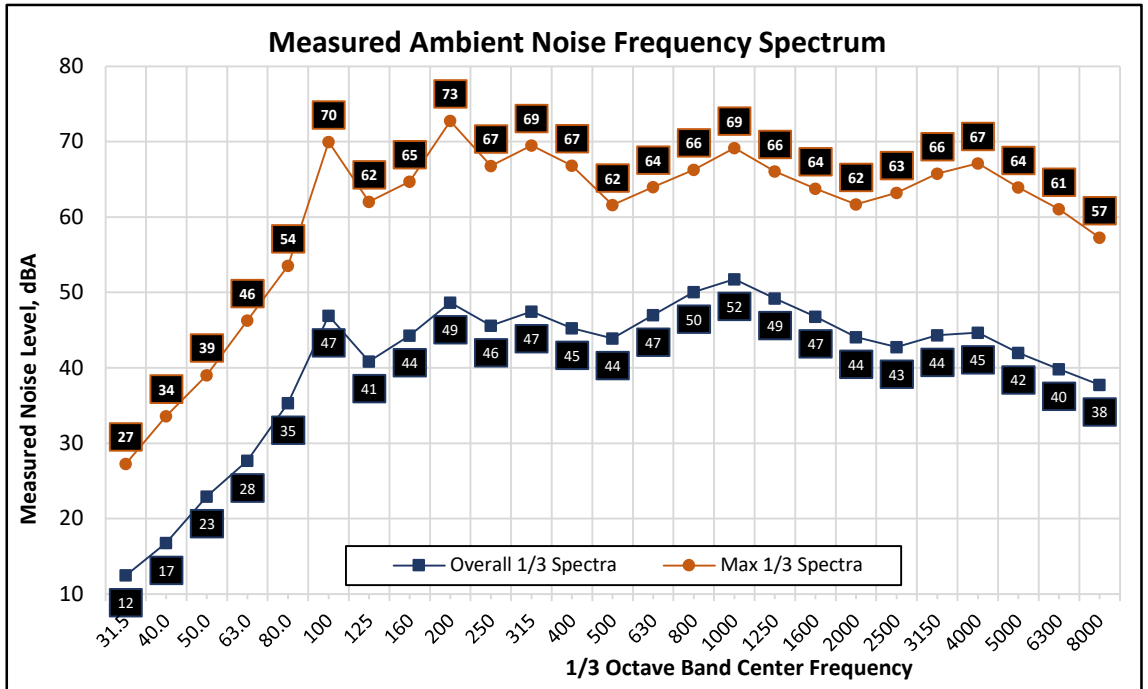
L_{min} : 43

L_{50} : 48

L_{90} : 45

Notes

Elevated above road 4-5 feet. Primary noise sources are North Main Street, some aircraft noises, parkgoer noise, and bird noise.



Appendix B9 : Short Term Noise Monitoring Results

Site: ST-5

Project: City of Jackson General Plan Update

Meter: LDL 831-4

Location: Detert Park

Calibrator: CAL200

Coordinates: 38.3541896°, -120.7773259°

Start: 2021-04-21 14:10:48

Stop: 2021-04-21 14:20:48

SLM: Model 831

Serial: 2893

Measurement Results, dBA

Duration: 0:10

L_{eq} : 62

L_{max} : 72

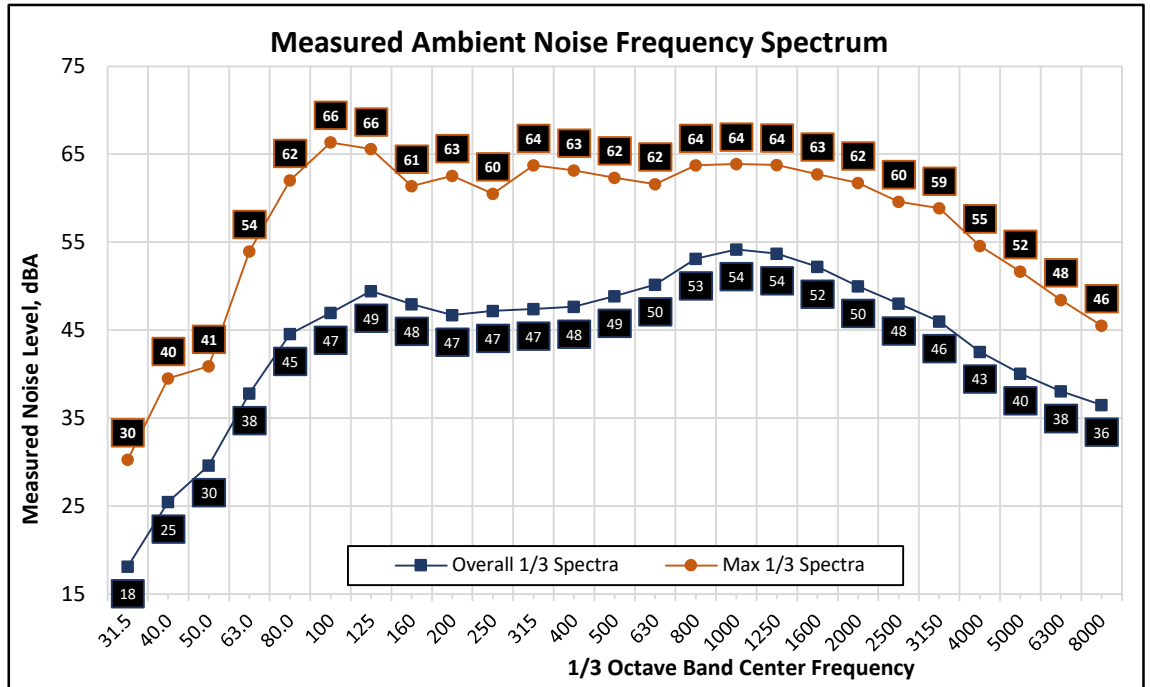
L_{min} : 50

L_{50} : 61

L_{90} : 55

Notes

Primary noise source is Highway 49.



Appendix C

Traffic Noise Calculation

Inputs and Results

Appendix C: Traffic Noise Calculation Inputs and Results



Appendix C1

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Project #: 200808

Description City of Jackson General Plan Update - Existing Traffic



Segment	Roadway	Segment	ADT	Day Night		% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset Level, dBA			
				%	%						60	65	70	
1	Highway 49	Ridge Rd to Jackson Gate Rd	20,000	89	11	2.0%	1.0%	45	80	0	216	100	47	66.5
2	Highway 49	Jackson Gate Rd to Hoffman St	21,000	89	11	2.0%	1.0%	45	55	0	223	104	48	69.1
3	Highway 49	Hoffman St to Hwy 88	21,700	89	11	2.0%	1.0%	45	60	0	228	106	49	68.7
4	Highway 49	Hwy 88 to French Bar Rd	18,900	89	11	2.0%	1.0%	50	45	0	248	115	53	71.1
5	Highway 49	French Bar Rd to Clinton Rd	14,700	89	11	2.0%	1.0%	45	65	0	176	82	38	66.5
6	Highway 49	Clinton Rd to Hwy 49 S	8,300	89	11	2.0%	1.0%	45	50	0	120	56	26	65.7
7	Highway 88	Hwy 88 W to Wicklow Wy	11,700	89	11	2.0%	1.0%	45	85	0	151	70	33	63.7
8	Highway 88	Wicklow Wy to Hwy 49	16,500	89	11	2.0%	1.0%	45	65	0	190	88	41	67.0
9	Highway 88	Hwy 49 to Court St	11,000	89	11	2.0%	1.0%	35	40	0	97	45	21	65.8
10	Highway 88	Court St to Hwy 88 E	11,500	89	11	2.0%	1.0%	55	175	0	209	97	45	61.2
11	Hoffman St	Argonaut Ln to Hwy 49	3,100	89	11	2.0%	1.0%	35	30	0	42	19	9	62.2
12	Jackson Gate Rd	Hwy 49 to Raggio Rd	2,600	89	11	2.0%	1.0%	40	45	0	46	21	10	60.1
13	North Main St	China Graveyard Rd to Hwy 49	3,200	89	11	2.0%	1.0%	25	40	0	28	13	6	57.8
14	Mission Blvd	Hwy 88 to Clinton Rd	3,200	89	11	2.0%	1.0%	35	40	0	43	20	9	60.4
15	New York Ranch Rd	China Graveyard Rd to Court St	4,700	89	11	2.0%	1.0%	35	40	0	55	26	12	62.1

Appendix C2

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Project #: 200808

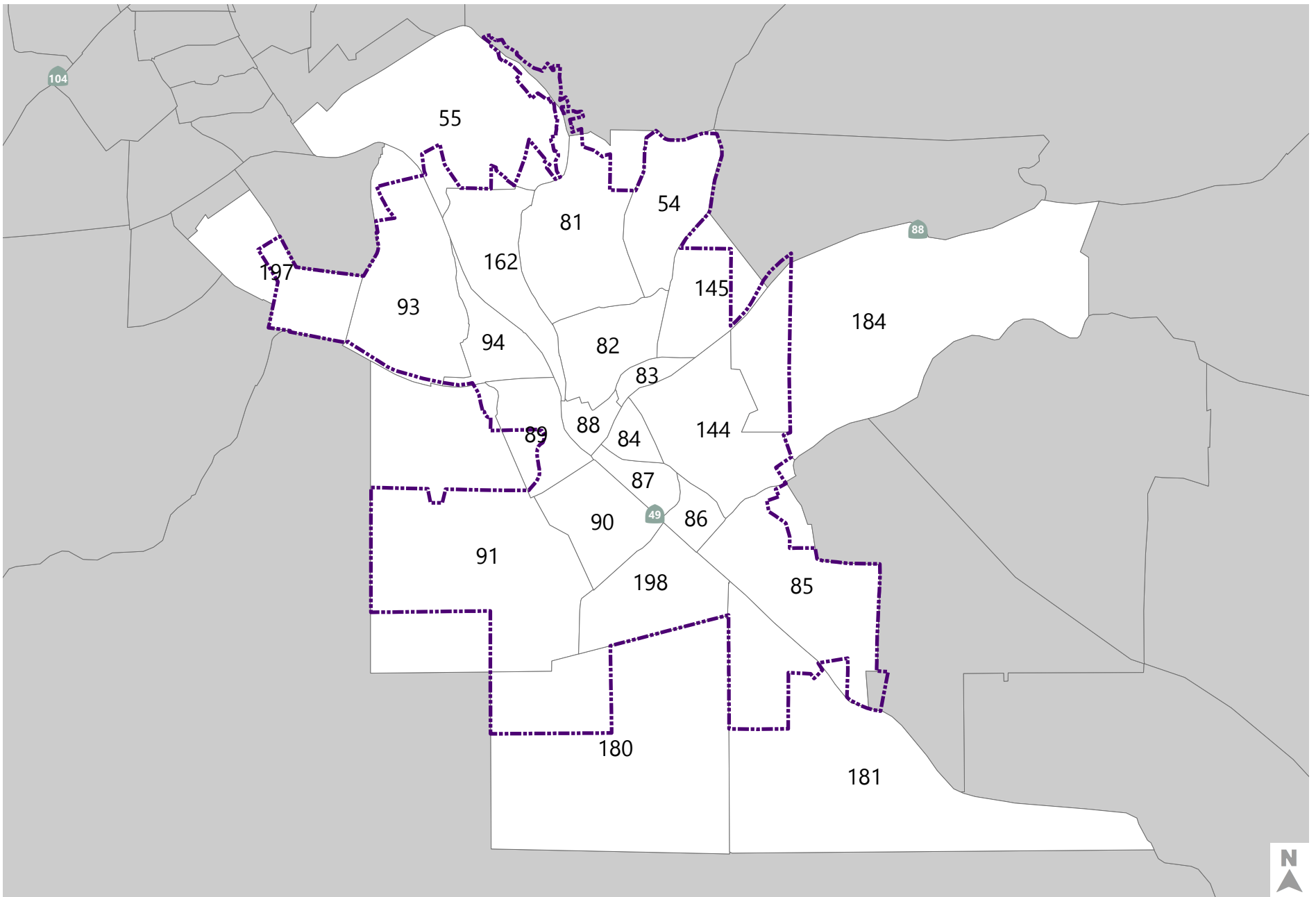
Description City of Jackson General Plan Update - Cumulative (2040) Traffic






Segment	Roadway	Segment	ADT	Day %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No			Level, dBA
											Offset			
											60 dBA	65 dBA	70 dBA	
1	Highway 49	Ridge Rd to Jackson Gate Rd	24,700	89	11	2.0%	1.0%	45	80	0	248	115	54	67.4
2	Highway 49	Jackson Gate Rd to Hoffman St	24,800	89	11	2.0%	1.0%	45	55	0	249	116	54	69.8
3	Highway 49	Hoffman St to Hwy 88	26,300	89	11	2.0%	1.0%	45	60	0	259	120	56	69.5
4	Highway 49	Hwy 88 to French Bar Rd	21,800	89	11	2.0%	1.0%	50	45	0	272	126	59	71.7
5	Highway 49	French Bar Rd to Clinton Rd	17,400	89	11	2.0%	1.0%	45	65	0	197	91	42	67.2
6	Highway 49	Clinton Rd to Hwy 49 S	10,000	89	11	2.0%	1.0%	45	50	0	136	63	29	66.5
7	Highway 88	Hwy 88 W to Wicklow Wy	16,400	89	11	2.0%	1.0%	45	85	0	189	88	41	65.2
8	Highway 88	Wicklow Wy to Hwy 49	16,500	89	11	2.0%	1.0%	45	65	0	190	88	41	67.0
9	Highway 88	Hwy 49 to Court St	11,000	89	11	2.0%	1.0%	35	40	0	97	45	21	65.8
10	Highway 88	Court St to Hwy 88 E	11,500	89	11	2.0%	1.0%	55	175	0	209	97	45	61.2
11	Hoffman St	Argonaut Ln to Hwy 49	4,900	89	11	2.0%	1.0%	35	30	0	57	26	12	64.1
12	Jackson Gate Rd	Hwy 49 to Raggio Rd	2,800	89	11	2.0%	1.0%	40	45	0	48	22	10	60.4
13	North Main St	China Graveyard Rd to Hwy 49	3,400	89	11	2.0%	1.0%	25	40	0	30	14	6	58.0
14	Mission Blvd	Hwy 88 to Clinton Rd	4,300	89	11	2.0%	1.0%	35	40	0	52	24	11	61.7
15	New York Ranch Rd	China Graveyard Rd to Court St	4,700	89	11	2.0%	1.0%	35	40	0	55	26	12	62.1

Appendix D

Transportation Data and Maps



-  Jackson City
-  TAZs in Jackson City
-  TAZs Outside of Jackson City



Traffic Analysis Zone (TAZ) Map of Jackson
 Amador County Transportation Commission (ACTC) Travel Demand Model

KSF to Employee Yields – City of Jackson General Plan

KSF	Description	Unit	EMP
CBD_KSF	Central Business District	KSF	1.25
SC_KSF	Major Shopping Center	KSF	1.25
GC_KSF	General Commercial	KSF	1.25
OFF_KSF	Office	KSF	2.25
LI_KSF	Light Industrial	KSF	1
MED_KSF	Medical	KSF	1.75
HI_KSF	Heavy Industrial	KSF	1

These yields were selected such that the resulting total employment within the City matches Department of Finance Citywide projections.